

# **PROJECT MANUAL & SPECIFICATIONS**



***UTAH STATE UNIVERSITY***

***VET SCIENCE / LARC BUILDING***

***Re-Roof Project***

*JAN 2025*

**DESIGN  
WEST**

**UTAH STATE UNIVERSITY**  
**Vet Science / LARC Building**  
**Re-Roof Project**  
LOGAN, UTAH

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# USU PROJECT ANNOUNCEMENT AND INVITATION TO BID

## Re-Roof Replacement Project

**Date:**

January 21, 2025

**Item for Bid:**

Description of work: removal of existing roofing materials, flashings, mechanical unit screen walls, unused curbs and covers. Modify existing HVAC equipment, conduits and lines as required for new roofing and insulation Provide and install new insulation, PVC membrane, flashings and associated roofing accessories for a complete and weather tight roofing system. Remove all debris and roofing demolition materials as per specifications and local codes.

**Bidding Document Location:** as directed in the RFP

**USU PROJECT – IDRPP Reroof project Attn: Quin Whitaker**

**Value-Based Selection Criteria:**

The selection of contractor for this project will be awarded using the value-based selection method. The following criteria (not listed in order of importance) will be used in the selection criteria:

1. **Schedule** – Delivery schedule, flexibility, and reliability.
2. **Quality of work and service** – Please provide adequate projects completed in the last ten years using this type of system, that will identify your quality of work. For each project provide one copy of a list of references on additional similar projects for a total of three projects.

For projects provide the following information:

Point of Contact: Person who will be able to answer any customer satisfaction questions.  
Phone Number: Phone number of the contact we will be surveying.  
User Name: Name of Company / Institution that purchased the construction work.  
Project Name: Name of the project.  
Date Completed: Date when the work was completed.  
Address: Street, City and State where the work was performed.  
Size: Size of project in dollars.  
Duration: Duration of the project/construction in months.  
Type: Type of the project (i.e.: School, Offices, Warehouse, etc.)

3. **Cost** - See bidding process instructions below.

4. **Experience** – Overall company experience as well as that of those key individuals assigned to the project with this type of system. The Statement of Qualifications is a *short* document that indicates the experience and qualifications of the firm, the project manager and other critical members of the team. It describes what talents their team brings to the project, how their knowledge of the subject will provide benefit to the process, how the team has been successful in the past and how that relates to this project. It should include information on similar projects that have been completed by the firm, project manager and other team members. Include the experience and special qualifications that are applicable to this project and/or are part of the project specific selection criteria.

5. **Labor Force** - The Statement of Labor Force is a *short* document or statement that indicates that all labors shall be fully documented employees of the roofing contractor and shall be covered by the contractor's workman's comp and general liability insurance. No temporary labor will be allowed.

6. **Management Plan** - Firms will be required to submit a project schedule. Indicate critical dates and other information in sufficient detail for the selection committee to determine if the time frames are reasonable.

The Management Plan should be concise yet contain sufficient information for evaluation by the selection committee.

### **Management Plans / Bid Proposals:**

Each management plan shall be in the following format (3 sets): *Please keep it simple and concise.*

1. 10 pages or less, 8 ½" x 11" format on bond paper
2. Single-spaced paragraphs, 12pt. font
3. All pages must be numbered
4. Stapled - not bound

### **Plans and Project Manual:**

**Securing Documents:** Plans and specifications will be available per RFP and as directed by USU Facilities.

### **PROJECT OVERVIEW:**

The goal of this project is to remove and replace an existing Built-up roof in accordance with the Construction Documents.

### **SUPPLEMENTAL INSTRUCTIONS TO BIDDERS:**

- 1 As this is an occupied university campus, the SAFETY and wellbeing of the employees, students and faculty are the first priority. Any unsafe practices or any inappropriate contact or conduct with the occupants will not be tolerated and will be grounds for immediate removal from the site.
- 2 Time is of the essence. The scope of work for this project requires a compressed, aggressive, organized construction schedule and will require a firm, substantial commitment from all the successful bidders to accomplish the project completion as scheduled.
- 3 Any dust debris control, collection and street sweeping related to each subcontractor's work is the responsibility of the general contractor.

### **BIDDING PROCESS INSTRUCTIONS:**

Before submitting a proposal, bidders shall carefully examine the plans, read the specifications, all addenda and all other bid documents. They shall visit the site of work and shall fully inform themselves as to all existing conditions and limitations. They shall include in the proposal a sum to cover the cost of all items included in the bid.

The Utah State University reserves the right to reject any or all submittals or to waive any formality or technicality in any submittal in the interest of the State.

**PROJECT SCHEDULE:**

Work shall be completed as determined at time of notice to proceed to the chosen contractor given the nature and scope of work. *Work shall be completed as scheduled.*

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# UTAH STATE UNIVERSITY

## GENERAL CONDITIONS

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# GENERAL CONDITIONS

## ARTICLE 1. GENERAL PROVISIONS.

### 1.1 BASIC DEFINITIONS.

**ADDENDA.** "Addenda" means the written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

**BID.** "Bid" means the offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

**BONDS.** "Bonds" mean the bid bond, performance and payment bonds and other instruments of security.

**CHANGE ORDER.** "Change Order" means a written instrument signed by the Owner and Contractor, stating their agreement for changes of the Contract as specified on the required Owner's change order form.

**CLAIM.** "Claim" means a demand or assertion by one of the parties seeking, as a matter of right, modification, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. A Request for Equitable Adjustment (REA) shall not be considered a "claim." If a Request for Equitable Adjustment is denied in whole or in part, a claim may be filed in accordance with Article 4 of these General Conditions.

**CONSULTANT** (including all design professionals). "Consultant" means the person lawfully licensed to practice architecture or engineering or an entity lawfully practicing architecture or engineering identified as such in the Consultant's Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Consultant" also means the Consultant's representative and its consultants. When these General Conditions are part of a Contract in which the design professional is an interior designer, landscape Consultant or other design professional, the term "Consultant" as used in these General Conditions shall be deemed to refer to such design professional. A license is not required when the type of design professional is one which is not subject to a professional license, but such professional must meet the prevailing standards in the State of Utah for such practice.

**CONSTRUCTION CHANGE DIRECTIVE.** A "Construction Change Directive" means a written order signed by the Owner, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work

within the general scope of the Contract consisting of additions, deletions or other revisions; even if it may impact the Contract Sum and Contract Time.

**CONTRACT.** The Contract Documents form the Contract for Construction. The term "Contract" represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Consultant and Contractor, (2) between the Owner and a Subcontractor or (3) between any persons or entities other than the Owner and Contractor.

**CONTRACT DOCUMENTS.** The term "Contract Documents" means the Contractor's Agreement between the Owner and Contractor (hereinafter referred to as "Contractor's Agreement"), the Conditions of the Contract (General, Supplementary and other Conditions), the Drawings, Specifications, Addenda, other documents listed in the Contractor's Agreement and Modifications issued after execution of the Contractor's Agreement. The Contract Documents shall also include the bidding documents, including the Instructions to Bidders, Notice to Contractors and the Bid Form, to the extent not in conflict with the other above-stated Contract Documents and other documents and oral presentations as part of the Selection which are documented as an attachment to the Contract.

**CONTRACT SUM.** The term "Contract Sum" means the Contract Sum as stated in the Contractor's Agreement and, including authorized and signed adjustments to this agreement (modifications), is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

**CONTRACT TIME.** "Contract Time", unless otherwise provided in the Contract Documents, means the period of time, including authorized and signed adjustments (modifications), stated in the Contract Documents for Substantial Completion of the Work.

**CONTRACTOR.** The Contractor is the person or entity identified as such in the Contractor's Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative. When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case, shall mean the Contractor who executes each separate Owner-Contractor Agreement.

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

**DEFECTIVE.** "Defective" is an adjective which when modifying the word "Work" refers to Work that does not conform to the Contract Documents, or does not meet the requirements of any inspection, referenced standard, code, test or approval referred to in the Contract Documents, or has been damaged.

**DIRECTOR.** "Director" means the Director of USU Facilities Design and Construction unless the context requires otherwise. Director may include a designee selected by the Director



for the particular function referred to in the General Conditions.

**DRAWINGS.** The "Drawings" are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location, and dimensions of the Work, and generally include the drawings, elevations, sections, details, schedules and diagrams.

**FIELD ORDER.** "Field Order" means a written order issued by the Owner or the Consultant which directs minor changes in the Work in accordance with Article 7 but which does not involve a change in the Contract Price or the Contract Time.

**INSPECTION.** The word "inspection" or its derivatives shall mean a review of the Project, including but not limited to a visual review of the Work completed to date to ascertain if the Work is in accordance with the Contract Documents, including all applicable building codes and construction standards.

**MODIFICATION.** A "Modification" is (1) a Change Order (2) Construction Change Directive or (3) Field Order. The Contract may be amended or modified only by (1) a written amendment executed by both the Owner and Contractor, or (2) by a Modification.

**NOTICE TO PROCEED.** A "Notice to Proceed" is a document prepared by the Owner and by its terms authorizes the Contractor to commence Work on the Project. It is deemed issued upon being sent by the Owner to the Contractor's specified address within the bid or proposal.

**OWNER.** "Owner" or pronoun used in place thereof, means Utah State University, as represented by Facilities Design and Construction of the Department of Administrative Services. The Owner is referred to throughout the Contract Documents as if singular in number.

**OWNER'S DESIGNATED REPRESENTATIVE.** "Owner's Designated Representative" means the Owner's Program Director or other representative as assigned by the Owner.

**PARTIAL USE.** "Partial Use" means placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work. This partial use does not constitute "substantial completion".

**PRODUCT DATA.** "Product Data" means 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.

**PROJECT.** The "Project" means the total construction of the Work performed under the Contract Documents.

**PROJECT MANUAL (FOR CONSTRUCTION).** The "Project Manual" is the volume assembled for the Work and may include the bidding requirements, sample forms, General or Supplementary Conditions of the Contract and Specifications.

**REQUEST FOR EQUITABLE ADJUSTMENT.** A "Request for Equitable Adjustment" (REA) is an informal request to resolve matters. It shall not be considered a "claim." If a Request for Equitable Adjustment is denied in whole or in part, a claim may be filed in accordance with Article 4 of these General Conditions.

**SAMPLES.** "Samples" mean physical examples, which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

**SHOP DRAWINGS.** "Shop Drawings" means drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

**SPECIFICATIONS.** The "Specifications" are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards, installation and workmanship for the Work, and performance of related systems and services.

**SUBCONTRACTOR.** "Subcontractor" means the person or entity that has a direct contract with the Contractor or with another Subcontractor to provide labor or materials for the work. Notwithstanding the foregoing, the text in which the term is used may provide for the exclusion of Subcontractors of other Subcontractors or the exclusion of suppliers. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or authorized representative of the Subcontractor. The Term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

**SUBSTANTIAL COMPLETION.** "Substantial Completion" is the date certified by the Consultant in accordance with Paragraph 9.2 and means the date the Work or designated portion thereof is sufficiently complete, and any lack of completion or performance does not reasonably interfere with the Owner's intended use of the Project, in accordance with the Contract Documents so that the Owner can occupy and use the Work for its intended use.

**SUPPLEMENTARY CONDITIONS OR SUPPLEMENTARY GENERAL CONDITIONS.** "Supplementary Conditions" or "Supplementary General Conditions" means the part of the Contract Documents which amends or supplements these General Conditions.

**WORK.** The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, materials, equipment and services provided, or to be provided, by the Contractor to fulfill the Contractor's obligations.

**1.2 OWNERSHIP AND USE OF CONSULTANT'S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS.**

All Drawings, Specifications and other documents prepared by the Consultant are and shall remain the property of the Owner, and Owner shall retain all common law, statutory and other reserved rights with respect thereto. Said documents were prepared

and are intended for use as an integrated set for the Project which is the subject of this Contractor's Agreement. They shall not be modified or used on any other project without the prior written consent of the Owner and Consultant. Any such nonpermissive use or modification, by Contractor, the Contractor's Subcontractors at any tier or anyone for whose acts the Contractor is liable, shall be at Contractor's sole risk. Contractor shall hold harmless and indemnify the Owner from and against any and all claims, actions, suits, costs, damages, loss, expenses and attorney fees arising out of such non-permissive use or modification by the Contractor. The Contractor and Subcontractors are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Consultant appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this license shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Consultant. Submittals or distributions necessary to meet official regulatory requirements or for other purposes relating to completion of the Project are not to be construed as a publication in derogation of the Owner's copyright or other reserved rights.

## **ARTICLE 2. OWNER.**

### **2.1 INFORMATION AND SERVICES REQUIRED OF THE OWNER.**

**2.1.1 OWNER'S DESIGNATED REPRESENTATIVE.** The Owner shall designate an Owner's Designated Representative authorized to act in the Owner's behalf with respect to the Project. The Owner or such authorized representative shall render decisions within a reasonable time pertaining to documents submitted by the Consultant and/or Contractor in order to avoid a compensable delay in the orderly and sequential progress of the Project.

**2.1.2 SPECIALISTS AND INSPECTORS.** The Owner will provide certified building inspection services in accordance with the adopted Building Codes. This includes 'routine' and 'special' inspections unless noted in the Consultant Agreement. The Owner may assign an inspector or specialist to note deviations from, or necessary adjustments to, the Contract Documents or to report deficiencies or defects in the Work. The inspector or specialist's activities in no way relieves the Contractor of the responsibilities set forth in the Contract Documents.

**2.1.3 SURVEYS AND LEGAL DESCRIPTION.** The Owner shall furnish surveys describing physical characteristics, legal limitations, and utility locations for the site of the Project, and a legal description of the site. The Contractor shall review this information, including the surveys and any provided soils tests, and compare such information with observable physical conditions and the Contract Documents.

**2.1.4 PROMPT INFORMATION AND SERVICES.** Upon receipt of a written request from the Contractor, the Owner shall furnish information or services under the Owner's control with reasonable promptness to avoid delay in orderly progress of the Work.

**2.1.5 COPIES OF DRAWINGS AND PROJECT MANUALS (FOR CONSTRUCTION).**

Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, such copies of Drawings and Project Manuals (for construction) as are reasonably necessary for execution of the Work.

**2.1.6 OTHER DUTIES.** The foregoing is in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Article 6 (Construction by Owner or by Separate Contractors), Article 8 (Payments and Completion) and Article 11 (Insurance and Bonds).

**ARTICLE 3. CONTRACTOR**

**3.1 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR.**

**3.1.1 REVIEWING CONTRACT DOCUMENTS, INFORMATION, REPORTING ERRORS, INCONSISTENCIES OR OMISSIONS.** The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the Owner pursuant to Paragraph 2.1 hereinabove and shall at once report to the Owner and Consultant errors, inconsistencies or omissions discovered. The Contractor shall not be liable to the Owner or Consultant for damage resulting from errors, inconsistencies or omission in the Contract Documents, unless the Contractor recognized such error, inconsistency or omission or a Contractor of ordinary skill and expertise for the type of Work involved would have readily so recognized such error, inconsistency or omission, and the Contractor failed to report such to the Owner and Consultant. If the Contractor performs any construction activity without such notice to the Owner and Consultant and resolution of the error, inconsistency or omission, the Contractor shall assume appropriate responsibility for such performance and shall bear an appropriate amount of the attributable costs for correction.

**3.1.2 FIELD CONDITIONS.** 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, or information which a Contractor of ordinary skill and expertise for the type of Work involved would have known, before commencing activities. Errors, inconsistencies, or omissions discovered shall be reported to the Owner and Consultant at once. If the Contractor performs any construction activity without such notice to the Owner and Consultant and resolution of the error, inconsistency or omission, the Contractor shall assume appropriate responsibility for such performance and shall bear an appropriate amount of the attributable costs for correction.

**3.1.3 PERFORM IN ACCORDANCE WITH DOCUMENTS AND SUBMITTALS.** The Contractor shall perform the Work in accordance with the Contract Documents and submittals approved pursuant to Paragraph 3.9 hereinbelow.

**3.1.4 PERFORMANCE TO PRODUCE THE COMPLETE SYSTEM AND INTENDED RESULTS.** Performance by the Contractor shall be required to the extent consistent with the

Contract Documents and reasonably inferable from the Contract Documents as being necessary to allow the system to function within its intended use.

**3.1.5 INTENT AND HIERARCHY.** The Contract Documents should be read as a whole and wherever possible, the provisions should be construed in order that all provisions are operable. 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 Document or provisions thereof shall be as binding as if required by all the Documents or provisions thereof. In case of an irreconcilable conflict between provisions within a Contract Document or between Contract Documents, the following priorities shall govern as listed below:

- (1) A particular Modification shall govern over all Contract Document provisions or Modifications issued prior to said particular Modification.
- (2) Attachments resulting from the Selection process including any management plan or documented interview information.
- (3) A particular Addendum shall govern over all other Contract Document provisions issued prior to said particular Addendum. Subsequent Addenda shall govern over all prior Addenda.
- (4) The Supplementary General Conditions shall govern over the General Conditions.
- (5) These General Conditions shall govern over all other Contract Documents except for the Supplementary General Conditions, Addenda, Modifications and Attachments resulting from the selection process.
- (6) The drawings and specifications shall not govern over any of the documents listed above.
- (7) In case of a conflict or ambiguity within the same level of hierarchy of described documents, Owner reserves the right to select the most stringent requirement unless the preponderance of the contract indicates the less stringent requirement.

**3.1.6 DIVIDING WORK AND CONTRACTOR REPRESENTATION.** Organization of the specifications into division, 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. Contractor represents that the Subcontractors, Sub-subcontractors, manufacturers, and suppliers engaged or to be engaged by it are and will be familiar with the requirements for performance by them of their obligations.

**3.1.7 PLANNING AND PRIORITY.** The Contractor shall plan and schedule its work to facilitate the Project and shall maintain a work schedule to place proper priority to sequence work to complete the project timely.

## **3.2 SUPERVISION AND CONSTRUCTION PROCEDURES.**

**3.2.1 SUPERVISION AND CONTROL.** 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 the construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, except to the extent that the Contract Documents expressly and specifically state otherwise.

**3.2.2 RESPONSIBILITY.** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors, and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor or on behalf of the Contractor.

**3.2.3 NOT RELIEVED OF OBLIGATIONS.** The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Owner or its agents in the Owner's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

### **3.2.4 INSPECTIONS AND APPROVALS.**

(1) The Contractor is responsible for requesting inspections for various stages and portions of the Work required under the Contract Documents in a timely manner.

(2) If any of the Work is required to be inspected or approved by the terms of the Contract Documents by any public authority, the Contractor shall timely request such inspection or approval to be performed in accordance with Article 9. Except as provided in Article 9, work shall not proceed without any required inspection and the associated authorization to proceed. Contractor shall promptly notify Owner if the inspector fails to appear at the site.

## **3.3 LABOR AND MATERIALS.**

**3.3.1 PAYMENT BY CONTRACTOR.** Except to the extent it is otherwise stated in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipments, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities, supplies, consumables and services necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

**3.3.2 DISCIPLINE AND COMPETENCE.** The Contractor shall enforce strict discipline and good order among the Contractor's employees, its Subcontractors, agents, representatives, and other persons performing under the Contract Documents. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

**3.4 TAXES AND OTHER PAYMENTS TO GOVERNMENT.** The Contractor shall pay sales, consumer, use, employment-related and similar taxes related to the Work or portions thereof provided by the Contractor which are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

**3.5 PERMITS, FEES, NOTICES, LABOR AND MATERIALS.**

**3.5.1 PERMITS AND FEES.** Unless required in the Supplementary General Conditions or an Addendum, it will not be necessary for the Contractor to obtain or pay for local building permits, plan check fees, electrical permits, plumbing permits, connection fees, or impact fees, nor will it be necessary to pay fees for inspections pertaining thereto.

**3.5.2 COMPLIANCE WITH PUBLIC AUTHORITIES, NOTICES.** The Contractor shall comply with and give notices required by laws, ordinances, resolutions, rules, regulations, and lawful orders of public authorities bearing on the performance of the Work.

**3.5.3 CORRELATION OF CONTRACT DOCUMENTS AND ENACTMENTS.** It is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, resolutions, building codes, and rules and regulations. However, if the Contractor observes, or if such is readily observable to a Contractor of ordinary skill and expertise for the type of Work involved, that a portion of the Contract Documents is at variance therewith, the Contractor shall promptly notify the Consultant and Owner in writing, and necessary changes shall be accomplished by appropriate Modification.

**3.5.4 FAILURE TO GIVE NOTICE.** If the Contractor, or any Subcontractor thereof performs Work without complying with the requirements of Paragraph 3.5.3 hereinabove, the Contractor shall assume appropriate responsibility for such Work and shall bear the appropriate amount of the attributable costs.

**3.6. SUPERINTENDENT.** The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

**3.7 TIME AND CONTRACTOR'S CONSTRUCTION SCHEDULES.**

**3.7.1 PROGRESS AND COMPLETION.**

**(1) TIME IS OF THE ESSENCE; COMPLETE WITHIN CONTRACT TIME.** Time is of the essence. By executing the Contractor's Agreement, the Contractor confirms that the Contract Time is adequate to perform the Work. The Contractor shall proceed expeditiously with adequate forces to achieve Substantial Completion within the Contract Time.

**(2) NOTICE TO PROCEED AND INSURANCE.** The Contractor shall not prematurely commence operations on the site or elsewhere prior to the issuance of a Notice to Proceed by the Owner or prior to the effective date of insurance required by Article 11 to be furnished by the Contractor, whichever is the latter.

**3.7.2 SCHEDULE PREPARATION.** The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Consultant's review a reasonably detailed CPM schedule for the Work. The schedule shall indicate the order, sequence, and interdependence of all items known to be necessary to complete the Work including construction, procurement, fabrication, and delivery of materials and equipment, submittals and approvals of samples, shop drawings, procedures, or other documents. Work items of the Owner, other Contractors, utilities and other third parties that may affect or be affected by the Contractor shall be included. If the Owner is required, by the Contract Documents, to furnish any materials, equipment, or the like, to be incorporated into the Work by the Contractor, Contractor shall submit, with the first schedule submittal, a letter clearly indicating the dates that such items are required at the Project Site. The critical path should be identified, including the critical paths for interim completion dates and milestones. The CPM schedule shall be developed using Primavera, MS Project, or Suretrack unless otherwise authorized by the Owner's Designated Representative. The Contractor's schedule shall be updated at least once a month and submitted with each pay request.

**3.7.3 INITIAL CONTRACT TIME.** Unless otherwise specified in the bidding documents, the initial Contract Time is the time proposed by the Contractor and accepted by the Owner in the selection process.

**3.7.4 INTERIM COMPLETION DATES AND MILESTONES.** The schedule must include contractually specified interim completion dates and milestones. The milestone completion dates indicated are considered essential to the satisfactory performance of this Contract and to the coordination of all Work on the Project. The milestone dates listed are not intended to be a complete listing of all Work under this Contract or of interfaces with other Project Contractors.

**3.7.5 SCHEDULE CONTENT REQUIREMENTS.** The schedule shall indicate an early completion date for the Project that is no later than the Project's required completion date. The schedule, including all activity duration's shall be given in calendar days. The Schedule shall also indicate all of the following:

- (1) Interfaces with the work of outside contractors (e.g., utilities, power and with any separate Contractor);
- (2) Description of activity including activity number/numbers;
- (3) Estimated duration time for each activity;
- (4) Early start, late start, early finish, late finish date, and predecessor/successors including stop-start relationships with lead and lag time for each activity;



- (5) Float available to each path of activities;
- (6) Actual start date for each activity begun;
- (7) Actual finish date for each activity completed;
- (8) The percentage complete of each activity in progress or completed;
- (9) Identification of all critical path activities;

(10) The critical path for the Project, with said path of activities being clearly and easily recognizable on the time-scaled network diagram. The path(s) with the least amount of float must be identified. Unless otherwise authorized by the Owner's Designated Representative, no more than 40% of all activities may be identified as critical path items. The relationship between non-critical activities and activities on the critical path shall be clearly shown on the network diagram;

(11) Unless otherwise authorized by the Owner's Designated Representative, all activities on the schedule representing construction on the site may not have a duration longer than 14 days. Construction items that require more than 14 days to complete must be broken into identifiable activities on the schedule with durations less than 14 days. The sum of these activities represents the total length required to complete that construction item; and

(12) Additional requirements as specified in the Supplemental General Conditions.

**3.7.6 OWNER'S RIGHT TO TAKE EXCEPTIONS.** The Owner reserves the right to take reasonable exception to activity duration, activity placement, construction logic or time frame for any element of the Work to be scheduled.

**3.7.7 FLOAT TIME.** Float or slack time is defined as the amount of time between the earliest start date and the latest start date or between the earliest finish date and the latest finish date of a chain of activities on the Schedule. By a proposal request or modification delivered to the Contractor, the Owner has the right to use the float time for non-critical path activities until the Contractor has reallocated such time on a newly submitted schedule.

**3.7.8 INITIAL SCHEDULE SUBMISSION.** No progress payments will be approved until the Contractor has submitted a Project detailed CPM schedule covering the first 90 days of the Work with a general CPM schedule for the entire project. The detailed schedule for the entire project is to be completed prior to the second pay request unless otherwise authorized in writing by the Owner's Designated Representative.

**3.7.9 UPDATES.** Prior to any approval of a pay request, the Owner, Consultant and Contractor shall review the Contractor's schedule compared to the Work completed. The Owner approves the amount of Work completed as supported by the schedule of values. If necessary,

the Contractor shall then update and submit to the Owner the schedule with the pay request; all of which in accordance with the Owner's approval. All updates shall be provided in electronic and hard copy formats. At each scheduled meeting with the Owner's Designated Representative, the Contractor shall provide a "three week look ahead" with long lead items identified.

**3.7.10 SCHEDULE OF SUBMITTALS.** The Contractor shall prepare and keep current, for the Consultant's and Owner's review, a schedule of submittals required under the Contract Documents which is coordinated with the Contractor's construction schedule and allows the Consultant a reasonable time to review the submittals. This submittal schedule is to be included as part of the construction schedule. Submittals requiring expedited review must be clearly identified as such in the schedule of submittals.

**3.7.11 SCHEDULE RECOVERY.** If the Work represented by the critical path falls behind more than 7 days, the project schedule shall be redone within 14 days showing how the Contractor shall recover the time. A narrative that addresses the changes in the schedule from the previously submitted schedule shall be submitted along with the schedule in both hard copy (appropriate report formats to be determined by the Owner's Designated Representative) and electronic copy. The Contractor shall comply with the most recent schedules.

### **3.7.12 SCHEDULE CHANGES AND MODIFICATIONS.**

**(1) CONTRACT TIME CHANGE REQUIRES MODIFICATION.** The Contract Time may only be shortened or extended by a written modification fully executed by the Owner.

**(2) CONTRACTOR REORDERING, RESEQUENCING AND CHANGING ACTIVITY DURATIONS.** Should the Contractor, after approval of the complete detailed construction network, desire to change his plan of construction, he shall submit his requested revisions to the Owner and the Consultant along with a written statement of the revisions including a description of the sequence and duration changes for rescheduling the work, methods of maintaining adherence to intermediate milestones and the contract completion date and the reasons for the revisions. If the requested changes are acceptable to the Owner, which acceptance shall not be unreasonably withheld, they will be incorporated into the Schedule in the next reporting period.

If after submitting a request for change in the Contract Schedule, the Owner does not agree with the request, the Owner will schedule a meeting with the Contractor to discuss the differences.

**(3) CHANGES IN CONTRACT TIME.** The critical path schedule as the term is used in the provisions herein shall be based on the current version of the Contractor's schedule for the Project and accepted by the Owner just prior to the commencement of the modification, asserted delay, suspension or interruption. If the Contractor believes it is entitled to an extension of Contract Time under the Contract Documents, the Contractor shall submit to the Owner's Designated Representative an analysis ("Requested Time Adjustment Schedule") in accordance with the Contract Documents for time extensions. The "Requested Time Adjustment

Schedule" shall include "fragnets" that represent the added or changed work to the Schedule. The impact on unchanged activities caused by the changes and/or delays being analyzed shall be included in these fragnets.

A "fragnet" as used in these General Conditions and when used in the context of project scheduling is a subset of project activities that are inter-related by predecessor and successor relationships that are tied into the main schedule with identified start and completion points. Each fragnet may or may not be on the critical path. An entire schedule consists of a series of inter-related fragnets.

### **3.7.13 EXCUSABLE DELAY.**

**(1) IN GENERAL.** If the Contractor is delayed at any time in progress of the Work on the critical path schedule by an act or neglect of the Owner or other causes beyond the Contractor's control or by other causes which the Owner determines may justify delay, then the Contract Time shall be extended by Change Order. The Contractor shall immediately take all steps reasonably possible to lessen the adverse impact of such delay. Notwithstanding the above, to the extent any of the causes for delay were caused by the Contractor, reasonably foreseeable by the Contractor or avoidable by the Contractor, then to such extent the delay shall not be cause for extension of the Contract Time.

The determination of the total number of days extension will be based upon the current construction schedule in effect at the inception of the change and/or delay and upon all data relevant to the extension as it exists in the project record. Once approved, such data shall be incorporated in the next monthly update of the schedule.

Contractor acknowledges and agrees that delays in work items which, according to the schedule analysis, do not affect any milestone dates or the Contract completion dates shown on the CPM at the time of the delay, will not be the basis for a contract extension.

**(2) WEATHER-RELATED EXCUSABLE DELAYS.** Completion time will not be extended for normal bad weather or any weather that is reasonably foreseeable at the time of entering into the contract. The time for completion as stated in the contract documents includes due allowance for calendar days on which Work cannot be performed out of doors. The Contractor acknowledges that it may lose days due to weather conditions. Contract time may be extended at no cost to the Owner if all of the following are met which must be established by the Contractor:

(a) That the weather prevented Work from occurring that is on the critical path for the project based upon a critical path schedule previously submitted to the Owner and to the extent accepted by the Owner;

(b) There are no concurrent delays attributed to the Contractor;

(c) The Contractor took all reasonable steps to alleviate the impact of the weather and took reasonable attempts to prevent the delay and despite such reasonable

actions of Contractor, the weather impacted the critical path as described above; and

(d) one of the following occurred:

1. The weather was catastrophic, such as a tornado, hurricane, severe windstorm, severe hailstorm; or

2. Based on the full history of information published from the closest station as indicated from the Western Regional Climate Center (Desert Research Institute 2215 Raggio Parkway Reno, Nevada 89512, and as may be described on their website at <http://www.wrcc.dri.edu/summary/>), one or more of the following occurred:

a. For any day between November 1 and March 31, the minimum temperature fell below the average minimum temperature plus the extreme low temperature recorded for the month divided by 2.

b. For any day between November 1 and March 31, the maximum temperature fell below the monthly average for the minimum temperature.

c. The daily precipitation exceeded 75% of the historical one day maximum for the month.

d. The snowfall for the month exceeded 175% of the historical average snow fall for the month.

### **3.7.14 COMPENSABLE DELAY, SUSPENSION OR INTERRUPTION.**

**(1) BASIC CONDITIONS.** In addition to the other requirements of the Contract Documents, a compensable delay, suspension or interruption of the work occurs only when the following are met:

(a) is wholly unanticipated by the parties at the time of execution of the Contractor's Agreement or is caused by the breach of a fundamental obligation of the Contract Documents attributable to the Owner; and

(b) the Contractor files an REA or claim under Article 4 and such is received by the Owner and said continuation affects the Contract Time as indicated by the Project's critical path schedule.

**(2) COMPENSABLE DELAY FORMULA.** To the extent of the compensable delay, the Contractor's total entitlement for all compensable delay damages is the computed result of the following formula: Contract Sum divided by Contract Time (in calendar days); the result of which is then multiplied by 0.05; and the result of which is multiplied by the number of calendar days of compensable days allowed under these General Conditions that are beyond the Contract Time.

**(3) PERIOD OF COMPENSABLE DELAY, SUSPENSION OR INTERRUPTION.** The length and extent of compensable delay, shall be determined, with the use of the Project's critical path schedule, by ascertaining the number of additional days to the Contract Time that are needed in order to perform the Work in accordance with the Contract Documents as a result of the continuation of the aforesaid delay, suspension or interruption after receipt of the REA or claim by the Owner under Article 4 and following the requirements of 3.7.12.

**(4) CONCURRENT DELAY.** Notwithstanding any other provision of these General Conditions, to the extent a non-compensable delay occurs at the same time as a compensable delay, the Owner shall not be responsible for any compensation for the period of the non-compensable delay.

**3.7.15 TIME EXTENSION REQUESTS.** Any time extension shall be requested within 21 days after the Contractor knew or should have known about the delay and shall be supported by the critical path schedule analysis.

### **3.7.16 LIQUIDATED DAMAGES.**

**(1) IN GENERAL.** Should the Contractor fail to complete the Work within the Contract Time, there shall be deducted from any amount due or that may become due the Contractor, the sum as stated in the Contractor's Agreement. Such sum is fixed and agreed upon by the Owner and Contractor as liquidated damages due the Owner by reason of the inconvenience and added costs of administration, engineering, supervision and other costs resulting from the Contractor's default, and not as a penalty. Actual damages related to delay can not be ascertained at the time of execution of the Contract. To the extent that the liquidated damages exceed any amounts that would otherwise be due the Contractor, the Contractor shall be liable for such excess to the Owner. Owner may seek enforcement of such obligation by legal action, and if such is necessary, shall recover the related costs and attorney fees. Notwithstanding any other provision of these General Conditions, the availability of liquidated damages to the Owner shall not limit the Owner's right to seek damages or other remedies available under law or equity to the extent such damages or remedies are not based upon delay.

**(2) NO WAIVER OF OWNER'S RIGHTS.** Permitting the Contractor to continue any part of the Work after the time fixed for completion or beyond any authorized extension thereof, shall in no way operate as a waiver or estoppel on the part of the Owner of any of its rights under the Contract Documents, including the right to liquidated damages or any other remedies or compensation.

**3.8 DOCUMENTS AND SAMPLES AT THE SITE, CERTIFYING "AS-BUILTS".** The Contractor shall maintain at the site for the Owner, one record copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked weekly to record changes and selections made during construction, as well as approved Shop Drawings, Product Data, Samples and similar submittals. These aforesaid items shall be available to the Consultant and shall be delivered to the Consultant for submittal to the Owner upon

completion of the Work, signed by the Contractor, certifying that they show complete and exact "as-built" conditions, stating sizes, kind of materials, vital piping, conduit locations and similar matters. All notes of encountered or changed conditions shall be included.

### **3.9 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.**

**3.9.1 NOT CONTRACT DOCUMENTS.** Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The submittal shall demonstrate, for those portions of the Work for which the submittal is required, the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents.

**3.9.2 PROMPTNESS.** The Contractor shall review, approve and submit to the Consultant, Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

**3.9.3 NOT PERFORM UNTIL CONSULTANT APPROVES.** 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 in writing by the Consultant. Such Work shall be in accordance with the approved submittals.

**3.9.4 REPRESENTATIONS BY CONTRACTOR.** By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

**3.9.5 CONTRACTOR'S LIABILITY.** The Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Consultant's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Consultant in writing of such deviation at the time of the submittal and the Consultant has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Consultant's review and comment.

**3.9.6 DIRECT SPECIFIC ATTENTION TO REVISIONS.** The Contractor shall direct specific attention in writing to all revisions on resubmitted Shop Drawings, Product Data, Samples or similar submittals, except those requested by the Consultant and indicated on previous submittals.

**3.9.7 INFORMATIONAL SUBMITTALS.** Informational submittals upon which the Consultant is not expected to take responsive action may be so identified in the Contract Documents.

**3.9.8 RELIANCE ON PROFESSIONAL CERTIFICATION.** When professional certification of performance criteria of materials, systems or equipment is required by the

Contract Documents, the Owner and Consultant shall be entitled to rely upon the accuracy and completeness of such calculations and certifications. If a professional stamp is required, the professional shall be licensed in the State of Utah unless otherwise approved by the Owner in writing. Likewise, the Contractor is entitled to rely upon the accuracy and completeness of the calculations made by the Consultant in developing the Contract Documents, unless a Contractor of ordinary skill and expertise for the type of Work involved would know that such is inaccurate or incomplete and therefore must immediately notify the Owner.

### **3.10 USE OF SITE.**

**3.10.1 IN GENERAL.** The Contractor shall confine operations at the site to areas permitted by the Contract Documents, law, ordinances, resolutions, rules and regulations, and permits and shall not unreasonably encumber the site with materials or equipment. Contractor shall take all reasonable means to secure the site protect the site and the Work from any damage. The site shall be left free and clear of refuse, equipment, materials, etc. and the site shall not be subject to spilled liquids and chemicals, toxic or otherwise. Should such an incident occur while the Contractor has control of the site, the Contractor shall be responsible to clean the site and pay all associated costs, fines and penalties. Notwithstanding this, Contractor is not responsible for any damage to the site or the Work to the extent caused by the Owner or the Owner's agents.

**3.10.2 ACCESS TO NEIGHBORING PROPERTIES.** The Contractor shall not, except as provided in the Contract Documents or with the Owner's advance written consent when necessary to perform the Work, interfere with access to properties neighboring the Project site by the owners of such properties and their respective tenants, agents, invitees and guests.

**3.11 ACCESS TO WORK.** The Contractor shall provide the Owner and Consultant access to the Work in preparation and progress, wherever located.

**3.12 ROYALTIES AND PATENTS.** The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of patent rights and shall hold the Owner and Consultant harmless from loss on account thereof but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Owner.

### **3.13 INDEMNIFICATION.**

#### **3.13.1 IN GENERAL.**

(1) To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the State of Utah, the State of Utah's institutions, agencies, departments, divisions, authorities, and instrumentalities, boards, commissions, elected or appointed officers, employees, agents, authorized volunteers (hereinafter the above listing of entities and persons is

referred to an "indemnities") from and against every kind and character of claims, damages, losses and expenses, including but not limited to attorneys' fees, and including those events covered under the blanket Contractual Liability Coverage required under the Contract Documents, arising out of or resulting from any act or omission in the performance of the Work including the work of all the Subcontractors and their employees, provided that any such claim, damage, loss or expense is caused in whole or in part by the negligent or wrongful act or omission of the Contractor, any Subcontractor, and their employees, provided that any such claim, damage loss or expense is caused in whole or in part by the negligent or intentional act or omission of the Contractor, any Subcontractor, or anyone directly or indirectly employed or the agent of any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. The Contractor shall defend all actions brought upon such matters to be indemnified hereunder and pay all costs and expenses incidental thereto, but the State of Utah shall have the right, at its option, to participate in the defense of any such action without relieving the Contractor of any obligation hereunder. Notwithstanding any of the above, to the extent the Contractor is complying with a written directive from the Owner, that is not based on the Contractor's recommendation, the Contractor shall not be held liable under the indemnification provision of this Agreement if the Contractor has promptly disagreed with the written directive by delivering such objection to the Owner in writing.

(2) Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person under Contract Documents.

(3) In claims against any person or entity indemnified under this Paragraph 3.13 by an employee of the Contractor, Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Paragraph 3.13 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under workers' or workmen's compensation acts, disability benefits acts or other employee benefit acts.

## **ARTICLE 4. ADMINISTRATION OF THE CONTRACT.**

### **4.1 CONSULTANT'S ADMINISTRATION OF THE CONTRACT.**

**4.1.1 IN GENERAL.** The Consultant assists the Owner with the administration of the Contract as described in the Contract Documents. The Consultant shall have the authority to act on behalf of the Owner only to the extent provided in the Contract Documents or Consultant's Agreement.

#### **4.1.2 SITE VISITS.**

(1) Site visits or inspections by the Consultant, the Owner or any Owner representative shall in no way limit or affect the Contractor's responsibility to comply with all the requirements and the overall design concept of the Contract Documents as well as all applicable



laws, statutes, ordinances, resolutions, codes, rules, regulations, orders and decrees.

(2) WRITTEN REPORT. The Consultant shall promptly submit to the Owner a written report subsequent to each site visit.

**4.1.3 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION.** Except as authorized by the Owner's Designated Representative or as otherwise provided in the Contract Documents, including these General Conditions, the Consultant and Contractor shall communicate through the Owner's Designated Representative on issues regarding the timing of the Work, cost of the Work or scope of the Work. Contractor shall comply with communication policies agreed upon at any pre-construction meeting with the Owner. Communications by and with the Consultant's sub-consultants shall be through the Consultant. Communications by and with Subcontractors shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

**4.1.4 CONSULTANT MAY REJECT WORK, ORDER INSPECTION, TESTS.** The Consultant shall have the responsibility and authority to reject Work which, based upon the Consultant's knowledge or what may be reasonably inferred from the Consultant's site observations and review of data, does not conform to the Contract Documents. Whenever the Consultant considers it necessary or advisable for implementation of the intent of the Contract Documents, the Consultant shall have the responsibility and authority to require additional inspections or testing of the Work in accordance with the provisions of the Contract Documents, whether or not such Work is fabricated, installed or completed, provided, however, the Consultant must obtain the Owner's prior written approval of any such additional inspections or testing. However, neither this authority of the Consultant nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Consultant to the Contractor, Subcontractors, their agents or employees or other persons performing portions of the Work, including separate contractors. If the Contractor disputes the rejection of any Work and the correction thereof shall involve additional cost or time, it shall be the Owner's option to accept such Work whether it be conforming or nonconforming.

**4.1.5 CONSULTANT REVIEW CONTRACTOR'S SUBMITTALS.**

(1) Contractor shall submit shop drawings, product data, and samples and other submittals required by the Contract Documents to the Consultant as required by the approved submittal schedule.

(2) The Consultant shall review and approve or take other appropriate action upon Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the purpose of checking for conformance with the information and design concepts expressed in the Contract Documents. Consultant action taken on a submittal shall not constitute a Modification of this Agreement.

(3) The Consultant's action shall be taken no later than 15 days following Consultant's receipt of the submittal, unless agreed to otherwise by Contractor and Owner, in order to avoid a delay in the Work of the Contractor or of separate contractors while allowing

sufficient time in the Consultant's professional judgment to permit adequate review.

(4) Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents.

(5) The Consultant's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Article 3 and Paragraph 9.4 of these General Conditions.

(6) The Consultant's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Consultant, of any construction means, methods, techniques, sequences or procedures.

(7) The Consultant's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

(8) When professional certification of performance characteristics of materials, systems or equipment is required by the Contract Documents, the Consultant shall be entitled to rely upon such certifications to establish that the materials systems or equipment will meet the performance criteria required by the Contract Documents.

**4.1.6 CONSULTANT PREPARE CHANGE ORDERS, DIRECTIVES, AND FIELD ORDERS.** The Consultant shall prepare Change Orders and Construction Change Directives with specific documentation and data for the Owner's approval and execution in accordance with the Contract Documents and may issue Field Orders not involving an adjustment in the Contract Sum or an extension of the Contract Time which are not inconsistent with the intent of the Contract Documents.

## **4.2 REQUEST FOR EQUITABLE ADJUSTMENT.**

**4.2.1 FILING REA.** Contractor may file a Request for Equitable Adjustment (REA) within twenty (21) days after the Contractor first recognizes or should have recognized the condition giving rise to the REA, whichever occurs first. Failure to so file an REA or a Claim as provided for below shall be considered a waiver of the right to pursue the REA or a claim at any later point. Contractor may file a written request for equitable adjustment (REA) by delivery to the Owner's Designated Representative in an effort to resolve matters that arise on the Project.

**4.2.2 CONTENT.** In order to facilitate the resolution of the matter, the Requests for Equitable Adjustment should state the specific grounds relied upon and the specific relief requested.

**4.2.3 ONLY GENERAL CONTRACTOR MAY FILE.** Only a General Contractor shall have the right to file a Request for Equitable Adjustment with the Owner. No subcontractor at any tier shall have the right to file a Request for Equitable Adjustment with the Owner or maintain any claim on its own against the Owner. Any Subcontractor right to equitable adjustment or

claim, may only be with the General Contractor.

**4.2.4 CONTINUING CONTRACT PERFORMANCE.** Pending final resolution of a Request for Equitable Adjustment, unless otherwise agreed upon in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

**4.2.5 SPECIAL ADDITIONAL REQUIREMENTS:**

**(1) CONCEALED OR UNKNOWN CONDITIONS.** If the REA relates to conditions encountered at the site which are (a) unknown and reasonably unforeseeable subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (b) 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, the Contractor shall give notice to the Owner and Consultant of such conditions within three working days and shall not disturb those conditions without written authorization from the Owner.

**(a) HISTORICAL AND ARCHEOLOGICAL CONSIDERATIONS.** In the event of discovery of any underground man-made object, object associated with humans or animals, or suspected archeological artifact; work must cease until DFCM can make an appraisal of its historical significance. A significant archeological discovery would be treated contractually as an unknown site condition. Contractor cooperation with the archeologists is a requirement of this contract.

**(2) INCREASE IN CONTRACT SUM.** If the REA relates to a request to increase the contract sum and the Contractor claims the work is not included within the already executed contract and modifications, then the Contractor shall process the REA and have written approval from the Owner prior to proceeding with the work sought to be an extra.

**(3) INCREASE IN CONTRACT TIME.** The provisions of this Section and Sections 3.7.12, 3.7.13, and 3.7.14 apply. In case of a continuing delay only one REA is necessary.

**4.2.6 RESOLUTION OF REA.**

(1) The Owner's Designated Representative shall attempt to resolve the issues of the Request for Equitable Adjustment with the Contractor. The Owner's Designated Representative may request a written analysis by the Consultant with a reasonable deadline. The Consultant shall comply with any such request.

(2) The Owner's Designated Representative shall provide a decision to the Contractor within 30 days unless such time period is extended by both the Contractor and Owner. Failure of the Owner's Designated Representative to provide the decision within thirty (30) days, shall be deemed a denial of the REA.

## **4.3 CLAIMS.**

### **4.3.1 TIME PERIOD FOR FILING CLAIM.**

**(1) IF REA IS FILED AND DENIED.** If an REA is denied by the Owner's Designated Representative in whole or in part, the Contractor may file a written claim with the Director of the Division of Facilities Construction Management, certified mail, return receipt requested, within twenty-one (21) days of such denial. Failure to so file a written claim within said period shall be considered a waiver of the right to pursue the claim.

**(2) WHEN REA PROCEDURE IS NOT USED.** If the Contractor chooses to not file an REA, and wishes to proceed to a claim directly, a claim must be filed within twenty (21) days after the Contractor first recognizes or should have recognized the condition giving rise to the claim, whichever occurs first. Failure to so file the claim within said period shall be considered a waiver of the right to pursue the claim at any later point. The claim shall be made by written notice sent certified mail, return receipt requested, to the owner's designated representative.

**4.3.2 CONTENT REQUIREMENTS.** All claims shall state the specific grounds relied upon and the specific relief requested. Detailed records supporting the Claim need not accompany the Claim, but must be maintained and made available, to the extent such records are customarily maintained and would be discoverable in a Utah court of law, within a reasonable time upon request.

**4.3.3 ONLY GENERAL CONTRACTOR MAY FILE.** Only a General Contractor shall have the right to file a Claim with the Owner. No subcontractor at any tier shall have the right to file a Claim with the Owner or maintain any claim on its own against the Owner. Any Subcontractor rights to equitable adjustment or a claim, may only be with the General Contractor.

**4.3.4 CONTINUING CONTRACT PERFORMANCE.** Pending final resolution of a Claim, unless otherwise agreed upon in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

**4.3.5 PAYMENTS OF UNDISPUTED AMOUNTS.** Pending final resolution of a claim, the Owner shall pay the undisputed portion of the claim.

**4.3.6 SCHEDULING HEARING OR PANEL.** If unresolved by the Owner's Designated Representative within 21 days of filing the claim with the Director, the matter shall be scheduled for an informal hearing with the Director or the Director's designee. The Director may also elect to have a panel report to the Director on the Request for Equitable Adjustment. If such panel is used, the Claimant must cooperate with reasonable requests of the panel in providing relevant information and documents or said claim shall be considered waived.

**4.3.7 DIRECTOR (OR DESIGNEE) DECISION.** The Director or the Director's designee shall prepare and send to the parties, a written decision, certified mail, return receipt requested, no later than ninety (90) days from the date the Owner's Designated Representative received the claim by certified mail. This time period may be extended by a reasonable request from the Owner based upon additional time being needed to finalize expert reports and/or investigations.

**4.3.8 ASSESSMENT OF COSTS.** If the Claim is denied and determined to be made in bad faith or is frivolous, by the Director or the Director's designee, the Contractor may be assessed the costs, or a portion thereof, of such review including the fee of any experts, design professional, attorney and staff costs.

**4.4 APPEAL OF DIRECTOR (OR DESIGNEE'S) DECISION.** The claim may be further pursued with the Utah Procurement Appeals Board or the Third Judicial District Court in accordance with Utah law.

**4.5 MEDIATION.** Claims not resolved as hereinabove described and any and all other claims or disputes arising out of or related to this Contract, the parties' performance hereunder, or the parties' relationship as created by this Contract, shall be submitted to mediation prior to initiation of litigation. Mediation of any such other claim or dispute may be demanded by either party at any time upon written notice to the other party as herein provided. In furtherance of this Contract to mediate, the parties shall: (i) select a mutually-acceptable mediator; (ii) exchange discoverable documents which either reasonably believes to be relevant and material to the issue(s) in dispute and necessary to an effective mediation; (iii) engage and cooperate in such further discovery as they may agree or which the mediator suggests may be necessary to facilitate an effective mediation; (iv) exchange written position papers which state their position in the dispute and outline the subject matter and substance of the anticipated testimony of individuals having personal knowledge of the facts underlying the dispute, and; (v) mediate in good faith. In the event the parties are unable to agree upon a mediator, the mediator shall be appointed by a court of competent jurisdiction. Witness expenses shall be borne by the party producing the witness. Mediator fees and expenses shall be paid equally by the parties. The mediator shall have the same immunity as is available to federal district court judges.

## **ARTICLE 5. SUBCONTRACTORS.**

### **5.1 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK.**

#### **5.1.1 APPROVAL REQUIRED.**

(1) Listing of Subcontractors shall be as required by U.C.A. 63A-5-208 as amended and/or as stated in the Contract Documents, including but not limited to the "USU

Subcontractors List Form".

(2) The Contractor shall not contract with a proposed person or entity to whom the Owner has made a reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

**5.1.2 BUSINESS AND LICENSING REQUIREMENTS.** All Subcontractors used by the Contractor shall comply with all applicable business and licensing requirements.

**5.1.3 SUBSEQUENT CHANGES.** After the lapse of twenty-four (24) hours from the bid opening, the Contractor may change its listed Subcontractors only in accordance with Rule R 23-1 and the Contract Documents and with written approval of the Director of Facilities Design and Construction.

**5.1.4 BONDING OF SUBCONTRACTORS.** Subcontractors as identified by Owner in the procurement documents, may be required to submit performance and payment bonds to cover the full extent of their portion of the Work. This provision does not in any way limit the right of the Contractor to have subcontractors at any tier be required to have a performance and/or payment bond.

## **5.2 SUBCONTRACTUAL RELATIONS.**

**5.2.1 COMPLY WITH CONTRACT DOCUMENTS.** By appropriate enforceable agreement, the Contractor shall require each Subcontractor to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Documents, assumes towards the Owner and Consultant.

**5.2.2 RIGHTS.** Each Subcontractor agreement shall preserve and protect the rights of the Owner and Consultant under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the Subcontractor agreement, the benefit of all rights and remedies against the Contractor that the Contractor, by the Contract Documents, has against the Owner.

**5.2.3 SUB-SUBCONTRACTORS.** The Contractor shall require each Subcontractor to enter into similar agreements with its Subcontractors which complies with the requirements of Subparagraphs 5.2.1 and 5.2.2 hereinabove.

**5.2.4 DOCUMENT COPIES.** The Contractor shall make available to each proposed Subcontractor, prior to execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound. Subcontractors shall similarly make copies of applicable portions of the Contract Documents available to their respective proposed Subcontractors.

## **5.3 CONTINGENT ASSIGNMENT OF SUBCONTRACTS.**

**5.3.1 CONDITIONS FOR ASSIGNMENT TO OWNER.** Each subcontract agreement for a subcontractor at any tier for a portion of the Work is assigned by the Contractor to the Owner provided that the assignment is effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 13.2 or stoppage of the Work by Owner pursuant to Paragraph 13.5, and only for those subcontract agreements which the Owner accepts by notifying the Subcontractor in writing. The subcontract shall be equitably adjusted to meet the new conditions of the work.

## **ARTICLE 6. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

### **6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS.**

**6.1.1 IN GENERAL.** The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor has a compensable Claim due to such action by Owner, Contractor shall make such Claim in accordance with Article 4.

**6.1.2 COORDINATION AND REVISIONS.** The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule and Contract Sum deemed necessary after a joint review and agreement by the Owner. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors, and the Owner until subsequently revised.

### **6.2 MUTUAL RESPONSIBILITY.**

**6.2.1 CONTRACTOR COORDINATION.** The Contractor shall afford the Owner and separate contractor(s) a reasonable opportunity for delivery and storage of their materials and equipment and performance of their activities and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

**6.2.2 REPORTING PROBLEMS TO OWNER .** If part of the Contractor's Work depends on work by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Owner apparent defects in workmanship that would render it unsuitable for proper execution. Failure of the Contractor to make said report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects in workmanship not then reasonably discoverable.

**6.2.3 COSTS.** Costs caused by delays or by improperly timed activities or defective construction shall be borne by the responsible party in accordance with the Contract Documents.

**6.2.4 CONTRACTOR REMEDIAL WORK.** The Contractor shall promptly remedy damage caused by the Contractor to completed or partially completed Work or to property of the Owner or separate contractors and subcontractors as provided in Subparagraph 10.2.6.

## **ARTICLE 7. MODIFICATIONS.**

### **7.1 MODIFICATIONS.**

**7.1.1 IN GENERAL.** Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or Field Order, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

**7.1.2 BY WHOM ISSUED.** A Change Order or Construction Change Directive shall be issued by the Owner. A Field Order is issued by the Consultant or by the Owner.

**7.1.3 PERFORMANCE REQUIREMENTS.** Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or Field Order.

**7.1.4 ADJUSTING UNIT PRICES.** 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 or Construction Change Directive that application of such unit prices to quantities of Work proposed will cause a substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

### **7.2 CHANGE ORDERS.**

**7.2.1 ADJUSTING SUM.** If the Change Order provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

(1) mutual acceptance of a fixed sum properly itemized and supported by sufficient substantiating data to permit evaluation;

(2) unit prices stated in the Contract Documents or subsequently agreed upon;

(3) cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee with the Contractor providing, in such form as the



Consultant may prescribe, an itemized accounting with appropriate supporting data; or

- (4) as provided in Subparagraph 7.2.2 hereinbelow.

**7.2.2 OWNER RESOLUTION OF SUM AND STANDARDS.** If the Contractor and Owner do not agree on any of the above methods for adjustment of the Contract Sum, the adjustment shall be determined on the basis of reasonable actual costs and savings as demonstrated by an itemized accounting with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Subparagraph shall be limited to the following:

- (1) all direct and indirect costs of labor; including workers compensation insurance, social security and other federal and state payroll-based taxes, and payroll based fringe benefits paid by Contractor so long as they are reasonable and no higher than that charged to other clients;

- (2) costs of materials, on-site temporary facilities, supplies and equipment (except hand tools) required for or incorporated into the work;

- (3) rental costs of machinery, equipment, tools (except hand tools), and on-site temporary facilities, whether rented from the Contractor or others;

- (4) costs of permits and other fees, sales, use or similar taxes related to the Work;

- (5) additional costs of field supervision and field office personnel directly attributable to the change; and

- (6) overhead and profit by the following liquidated formula, which is not a penalty, but a reasonable calculation agreed upon at the time of execution of the Contractor's Agreement, and provided by formula herein due to the fact that the actual amount due for said overhead and profit cannot easily be ascertained at the time of such execution. The markups in 7.2.2(6)(a) and (b) are to cover the Contractor's additional payment and performance bond premiums, insurance premiums not specified under 7.2.2(1), home office overhead and profit. Overhead and profit includes, but is not limited to, the Contractor's Project Manager and Cost Estimator. Each request for pricing shall stand on its own and not be combined with other requests for pricing in determining the allowed markup described below. A particular request for pricing shall include all items reasonably related together and determinable at the time of the request. If several unrelated requests for pricing are grouped together in a single Change Order, each request for pricing will be considered separately for purposes of calculating the markup under the following formula:

- (a) A markup of 15% shall be applied to the cost of each individual change up to \$20,000 in cost, but in no case shall the markup be less than \$150;

(b) A markup of 10% shall be applied to the portion of the cost of each individual charge in excess of \$20,000;

(c) Subcontractors at any tier shall be entitled to markup their costs related to a Change Order with the same percentages as specified in 7.2.2(6)(a) and (b) above, except that the minimum markup shall be \$50 for any individual change.

**7.2.3 AGREEMENT; CHANGE ORDER ISSUED.** When the Owner and the Contractor agree on the adjustment in the Contract Time and/or Contract Sum, the agreed to adjustment shall be incorporated in an appropriate Change Order.

**7.2.4 DISAGREEMENTS; CLAIMS PROCESS STILL APPLIES; CONSTRUCTION CHANGE DIRECTIVE MAY BE ISSUED.** If there is no agreement with the adjustment in Contract Time and/or Contract Sum, then the disagreement is still subject to the Article 4 claims resolution process. A Construction Change Directive may be issued in the interim.

**7.2.5 CREDITS.** The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Consultant.

### **7.3 CONSTRUCTION CHANGE DIRECTIVES.**

**7.3.1 WHEN USED.** A Construction Change Directive may be issued in the case of an immediate need for the Work to commence.

**7.3.2 PROCEED WITH WORK AND NOTIFY OWNER ABOUT ADJUSTMENT METHOD.** 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 Contact Sum or Contract Time. Any disagreement is still subject to the requirements of the claims resolution process in Article 4 hereinabove.

**7.3.3 RESOLUTION OF CONSTRUCTION CHANGE DIRECTIVES.** Contractor and Owner shall use best efforts to promptly reach an agreement as to the impact of the Construction Change Directive on the Contract Sum and Contract Time and have such agreement reflected in a Change Order. If the Owner is not able to reach agreement with the Contractor, the Owner shall prepare a proposed Change Order which shall become effective as a Change Order 21 days after notification to the Contractor unless the Contractor files a claim under Article 4 before the expiration of the 21 days.

**7.3.4 INTERIM PAYMENTS BY OWNER.** Pending final determination of cost to the Owner, Owner shall pay any amount not disputed by the Owner of the estimated cost indicated on the Construction Change Directive as the Work under the Construction Change Directive progresses.

**7.4 FIELD ORDER.** The Consultant will have the authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly. If the Contractor wishes to contend that said minor change does involve an adjustment in the Contract Sum and/or Contract Time, the Contractor shall promptly notify the Owner of the Contractor's position regarding compensation and time. If such contention is not resolved with the Owner, the Contractor may file a Claim in accordance with Article 4.

## **ARTICLE 8. PAYMENTS AND COMPLETION.**

### **8.1 SCHEDULE OF VALUES.**

**8.1.1 SCHEDULE OF VALUES.** Before the first Application for Payment, the Contractor shall submit to the Consultant 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 Consultant may require. This schedule, unless objected to by the Consultant, shall be used as a basis for reviewing the Contractor's Applications for Payment. The Contractor shall not be entitled to payment until receipt and acceptance of the Schedule of Values.

**8.1.2 FORM.** The schedule of values shall be prepared in such a manner that each major item of the Work and each subcontracted item of the Work is shown as a separate line item on AIA Document G703, Application and Certification for Payment, Continuation Sheet, or other form acceptable to the Owner.

### **8.2 APPLICATIONS FOR PAYMENT.**

**8.2.1 IN GENERAL.** The Contractor shall submit to the Consultant an itemized Application for Payment for Work completed in accordance with the schedule of values and that reflects retainage as provided for in the Contractor's Agreement. Such application shall be notarized and supported by such data substantiating the Contractor's right to payment as the Owner or Consultant may require. Said data may include, but is not limited to, copies of requisitions from Subcontractors.

(1) Such applications may include requests for payment pursuant to 7.3.4.

(2) Such applications may not include requests for payment of amounts the Contractor does not intend to pay to a Subcontractor because of a dispute or other reason.

**8.2.2 PAYMENT FOR MATERIAL AND EQUIPMENT.** Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved

in advance by the Owner and Consultant, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include applicable insurance, storage and transportation to the site for such materials and equipment stored off the site. The Owner may require copies of invoices or other suitable documentation.

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

**8.2.4 HOLDBACK BY OWNER.** Notwithstanding anything to the contrary contained in the Contract Documents, the Owner may, as a result of the claims resolution process, withhold any payment to the Contractor hereunder if and for so long as the Contractor fails to perform any of its obligations hereunder or otherwise is in default under any of the Contract Documents.

### **8.3 CERTIFICATES FOR PAYMENT.**

**8.3.1 ISSUED BY CONSULTANT.** The Consultant shall within ten (10) days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Consultant determines due, or notify the Contractor and Owner in writing of the Consultant's reasons for withholding certification in whole or in part as provided in Subparagraph 8.4.1. If the Consultant fails to act within said ten (10) day period, the Contractor may file the Application for Payment directly with the Owner's Designated Representative and the Owner will thereafter have twenty (20) days from the date of the Owner's receipt to resolve the amount to be paid and to pay the undisputed amount. The accuracy of the Contractor's Applications for Payment shall be Contractor's responsibility, not Consultant's.

**8.3.2 CONSULTANT'S REPRESENTATIONS.** The Consultant's issuance of a Certificate for Payment shall constitute a representation to the Owner that to the best of the Consultant's knowledge, information and belief, based upon the Consultant's observations at the site, the data comprising the Application for Payment, and what is reasonably inferable from the observations and data, that the Work has progressed to the point indicated in the Application and that the quality of the work is in accordance with the Contract Documents. The foregoing representations are subject to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the Consultant. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to

payment in the amount certified. However, the issuance of a Certificate for Payment shall not be a representation that the Consultant has (a) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (b) reviewed construction means, methods, techniques, sequences or procedures, (c) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, (d) ascertained how or for what purpose the Contractor used money previously paid on account of Contract Sum, or (e) any duty to make such inquiries.

#### **8.4 DECISIONS TO WITHHOLD CERTIFICATION.**

**8.4.1 WHEN WITHHELD.** The Consultant may decide not to certify payment and may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Consultant's judgment the representations to the Owner required in Subparagraph 8.3.2 above can not be made or under Subparagraph 8.2.4 above. If the Consultant is unable to certify payment in the amount of the Application, the Consultant shall notify the Contractor and Owner as provided in Subparagraph 8.3.1 above. If the Contractor and Consultant can not agree on a revised amount, the Consultant shall promptly issue a Certificate for Payment for the amount to which the Consultant makes such representations to the Owner. The Consultant may also decide not to certify payment or, because of subsequently discovered evidence or observations, may nullify the whole or part of a Certificate for Payment previously issued, to such extent as may be necessary in the Consultant's opinion to protect the Owner from loss because of:

- (1) defective Work not remedied;
- (2) third party claims filed or reasonable evidence indicating probable filing of such claims;
- (3) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- (4) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- (5) damage to the Owner or another contractor;
- (6) reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- (7) failure to carry out the Work in accordance with the Contract Documents.

**8.4.2 CERTIFICATION ISSUED WHEN REASONS FOR WITHHOLDING REMOVED.** When the reasons stated in Subparagraph 8.4.1 for withholding certification are removed, certification will be made for such related amounts.

**8.4.3 CONTINUE WORK EVEN IF CONTRACTOR DISPUTES CONSULTANT'S DETERMINATION.** If the Contractor disputes any determination by the Consultant or the result of the claims resolution process with regard to any Certification of Payment, the Contractor nevertheless shall expeditiously continue to prosecute the Work.

**8.4.4 OWNER NOT IN BREACH.** The Owner shall not be deemed to be in breach of this Contract by reason of the withholding of any payment pursuant to any provision of the Contract Documents provided the Owner's action or such withholding is consistent with the results of the claims resolution process.

## **8.5 PROGRESS PAYMENTS.**

**8.5.1 IN GENERAL.** Except as provided in Paragraph 8.3.1, the Owner shall pay any undisputed amount within thirty (30) days of the date that the application for payment was submitted to the Consultant. In no event shall Owner be required to pay any disputed amount.

**8.5.2 CONTRACTOR AND SUBCONTRACTOR RESPONSIBILITY.** The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payment to its Subcontractors in a similar manner.

**8.5.3 INFORMATION FURNISHED BY CONSULTANT TO SUBCONTRACTOR.** The Consultant shall, on request, furnish to the Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Consultant and Owner on account of portions of the Work done by such Subcontractor.

**8.5.4 OWNER AND CONSULTANT NOT LIABLE.** Neither the Owner or Consultant shall have an obligation to pay, monitor or enforce the payment of money to a Subcontractor, except to the extent as may otherwise be required by law.

**8.5.5 CERTIFICATE, PAYMENT OR USE NOT ACCEPTANCE OF IMPROPER WORK.** A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work that is not in accordance with the Contract Documents.

**8.6 PAYMENT UPON SUBSTANTIAL COMPLETION.** Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Consultant, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof as provided in the Contract Documents. To the extent allowed by law, the Owner may retain up to 200% of the fair market value of the work that has not been completed in accordance with the Contract Documents.

## **8.7 PARTIAL OCCUPANCY OR USE.**

**8.7.1 IN GENERAL.** 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 and authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is Substantially Complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of the warranties required by the Contract Documents. When the Contractor considers a portion to be substantially complete, the Contractor shall prepare and submit a list to the Consultant as previously provided for herein. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. Contractor shall have continuing responsibility to protect the site and the Work during such partial occupancy and shall be responsible for damage except to the extent caused solely by the Owner during such partial occupancy or use.

The stage of progress of the Work shall be determined by written agreement between the Owner and Contractor.

**8.7.2 INSPECTION.** Immediately prior to such partial occupancy or use, the Owner, Contractor, and Consultant 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.

**8.7.3 NOT CONSTITUTE ACCEPTANCE.** Except to the extent, it is agreed upon in writing by the Owner, partial occupancy or use of a portion or portion of the Work shall not constitute acceptance of Work not complying with the requirement of the Contract Documents.

## **8.8 FINAL COMPLETION AND FINAL PAYMENT.**

**8.8.1 CERTIFICATE FOR PAYMENT.** The Consultant's final Certificate for Payment shall constitute a further representation that conditions listed in Subparagraph 8.8.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

**8.8.2 CONDITIONS FOR FINAL PAYMENT.** Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Consultant the following to the extent required by the Owner:

(1) an affidavit that payrolls, bills for material and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied;

(2) a current or additional certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days prior written notice, by certified mail, return receipt requested, has been given to the Owner;

- (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents;
- (4) if requested by surety in a timely manner or by Owner, consent of surety, to final payment;
- (5) Receipt of Record Drawings, Specifications, Addenda, Change Orders and other Modifications maintained at the site; the warranties, instructions, operation and maintenance manuals, and training videos required to be furnished by the Contract Documents;
- (6) Other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Owner may require consent of Surety to the final payment. If such liens, claims, security interests or encumbrances remain unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees; and
- (7) A written statement demonstrating how the Contractor will distribute interest earned on retention to Subcontractors as required by Section 13.8.5, U.C.A.

**8.8.3 WAIVER OF CLAIMS: FINAL PAYMENT.** The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:

- (1) liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- (2) failure of the Work to comply with the requirements of the Contract Documents;
- (3) terms of warranties required by the Contract Documents; or
- (4) the one-year warranty period and any corrected Work.

**8.8.4 DELAYS NOT CONTRACTOR'S FAULT.** If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, the Owner shall, upon application by the Contractor and certification by the Consultant, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims. Unless otherwise stated by the Owner in writing, the making of final payment shall constitute a waiver of claims by the Owner as provided in Subparagraph 8.8.3 of these General Conditions for that portion of that Work fully completed and accepted by the Owner.



**8.8.5 WAIVER BY ACCEPTING FINAL PAYMENT.** Acceptance of final payment by the Contractor or a Subcontractor shall constitute a waiver of Claims by that payee except those Claims previously made in writing and identified by that payee as unsettled at the time of final Application for Payment. Such waivers shall be in addition to the waiver described in Subparagraph 8.8.3 of these General Conditions.

**ARTICLE 9. TESTS AND INSPECTIONS, SUBSTANTIAL AND FINAL COMPLETION, UNCOVERING, CORRECTION OF WORK AND WARRANTY PERIOD.**

**9.1 TESTS AND INSPECTIONS.**

**9.1.1 IN GENERAL.** Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations, resolutions or orders of public authorities having jurisdiction shall be made at an appropriate time. Unless otherwise specifically set forth in the Contract Documents or agreed to by the Owner in writing, the Owner shall contract for such tests, inspections, and approvals with an independent entity, or with the appropriate public authority, and the Owner shall bear all related costs of tests, inspections and approvals except as provided in 9.1.2 below. If any of the Work is required to be inspected or approved by the terms of the Contract Documents by any public authority, the Contractor shall, at least two working days prior to the time of the desired inspection, and following the procedures established by the Owner, request such inspection or approval to be performed. The Contractor shall give the Consultant timely notice of when and where tests and inspections are to be made so that the Consultant may observe such procedures.

**9.1.2 FAILURE OF AN INSPECTOR TO APPEAR.** Work shall not proceed without any required inspection and the associated authorization to proceed unless the following procedures and requirements have been met:

- (1) The inspection or approval was requested in a timely manner as provided in Subparagraph 9.1.1;
- (2) The Contractor received written confirmation by fax or other means that the inspection was scheduled;
- (3) The Contractor has contacted or attempted to contact the inspector to confirm that the inspector is unable to perform the inspection as scheduled;
- (4) If the inspector has confirmed that it is unable to perform the inspection as scheduled or if the Contractor is unable to contact the inspector, the contractor shall attempt to contact the State Building Official or other authority having jurisdiction; and
- (5) The Contractor has documented the condition of the work prior to being covered through photos or other means.

**9.1.3 NONCONFORMING WORK.** If such procedures for testing, inspection or approval under Subparagraphs 9.1.1 reveal failure of portions of the Work to comply with the 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 Owner's expenses, including the cost of retesting for verification of compliance if necessary, until the Owner accepts the Work in question as complying with the requirements of the Contract Documents.

**9.1.4 CERTIFICATES.** 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 Consultant.

**9.1.5 CONSULTANT OBSERVING.** If the Consultant is to observe tests, inspections or approvals required by the Contract Documents, the Consultant shall do so with reasonable promptness and, where practicable, at the normal place of testing.

**9.1.6 PROMPTNESS.** Tests, inspections and arrangements for approvals conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

## **9.2 INSPECTIONS: SUBSTANTIAL AND FINAL.**

**9.2.1 SUBSTANTIAL COMPLETION INSPECTION.** Prior to requesting a substantial completion inspection, the Contractor shall prepare a comprehensive initial punchlist, including unresolved items from prior inspections, for review by the Owner and Consultant to determine if the Project is ready for a substantial completion inspection. If the Owner determines that the initial punchlist indicates that the Project is not substantially complete, the initial punchlist will be returned to the Contractor with written comments. If the Owner determines that the initial punchlist indicates that the Project may be substantially complete, the Consultant shall promptly organize and perform a Substantial Completion inspection in the presence of the Owner and all appropriate authorities.

(1) If the Consultant reasonably determines that the initial punchlist prepared by the Contractor substantially understates the amount of the Work remaining to be completed and the Project is not substantially complete, the Consultant shall report this promptly to the Owner, and upon concurrence of the Owner, the Contractor will be assessed the costs of the inspection and punchlist preparation incurred by the Consultant and the Owner.

(2) When the Work or designated portion thereof is Substantially Complete, the Consultant shall prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion; shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the work and insurance; and shall fix the time within which the Contractor shall finish all items on the punchlist accompanying the Certificate. If there is a punchlist, the Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on the punchlist does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

(3) Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof except to the extent as provided otherwise in the Contract Documents or if such warranty is related to an item where the work is not complete. Such warranty documents shall state the length of the warranty, which must comply with the Contract Documents.

(4) The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate.

(5) Except to the extent the Owner's designated representative otherwise approves in advance and in writing, the Contractor shall submit the following documents in order to achieve Substantial Completion: written warranties, guarantees, operation and maintenance manuals, and all complete as-built drawings. The Contractor must also provide or obtain any required approvals for occupancy. The Contractor is responsible for the warranty of all Work, whether performed by it or by its Subcontractors at any tier.

**9.2.2 FINAL COMPLETION INSPECTION.** Prior to requesting a final inspection, the Contractor shall verify all punchlist items are corrected/completed. Once all punchlist items are corrected/completed the Contractor shall notify the Owner and request a final inspection. The Owner shall notify the Consultant and perform a final inspection. Two final inspections may be allowed due to required weather changes required to complete some items. When all punchlist items are completed a final pay request will be provided by the Contractor, authorized by the Consultant and processed by the Owner.

### **9.3 UNCOVERING OF WORK.**

**9.3.1 UNCOVER UNINSPECTED WORK.** Except as provided in Subparagraph 9.3.3, if a portion of the Work is covered prior to an Inspector's approval to proceed, it must, be uncovered for the Inspector's inspection and be replaced at the Contractor's expense without change in the Contract Time.

**9.3.2 OBSERVATION PRIOR TO COVERING.** Except as provided in Subparagraph 9.3.3, if the Owner or the Consultant has requested in writing to observe conditions prior to any Work being covered or if such observation is specified in the Contract Documents, and the Work is covered without such observation, the Contractor shall be required to uncover and appropriately replace the Work at the Contractor's expense without change in the Contract Time. If the Contractor requests an inspection and the Owner or Consultant, including any inspector of each, does not appear, the Contractor shall immediately notify the Owner of such lack of appearance, but shall not cover the Work without such inspection.

**9.3.3 WHEN AN INSPECTOR FAILS TO APPEAR OR CONSULTANT OR OWNER DID NOT MAKE PRIOR REQUEST.** If work is performed by the Contractor without an inspection as provided in Subparagraph 9.1.2 or if a portion of the Work has been covered which the Consultant or Owner has not specifically requested to observe prior to its being covered or such

observation is not specified by the Contract Documents, the Consultant or Owner 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 shall be responsible for payment of such costs.

#### **9.4 CORRECTION OF WORK AND WARRANTY PERIOD.**

**9.4.1 CONTRACTOR CORRECT THE WORK.** The Contractor shall correct Work rejected by the Consultant, Inspector or Owner, or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear the costs of correcting such rejected Work, including additional testing and inspections and compensation for the Consultant's and Inspector's services and expenses made necessary thereby.

**9.4.2 WARRANTY AND CORRECTION AFTER SUBSTANTIAL COMPLETION.** If within one year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Subparagraph 9.2.1 or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, including failure to perform for its intended purpose, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The period of one year shall be extended with respect to portions of the Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work. This obligation of the Contractor under this Subparagraph 9.4.2 shall be operative notwithstanding the acceptance of the Work under the Contract, the final certificate of payment, partial or total occupancy and/or termination of the Contract. The Owner shall give notice of observed defects with reasonable promptness, however, failure to give such notice shall not relieve the Contractor of its obligation to correct the Work at the cost that the Contractor would have incurred if the Owner did so report with reasonable promptness. All corrected Work shall be subject to a one-year warranty period the same in all respects as the original Work, except that such warranty period shall commence from the time of Substantial Completion of the corrected Work. This warranty period does not affect the Owner's right to pursue any available remedies against Contractor.

#### **9.4.3 REMOVAL OF WORK.**

(1) The Contractor shall promptly remove from the premises all Work that the Owner and/or the Consultant determines as being in nonconformance with the Contract Documents, whether incorporated or not.

(2) The Contractor shall promptly replace and re-execute the Work in accordance with the Contract Documents and without expense to the Owner.

(3) The Contractor shall bear the expense of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or of other contractors destroyed or damaged by such removal or replacement.

(4) If the Contractor does not remove such condemned Work within a reasonable time, fixed by written notice, the Owner may have the materials removed and stored at the expense of the Contractor.

(5) If the Contractor does not correct the nonconforming Work within a reasonable time, fixed by written notice, the Owner may correct it in accordance with Paragraph 13.2.2 of these General Conditions.

**9.4.4 NOT LIMIT OTHER OBLIGATIONS.** Nothing contained in this Paragraph 9.4 shall be construed to establish a period of limitation with respect to other obligations which the Contractor may have under the Contract Documents. Establishment of the time period of one year as described in Paragraph 9.4.2 relates only to the specific obligation of the Contractor to correct 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 other than specifically to correct the Work.

## **9.5 ADDITIONAL WARRANTIES.**

**9.5.1 IN GENERAL.** In addition to any other provisions of this Article 9, the following warranties shall apply:

(1) The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new, except to the extent otherwise required or expressly permitted by the Contract Documents.

(2) The Contractor also warrants to the Owner that the Work will be free from defects not inherent in the quality required or permitted and that the Work will conform with the requirements of the Contract Documents. Work not conforming to said requirements, including substitutions not properly approved and authorized, may be considered defective at the Owner's option.

**9.5.2 EXCLUSION.** Unless due to the negligent or intentional act or omission of the Contractor or those under the Contractor's control, or as otherwise stated in the Contract Documents, the Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper

operation, or normal wear and tear under normal usage.

**9.5.3 FURNISH EVIDENCE ON REQUEST.** If requested by the Consultant or Owner, the Contractor shall furnish satisfactory evidence as to the type and quality of materials and equipment.

**9.6 ACCEPTANCE OF NONCONFORMING WORK.** If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum shall be reduced as appropriate and equitable. Such adjustment shall be affected whether or not final payment has been made.

## **ARTICLE 10. PROTECTION OF PERSONS AND PROPERTY.**

### **10.1 SAFETY PRECAUTIONS AND PROGRAMS.**

**10.1.1 CONTRACTOR RESPONSIBILITY.** The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

**10.1.2 HAZARDOUS MATERIALS.** In the event the Contractor encounters on the site material reasonably believed to be asbestos or polychlorinated biphenyl (PCB) or any other hazardous waste or substance which may endanger the health of those persons performing the Work or being on the site, which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and Consultant by phone with a follow-up document in writing. The Work in the affected area shall be resumed in the absence of asbestos, polychlorinated biphenyl (PCB) or said hazardous waste or substance, or when it has been rendered harmless according to the Federal and State health standards. Except to the extent provided otherwise in the Contract Documents, the Contractor shall not be required to perform without consent, any Work relating to asbestos, polychlorinated biphenyl (PCB) or any other hazardous waste or substance.

### **10.2 SAFETY OF PERSONS AND PROPERTY.**

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

- (1) employees on the Work 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 a Subcontractor; 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 SAFETY PROGRAM, PRECAUTIONS.** The Contractor shall institute a safety program at the start of construction to minimize accidents. Said program shall continue to the final completion of the Project and conform to applicable laws and regulations including the Utah Occupational Safety and Health Rules and Regulations as published by the Utah Industrial Commission - UOSH Division. The Contractor shall post signs, erect barriers, and provide those items necessary to implement the safety program. As soon as the Contractor proceeds with the Work, the Contractor shall have all workers and all visitors on the site wear safety hard hats and obey all safety rules and regulations and statutes. The Contractor shall post a sign in a conspicuous location indicating the necessity of wearing hard hats and the Contractor shall loan such hats to visitors.

**10.2.3 COMPLIANCE WITH LAWS.** The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss. In particular, the Contractor shall comply with all applicable provisions of Federal, Owner and municipal safety laws, rules, and regulations as well as building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where the Work is being performed.

**10.2.4 ERECT AND MAINTAIN SAFEGUARDS.** The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

**10.2.5 UTMOST CARE.** 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 utmost care and carry on such activities under supervision of properly qualified personnel.

**10.2.6 PROMPT REMEDY.** The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Subparagraph 10.2.1 of these General Conditions caused in whole or in part by the Contractor, a Subcontractor, 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 said Subparagraph 10.2.1, except to the extent such damage or loss is directly due to errors in the Contract Documents or caused by agents or employees of the Consultant or Owner. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Paragraph 3.13 of these General Conditions.

**10.2.7 SAFETY DESIGNEE.** The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor

in writing to the Owner and Consultant.

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

**10.2.9 OFF-SITE RESPONSIBILITY.** In addition to its other obligations under this Article 9, the Contractor shall, at its sole cost and expense, promptly repair any damage or disturbance to walls, utilities, streets, ways, sidewalks, curbs and the property of third parties (including municipalities and other governmental agencies) resulting from the performance of the Work, whether by it or by its Subcontractors at any tier. The Contractor shall not cause materials, including soil and debris, to be placed or left on streets or ways.

**10.3 EMERGENCIES.** In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Paragraph 4.3 and Article 7 of these General Conditions.

## **ARTICLE 11. INSURANCE AND BONDS.**

### **11.1 LIABILITY INSURANCE.**

**11.1.1 OCIP.** If required in the Supplementary General Conditions, the Contractor shall comply with the State of Utah/USU's Owner Controlled Insurance Program (OCIP).

**11.1.2 IN GENERAL.** To protect against liability, loss and/or expense arising from damage to property or injury or death of any person or persons incurred in any way out of, in connection with or resulting from the Work provided hereunder, Contractor shall obtain and maintain in force during the entire period of this Contract without interruption, at its own expense, the following insurance from insurance companies authorized to do business in the State of Utah in a form and content satisfactory to the Owner and rated "A" or better with a financial size category of (a) Class X or larger where the Contract Sum is \$1,000,000 or greater or (b) Class VII or larger where the Contract Sum is under \$1,000,000. Said rating and financial size category shall be as published by A.M. Best Company at the time the Contract is executed.

(1) Workers' Compensation Insurance and Employers' Liability Insurance. Worker's Compensation Insurance shall cover full liability under the Worker's Compensation Laws of the jurisdiction in which the Project is located at the statutory limits required by said jurisdiction's laws. Employer's Liability Insurance shall provide the following limits of liability: \$100,000 for each accident; \$500,000 for Disease-Policy Limit; and \$100,000 for Disease-Each Employee. The Contractor shall require all Subcontractors to take and maintain similar policies of Workers' Compensation Insurance.

(2) Commercial General Liability Insurance and/or Comprehensive General Liability Insurance, including coverage for premises/operations, explosion, collapse and underground hazards, products/completed operations, contractual (including this Contract), and



personal injury, including employees, with limits of not less than \$1,000,000 each occurrence, and not less than \$2,000,000 general aggregate and \$2,000,000 products/completed operations aggregate. Aggregate limit shall be designated as applying to this Contract. If this insurance coverage is written on a "claims-made" basis, the certificate of insurance required below shall so indicate and the policy shall contain an extended reporting period provision or similar "tail" provision such that claims reported up to three (3) years beyond the date of Substantial Completion of this Contract are covered. Such Commercial General Liability Insurance must provide coverage for explosion, collapse and underground hazards. Said certificate shall state that the policy required by this paragraph has been endorsed to name the State of Utah and DFCM as Additional Insureds.

(3) Comprehensive Automobile Liability Insurance including owned, hired, and non-owned automobiles with limits not less than \$1,000,000 any one accident or loss.

(4) Aircraft Use. Contractor using its own aircraft, or employing aircraft in connection with the Work performed under this Agreement shall maintain Aircraft Liability Insurance with a combined single limit of not less than \$1,000,000 per occurrence. Said certificate shall state that the policy required by this paragraph has been endorsed to name Utah State University and Facilities Design and Construction as Additional Insureds.

(5) Owners Protective Liability Insurance with limits of not less than \$1,000,000 shall be purchased and maintained by Contractor. The State of Utah and all institutions, agencies, departments, authorities and instrumentalities, and while acting within the scope of their duties, all of its elected or appointed officers, agents, employees and authorized volunteers as well as members of governing bodies, boards, commissions and advisory committees, shall be named as insureds, but, only in respect to the Work to be performed under this Contract.

**11.1.3 CONFIGURATIONS.** Any policy required by this section may be arranged under a single policy for the full limit required, or by a combination of underlying policies with the balance provided by an Excess or Umbrella Liability Policy.

**11.1.4 CONTRACTOR LIABILITY.** Irrespective of the requirements as to insurance to be carried by Contractor as provided herein; insolvency, bankruptcy or failure of any insurance company to pay all claims accruing, shall not be held to relieve Contractor of any obligations hereunder.

**11.1.5 CERTIFICATE, NOTICE REQUIREMENTS, ADDITIONAL INSURED.** Before the Contract Agreement is executed, certificates evidencing coverages as specified above are in effect, shall be furnished to the Owner. Such insurance certificates shall contain provisions that no cancellation, material change therein or non-renewal shall become effective except upon thirty (30) days prior written notice to the Owner as evidenced by return receipt, certified mail sent to Owner. The Contractor shall notify the Owner within thirty (30) days of any claim(s) against the Contractor, and if such claim(s) exceed 20% of the applicable required insured limits, the Owner may require the Contractor to re-instate the policy to provide full protection at the original limits. For any risk not covered by the Owner's protective liability insurance policy or

the worker's compensation policies, the State of Utah shall be named as an additional insured party, as primary coverage and not contributing.

**11.1.6 DEDUCTIBLE LIABILITY.** Any and all deductibles in the above-described policies shall be assumed by, for the account of, and at sole risk of Contractor.

**11.1.7 ALTERNATIVE COVERAGE.** The Owner's Risk Manager may approve alternative forms of insurance to those stated above based on a finding of reasonable unavailability.

Any type of insurance or any increase of limits of liability not described in this Agreement which the Contractor requires for its own protection or on account of any statute, rule or regulation, shall be its own responsibility and at its own expense.

The carrying of any insurance required by this Agreement shall in no way be interpreted as relieving the Contractor or Subcontractors of any other responsibility or liability under this Agreement or any applicable law, statute, rule, regulation or order.

Contractor shall not violate or knowingly permit to be violated any of the provisions of the policies on insurance required under these General Conditions.

## **11.2 "BUILDER'S RISK" PROPERTY INSURANCE.**

**11.2.1 IN GENERAL.** Owner shall provide "Builder's Risk" property insurance to protect Owner, as well as all Contractors and Subcontractors, and include them as insureds, with respect to Work performed hereunder at Owner's own cost and expense, according to the policies and forms currently in force with insurance carriers selected by Owner's Risk Manager or issued by the Owner Risk Management Fund. Owner's Risk Manager shall furnish, upon request, all parties in interest with copies of said policies authenticated by authorized agents of the insurers or the Owner Risk Management Fund.

**11.2.2 INSPECTIONS, RECOMMENDATIONS.** Owner, the Division of Risk Management, and the Builder's Risk insurers shall have the right to inspect the Work. The Contractor shall comply with reasonable risk control recommendations made by insurers or the Division of Risk Management. Such inspections or recommendations do not relieve the Contractor of any of its responsibilities under the Contract Documents.

**11.2.3 DEDUCTIBLE.** The above described "Builders Risk" policies shall be subject to a total deductible of \$5,000 per loss occurrence, which shall be assumed by all Contractors or Subcontractors, in proportion to their share of the total amount of an insured loss occurrence.

**11.2.4 ADJUSTED WITH AND PAYABLE TO RISK MANAGER AS TRUSTEE.** Any insured property loss is to be adjusted with the Owner's Risk Manager, and made payable to the Owner's Risk Manager as trustee for the Contractor and Subcontractors, as their interests may appear, subject to the requirements of any applicable loss payable clause.

**11.2.5 WAIVER.** Contractor, including all Subcontractors, and Owner hereby waive all rights against each other for damages caused by perils insured against under the "Builder's Risk" insurance provided by Owner, except such rights as Contractor may have to the proceeds of such insurance held by the Owner's Risk Manager as trustee. The Owner and the Contractor each shall require similar waivers from their contractors, subcontractors, subconsultants and agents, at any tier.

**11.2.6 SPECIAL HAZARDS.** Owner shall bear the risk of loss, delay and/or damage due to earthquake and/or flood and may either insure or self-insure that risk. If the Contractor requests in writing that insurance for other special hazards be included in the "Builder's Risk" policy, the Owner's Risk Manager shall, if possible, include such insurance in the policy and the cost thereof shall be charged to the Contractor by Change Order.

**11.3 PERFORMANCE BOND AND PAYMENT BOND.** The Contractor shall submit and maintain in full force and effect as required by law and the Contract Documents, at its own expense, on forms provided by Facilities Design and Construction, and include as part of the quoted total all costs involved in securing and furnishing, the bonds listed below, based on the completed cost of the Contract and effective upon execution of the Contract. Said bonds shall be from surety companies which are authorized to do business in the State of Utah, listed in the U. S. Department of Treasury Circular 570, Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies, and acting within the limitation listed therein.

11.3.1 A full 100 percent performance bond covering the faithful execution of the Contract in accordance with the Contract Documents; and

11.3.2 A full 100 percent payment bond covering payment of all obligations arising under the Contract Documents, for the protection of each person supplying labor, service, equipment, or material for the performance of the Work.

## **ARTICLE 12. MISCELLANEOUS PROVISIONS.**

**12.1 CONSULTANT'S RESPONSIBILITIES.** These General Conditions are not intended to provide an exhaustive or complete list of the Consultant's responsibilities. A separate agreement between the Owner and Consultant incorporates these General Conditions by reference.

**12.2 SUCCESSORS AND ASSIGNS.** The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. The Contractor shall not assign the Contract without the prior written consent of the Owner, nor shall the Contractor assign any amount due or to become due as well as any rights under the Contract, without prior written consent of the Owner.

### **12.3 WRITTEN NOTICE.**

**12.3.1 PERSONAL DELIVERY AND REGISTERED OR CERTIFIED MAIL.** Written notice shall 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 officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail, return receipt requested, to the last business address known to the party giving notice.

**12.3.2 FAX.** Notwithstanding any other provision of these General Conditions, written notice shall also be deemed to have been duly served by verified use of a FAX system by using the known and operative calling number. Service by use of the FAX system is encouraged when timely notice will benefit the Owner, Consultant or Contractor. Notice shall be considered complete and verified upon the sending and confirmation of delivery using the FAX system, if on the same day notice is also sent by registered or certified mail, return receipt requested, to the last business address known to the party giving notice, confirming the FAX delivery.

### **12.4 RIGHTS AND REMEDIES.**

**12.4.1 NOT LIMIT.** 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.

**12.4.2 NOT WAIVER.** Except as expressly provided elsewhere in the Contract Documents, no action or failure to act by the Owner, Consultant or Contractor shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall such action or failure to act constitute approval or acquiescence in a breach thereunder, except as any of the above may be specifically agreed to in writing. In no case shall the Contractor or any Subcontractors be entitled to rely upon any waiver of any of these General Conditions unless agreed to in writing by the Owner.

### **12.5 COMMENCEMENT OF STATUTORY LIMITATION PERIOD.**

**12.5.1 BEFORE SUBSTANTIAL COMPLETION.** Except as provided in 12.5.4 below, as to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion.

**12.5.2 BETWEEN SUBSTANTIAL COMPLETION AND FINAL CERTIFICATION FOR PAYMENT.** Except as provided in 12.5.4 below, as to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to issuance of the final Certification for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of issuance of the final Certification for Payment.

**12.5.3 AFTER FINAL CERTIFICATION FOR PAYMENT.** Except as provided in 12.5.4 below, as to acts or failures to act occurring after the relevant date of issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any warranty provided under Article 9 the date of any correction of the Work or failure to correct the Work by the Contractor under 9.4.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

**12.5.4 EXCEPTION.** Notwithstanding any other provision of this Paragraph 12.5 to the contrary, no applicable statute of limitations shall be deemed to have commenced with respect to any portion of the Work which is not in accordance with the requirements of the Contract Documents, which would not be visible or apparent upon conducting a reasonable investigation, and which is not discovered by the Owner until after the date which, but for this Subparagraph 12.5.4, would be the date of commencement of the applicable statute of limitations; the applicable statute of limitations instead shall be deemed to have commenced on the date of such discovery by the Owner.

**12.6 NOT DISCRIMINATE, NO SEXUAL HARASSMENT.** Pursuant to the laws of the State of Utah, the Contractor, Subcontractors, or anyone for whose act any of them may be liable, will take affirmative action to not discriminate against any employee or applicant for employment because of race, creed, color, sex, religion, ancestry, or national origin. To the extent applicable, said persons will comply with all provisions of Executive Order No. 11246 dated September 24, 1965 and rules, regulations, orders, instructions, designations and other directives promulgated pursuant thereto. Contractor, Subcontractors, or anyone for whose act any of them may be liable, shall not act in any manner as would violate the laws, regulations and policies of the United States or the State of Utah prohibiting sexual harassment.

**12.7 APPLICABLE LAWS.** The applicable laws and regulations of the State of Utah, as well as any applicable local laws and regulations not superceded by State law, shall govern the execution of the Work embodied in the Contract Documents as well as the interpretation of the Contract Documents.

**12.8 CAPITALIZATION.** Terms capitalized in these General Conditions include those which are (1) specifically defined, (2) the title of numbered articles and identified references to Paragraphs, Subparagraphs and Clauses in the document or (3) the titles of referenced documents published by the American Institute of Architects and other organizations.

**12.9 INTERPRETATION.** In the interest of brevity, the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an", but the fact that a modification or an article is absent from the statement and appears in another is not intended to affect the interpretation of either statement.

**12.10 VENUE.** In case of any dispute, which may arise under the Contract Documents, the place of venue shall be in the County of Cache, Utah, unless otherwise agreed to by all the parties in writing.

**12.11 SEPARABILITY.** The invalidity of any part, paragraph, subparagraph, phase, provision or aspect of the Contract documents shall not impair or affect in any manner the validity, enforceability or effect of the remainder of the Contract Documents.

**12.12 CONSTRUCTION OF WORDS.** Unless otherwise stated in the Contract Documents, words, which have well-known technical or construction industry meanings, shall be construed as having such recognized meanings. Unless the context requires otherwise, all other technical words shall be construed in accordance with the meaning normally established by the particular, applicable profession or industry. All other words, unless the context requires otherwise, shall be construed with an ordinary, plain meaning.

**12.13 NO THIRD PARTY RIGHTS.** These General Conditions create rights and duties only as between Subcontractors, Owner and Contractor, and Owner and Consultant. Nothing contained herein shall be deemed as creating third party beneficiary contract rights or other actionable rights or duties as between Contractor and Consultant, or as between Owner, Contractor, or Consultant on the one hand, and any other person or entity.

## **ARTICLE 13. TERMINATION OR SUSPENSION OF THE CONTRACT.**

### **13.1 TERMINATION BY CONTRACTOR.**

**13.1.1 IN GENERAL.** If the Work is stopped for a period of sixty (60) days through no act or fault of the Contractor or a Subcontractor, or their agents or employees or any other persons performing portions of the Work under contract with any of the above, the Contractor, may terminate the Contract in accordance with 13.1.2 hereinbelow for any of the following reasons:

(1) because the Owner has persistently failed to fulfill fundamental Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work;

(2) issuance of an order of a court or other public authority having jurisdiction, except that where the Contractor has standing, the Contractor must cooperate in efforts to stay and/or appeal such order;

(3) an act of government, such as a declaration of national emergency, making material unavailable; or

(4) unavoidable casualties or other similar causes as listed in Subparagraph 13.2.2(2) hereinbelow.

**13.1.2 NOTICE.** If one of the reasons for termination in 13.1.1 hereinabove exist, the Contractor may, upon ten (10) additional days' written notice to the Owner and Consultant, and such condition giving cause for termination still not cured, terminate the Contract and recover

from the Owner payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead, profit and damages.

## **13.2 TERMINATION BY THE OWNER FOR CAUSE.**

**13.2.1 IN GENERAL.** The Owner may terminate the Contract if the Contractor fails to cure any of the following within a period of ten (10) days (or longer if the Owner so approves in writing) after receipt of notice from the Owner specifying the cause for termination:

- (1) The Contractor persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- (2) The Contractor fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- (3) The Contractor persistently disregards laws, ordinances, or rules, regulations, resolutions or orders of a public authority having jurisdiction; or
- (4) The Contractor fails to perform the Work within the time specified in the Contract Documents or any authorized extension thereof or the Contractor fails to make progress with the Work as to endanger such compliance;
- (5) The Contractor fails to perform the Work in accordance with the Contract Documents;
- (6) The Contractor fails to respond promptly to the financial responsibility inquiry under the Contractor's Agreement;
- (7) As permissible by law for a reason to terminate, the Contractor is adjudged bankrupt;
- (8) As permissible by law for a reason to terminate, the Contractor should make a general assignment for the benefit to creditors;
- (9) As permissible by law for a reason to terminate, the Contractor should have a receiver appointed on account of the Contractor's insolvency; or
- (10) The Contractor is in breach of a material provision of the Contract Documents.

### **13.2.2 OWNER'S RIGHT TO CARRY OUT THE WORK.**

- (1) If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten (10) day period (or longer if approved by the

Owner in writing) after receipt of written notice from the Owner to cure such default or neglect, the Owner may without prejudice to other remedies the Owner may have, correct such deficiencies, including taking over the Work and prosecuting the same to completion, by contract or otherwise, and may take possession of, and utilize in completing the Work, such materials, appliances and plant as may be on the site of the Work and necessary for its proper completion. In such case, the Owner shall offset from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Consultant, Owner's staff and legal counsel's additional services and expenses made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. The Contractor shall continue performance of the Contract to the extent not terminated.

(2) Except with respect to defaults of Subcontractors, the Contractor shall not be liable for any excess costs if the failure to perform the Contract arises out of causes beyond the control and without the fault or negligence of the Contractor or anyone for whom the Contractor may be liable. Such causes may include, but are not limited to, acts of God or of the public enemy, acts of the Owner or federal government in either their sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case the failure to perform must be beyond the control and without the fault or negligence of the Contractor or anyone for whom the Contractor may be liable. If the failure to perform is caused by the default of a Subcontractor, and if such default arises out of causes beyond the control of both the Contractor and the Subcontractor, and without the fault or negligence of either of them or anyone for whom either may be liable, the Contractor shall not be liable for any excess costs for failure to perform unless the supplies or services to be furnished by the Subcontractor were obtainable from other sources in sufficient time to permit the Contractor to meet the required delivery or completion schedule.

**13.2.3 ITEMS REQUIRED TO BE TRANSFERRED OR DELIVERED.** The Owner may require the Contractor to transfer title and deliver to the Owner, in the manner and to the extent directed by the Owner:

(1) Any completed portion of the Work; and

(2) Any partially completed portion of the Work and any parts, tools, dies, jigs, fixtures, drawings, information, and contract rights (hereinafter called "construction materials") as the Contractor has specifically produced or specifically acquired for the performance of such part of this Contract as has been terminated; and the Contractor shall, upon direction of the Owner, protect and preserve property in the possession of the Contractor in which the Owner has an interest.

**13.2.4 PAYMENT.** When the Owner terminates the Contract for one or more of the reasons stated in Subparagraph 13.2.1, the Owner may withhold payment and/or pursue all available remedies.

**13.2.5 OWNER PROTECTION IF LIENABLE.** When the subject property is lienable, the Owner may withhold from amounts otherwise due the Contractor for such



completed Work or construction materials such sum as the Owner determines to be necessary to protect the Owner against loss because of outstanding liens or claims for former lien holders.

**13.2.6 CREDITS AND DEFICITS.** If the unpaid balance of the Contract Sum exceeds the full cost of finishing the Work, including compensation for the Consultant's services and expenses made necessary thereby, such excess shall be paid to the Contractor. If such cost exceeds the unpaid balance, the Contractor shall pay the difference to the Owner obligation for payment shall survive the termination of the Contract.

**13.2.7 IF CONTRACTOR FOUND NOT IN DEFAULT OR EXCUSABLE.** If, after notice of termination of the Contract under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, or that the default was excusable under the provisions of this clause, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to the termination for convenience provisions.

**13.2.8 RIGHTS AND REMEDIES NOT EXCLUSIVE.** The rights and remedies of the Owner provided in this Paragraph 13.2 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

### **13.3 SUSPENSION, DELAY OR INTERRUPTION OF WORK BY THE OWNER FOR CONVENIENCE.**

**13.3.1 BY OWNER IN WRITING.** The Owner may in writing and without cause, order the Contractor to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine to be appropriate for the convenience of the Owner.

**13.3.2 TIME PERIOD FOR CLAIMS.** Any Claim by the Contractor for adjustment under this Paragraph 13.3 must be asserted by the Contractor, in writing, within twenty-one (21) days from the date of termination of such suspension, delay or interruption; provided that the Owner may, in its sole discretion, receive and act upon any such Claim asserted at any time prior to final payment under this Contract.

**13.3.3 ADJUSTMENTS.** Any adjustment in Contract Sum and Time shall be in accordance with Articles 3, 4, and 7.

### **13.4 TERMINATION FOR CONVENIENCE OF THE OWNER.**

**13.4.1 IN GENERAL.** The performance of Work under this Contract may be terminated by the Owner in accordance with this Paragraph 13.4 in whole, or from time to time, in part, whenever the Owner shall determine that such termination is in the best interest of the Owner or any person for whom the Owner is acting under this Contract. Any such termination shall be effected by delivery to the Contractor of a notice of termination specifying the extent to which performance of Work under the Contract is terminated, and the date upon which such termination becomes effective.

**13.4.2 CONTRACTOR OBLIGATIONS.** After receipt of a notice of termination, and except as otherwise directed by the Owner in writing, the Contractor shall:

(1) Stop work under the Contract on the date and to the extent specified in the notice of termination;

(2) Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the Work under the Contract as is not terminated;

(3) Terminate all orders and subcontracts to the extent that they relate to performance of Work terminated by the notice of termination;

(4) Assign to the Owner in the manner, at the times, and to the extent directed by the Owner, all of the right, title and interest of the Contractor under the orders and subcontracts so terminated, in which case the Owner shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;

(5) Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Owner, which approval or ratification shall be final for all the purposes of this Paragraph 13.4;

(6) Transfer title and deliver to the Owner in the manner, at the times, and to the extent, if any, directed by the Owner:

(a) The fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced as a part of, or acquired in connection with the performance of the Work terminated by the notice of termination; and

(b) The completed or partially completed drawings, information, and other property which, if the Contract had been completed, would have been required to be furnished to the Owner;

(7) Use best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorized by the Owner, any property of the types referred to in Subparagraph 13.4.2(6) above; provided, however, that the Contractor:

(a) Shall not be required to extend credit to any purchaser; and

(b) May acquire any such property under the conditions prescribed by and at a price or prices approved by the Owner; and provided further that the proceeds of any such transfer of or disposition shall be applied in reduction of any payments to be made by the Owner to the Contractor under this Contract or shall otherwise be credited to the price or cost of the Work covered by this Contract or paid in such other manner as the Owner may direct;

(8) Complete performance of such part of the Work as shall not have been terminated by the notice of termination; and

(9) Take such action as may be necessary, or as the Owner may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor in which the Owner has or may acquire an interest.

**13.4.3 TERMINATION CLAIM.** After receipt of a notice of termination, the Contractor shall submit to the Owner a termination claim, in the form and with certification prescribed by the Owner. Such claim shall be submitted promptly but in no event not later than sixty (60) days from the effective date of termination.

**13.4.4 AGREED UPON PAYMENT.** Subject to the provisions of Paragraph 13.4.3 above, the Contractor and the Owner may agree upon the amount to be paid to the Contractor by reason of the total or partial termination of Work pursuant to this Paragraph 13.4.

**13.4.5 PAYMENT NOT AGREED UPON.** In the event of the failure of the Contractor and the Owner to agree, as provided in Subparagraph 13.4.4, upon the whole amount to be paid to the Contractor by reason of the termination of Work pursuant to this Paragraph 13.4, the Owner shall pay to the Contractor the amounts determined by the Owner as follows, but without duplication of any amounts agreed upon in accordance with Subparagraph 13.4.4:

(1) With respect to all Contract Work performed prior to effective date of the notice of termination, the total (without duplication of any items) of:

(a) The cost of such Work including undisputed Claim amounts;

(b) The cost of terminating, settling and paying claims arising out of the termination of Work under subcontracts or orders as provided in Subparagraph 13.4.2(5) above, exclusive of the amounts paid or payable on account of supplies or materials delivered or services furnished by Subcontractors prior to the effective date of the notice of termination under this Contract, which amounts shall be included in the cost on account of which payment is made under 13.4.5(1)(a) above;

(c) A sum, as overhead and profit on 13.4.5(1)(a) above, determined by the Owner to be fair and reasonable;

(d) The reasonable cost of the preservation and protection of property incurred pursuant to Paragraph 13.4.2(9); and any other reasonable cost incidental to termination of Work under this Contract, including expenses incidental to the determination of the amount due to the Contractor as the result of the termination of Work under this Contract.

(2) The total sum to be paid to the Contractor under 13.4.5(1) above shall not exceed the total Contract Sum as reduced by the amount of payments otherwise made and as further reduced by the Contract price of work not terminated. Except for normal spoilage, and except to the extent that the Owner shall have otherwise expressly assumed the risk of loss,

there shall be excluded from the amounts payable to the Contractor under 13.4.5(1) above, the fair value of property which is destroyed, lost, stolen, or damaged so as to become undeliverable to the Owner, or to a buyer pursuant to Subparagraph 13.4.2(7).

**13.4.6 DEDUCTIONS.** In arriving at the amount due the Contractor under this Paragraph 13.4, there shall be deducted:

(1) All unliquidated advance or other payments on account theretofore made to the Contractor, applicable to the terminated portion of this Contract;

(2) Any Claim which the Owner may have against the Contractor in connection with this Contract; and

(3) The agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the Contractor or sold, pursuant to the provisions of this clause, and not otherwise recovered by or credited to the Owner.

**13.4.7 PARTIAL TERMINATION.** If the termination hereunder be partial, the Contractor may file with the Owner a Claim for an equitable adjustment of the amounts specified in the Contract relating to the continued portion of the Contract and such equitable adjustment as may be agreed upon shall be made in such amounts. Any Claim by the Contractor for an equitable adjustment under this Subparagraph 13.4.7 must be filed within sixty (60) days from the effective date of the notice of termination.

**13.4.8 PARTIAL PAYMENTS.** The Owner may, from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Contractor in connection with the terminated portion of this Contract whenever, in the opinion of the Owner the aggregate of such payments shall be within the amount to which the Contractor will be entitled hereunder. If the total of such payments is in excess of the amount finally agreed or determined to be due under this Paragraph 14.4, such excess shall be payable by the Contractor to the Owner upon demand, together with interest at a rate equal to the average rate at the time being received from the investment of state funds, as determined by the State Treasurer, for the period until the date such excess is repaid to the Owner; provided, however, that no interest shall be charged with respect to any such excess payment attributable to a reduction in the Contractor's claim by reason of retention or other disposition of termination inventory until ten (10) days after the date of such retention or disposition, or such later date as determined by the Owner by reason of the circumstances.

**13.4.9 PRESERVE AND MAKE AVAILABLE RECORDS.** Unless otherwise provided for in this Contract, or by applicable statute, the Contractor shall, from the effective date of termination until the expiration of three years after final settlement under this Contract, preserve and make available to the Owner at all reasonable times at the office of the Contractor, but without direct charge to the Owner, all books, records, documents and other evidence bearing on the costs and expenses of the Contractor under this Contract and relating to the Work terminated hereunder, or, to the extent approved by the Contracting officer, photographs, micrographs, or other authentic reproductions thereof.

**13.5 OWNERS RIGHT TO STOP THE WORK.** If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Paragraph 9.4 or fails to carry out Work in accordance with the Contract Documents, the Owner, by written order signed personally or by an agent specifically so empowered by the Owner in writing, 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 shall 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.

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**SECTION 011700  
PROJECT CLOSEOUT**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS:**

- A. Drawings and general provisions of Contract, including General Conditions and other Division-1 Specification sections, apply to work of this section.

**1.02 DESCRIPTION OF REQUIREMENTS:**

- A. Definitions: Closeout is hereby defined to include general requirements near end of Contract Time, in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in sections of Division 2 through 16.
- B. Submit Project Closeout Documents to Architect at time of Substantial Completion inspection unless otherwise noted.

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION**

**3.01 RECORD DOCUMENT SUBMITTALS:**

- A. General: Specific requirements for record documents are indicated in individual sections of these specifications. Other requirements are indicated in General Conditions. General submittal requirements are indicated in "Submittals" sections. Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire resistive location; provide access to record documents for Architect's/Engineer's reference during normal working hours.

**3.02 RECORD DRAWINGS:**

- A. Maintain a separate print set of contract drawings and shop drawings in clean, undamaged condition, marked to record all changes made during construction. Mark whichever drawing is most capable of showing "field" condition fully and accurately; however, where shop drawings are used for mark-up, record a cross-reference at corresponding location on working drawings. Mark with red erasable pencil and, where feasible, use other categories of work. Mark-up new information, which is recognized to be of importance to Owner, but was for some reason not shown on either contract drawings or shop drawings. Give particular attention to concealed work, which would be difficult to measure and record at a later date. Note related change-order numbers where applicable. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on cover of each set.
- B. To facilitate the above, the Architect will furnish the Contractor with one set of prints of all drawings which are part of this contract. Contractor shall maintain this set of prints in good condition in his field office. Installation of any work in locations or in a manner other than shown on the drawings shall be recorded daily by the Contractor on the drawings. The Contractor shall see that all subcontractors shall do likewise. Dimensions shall be given to permanent objects such as building columns, buildings, sidewalls, curbs and driveways and/or grids.
- C. Whenever necessary to complete the record drawings in a neat, legible manner, Contractor shall employ a competent draftsman, satisfactory to Architect, to make new drawings or to indicate changes on the prints.
- D. On or before the date of final inspection, the Contractor shall deliver the corrected and completed prints to the Architect as a record of construction. Delivery of the prints to the Architect will not relieve Contractor of the responsibility of furnishing required information that may be omitted from the prints. Delivery of the prints must be made before payment of the final retained percentage.
- E. Provide As-Built Survey Drawings.

### 3.03 FINAL CLEANING:

- A. General: Special cleaning for specific units of work is specified in sections of Divisions 2 through 16. General cleaning during progress of work is specified in General Conditions. Provide final cleaning of the work, at time indicated, consisting of cleaning each surface or unit of work to normal "clean" condition expected for a first-class building cleaning and maintenance program. Comply with manufacturer's instructions for cleaning operations. The following are examples, but not by way of limitation, for cleaning levels required.
- B. Remove labels which are not required as permanent labels.
- C. Clean exposed exterior hard-surfaced finishes, to a dirt-free condition, free of dust, stains, films and similar noticeable distracting substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.
- D. Clean light fixtures and lamps so as to function with full efficiency.
- E. Clean project site (yard and grounds), including landscape development areas, of litter and foreign substances. Sweep paved areas to a broom-clean condition; remove stains, petro-chemical spills and other foreign deposits. Rake grounds which are neither planted nor paved, to a smooth, even-textured surface.
- F. Removal of Protection: Except as otherwise indicated or requested by Architect/Engineer, remove temporary protection devices and facilities which were installed during course of the work to protect previously completed work during remainder of construction period.
- G. Compliances: Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at site, or bury debris or excess materials on Owner's property, or discharge volatile or other harmful or dangerous material into drainage systems; remove waste materials from site and dispose of in a legal manner.

### 3.04 PREFINAL AND FINAL INSPECTIONS:

- A. The CM/GC will prepare a written punch list of items to be completed or repaired and affixed to each room to be signed off by the affected subcontractor and CM/GC prior to requesting a pre-final inspection by the Architect.
- B. Upon Contractor's request, Architect (and his consultants as appropriate) will make a prefinal inspection and furnish to Contractor a list of items to be corrected by Contractor. Upon correction of these items, and receipt of written request that work is ready for final inspection, Architect will arrange a substantial completion inspection to include Owner's Representatives at which time Architect will furnish final list of items to be corrected. Architect will execute Certificate of Substantial Completion according to Article 9.8 of the General Conditions and for voiding the liquidated damages requirement contained in Document 00820 - Supplementary Conditions.

### 3.05 MAINTENANCE MANUALS:

- A. Organize maintenance-and-operating manual information into suitable sets of manageable size, and bind into individual binders properly identified and indexed (thumb-tabbed). Include emergency instructions, spare parts listing, extra stock receipts, copies of warranties, wiring diagrams, recommended "turn-around" cycles, inspection procedures, shop drawings, product data, and similar applicable information. Bind each manual of each set in a heavy-duty 2", 3-ring vinyl covered binder, and include pocket folders for folded sheet information. Mark identification on both front and spine of each binder. Provide (2) manuals for each trade.

### 3.6 PROJECT CLOSEOUT DOCUMENTS

- A. Submit the following closeout forms:
    - 1. Certificate of Substantial Completion
    - 2. Maintenance Manuals
    - 3. Contractor's One-year Guarantee
    - 4. Record Drawings
    - 5. WARRANTIES, GUARANTEES, and CERTIFICATIONS: (If Applicable)
- | Section | Title | Documents |
|---------|-------|-----------|
|---------|-------|-----------|



07 5419

Polyvinyl Chloride Membrane 30-year manufacturer written  
Roofing warranty

**END OF SECTION**

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**SECTION 012500  
SUBSTITUTION PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedural requirements for proposed substitutions.

**1.02 DEFINITIONS**

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
    - a. Unavailability.
    - b. Regulatory changes.
  2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
    - a. Substitution requests offering advantages solely to the Contractor will not be considered.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 GENERAL REQUIREMENTS**

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
  2. Agrees to provide the same warranty for the substitution as for the specified product.
  3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
  4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
  5. Waives claims for additional costs or time extension that may subsequently become apparent.
  6. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
- B. A Substitution Request for specified installer constitutes a representation that the submitter:
1. Has acted in good faith to obtain services of specified installer, but was unable to come to commercial, or other terms.
- C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
- D. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
1. No specific form is required. Contractor's Substitution Request documentation must include the following:
    - a. Project Information:
      - 1) Official project name and number, and any additional required identifiers established in Contract Documents.
    - b. Substitution Request Information:
      - 1) Discrete and consecutive Substitution Request number, and descriptive subject/title.
      - 2) Indication of whether the substitution is for cause or convenience.
      - 3) Issue date.
      - 4) Description of Substitution.
      - 5) Reason why the specified item cannot be provided.
      - 6) Differences between proposed substitution and specified item.

- 7) Description of how proposed substitution affects other parts of work.
- c. Attached Comparative Data: Provide point-by-point, side-by-side comparison addressing essential attributes specified, as appropriate and relevant for the item:
  - 1) Physical characteristics.
  - 2) In-service performance.
  - 3) Expected durability.
  - 4) Visual effect.
  - 5) Warranties.
  - 6) Other salient features and requirements.
  - 7) Include, as appropriate or requested, the following types of documentation:
    - (a) Product Data:
    - (b) Samples.
    - (c) Certificates, test, reports or similar qualification data.
- d. Impact of Substitution:
  - 1) Savings to Owner for accepting substitution.
  - 2) Change to Contract Time due to accepting substitution.
- E. Limit each request to a single proposed substitution item.
  - 1. Submit an electronic document, combining the request form with supporting data into single document.

### **3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT**

- A. Submittal Time Restrictions:
  - 1. Submit request for Substitution for Convenience immediately upon discovery of its potential advantage to the project, but not later than [7] days prior to time required for review and approval by Architect, in order to stay on approved bidding schedule.

### **3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION**

- A. Architect will consider requests for substitutions only within 15 days after date of Agreement.
- B. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 7 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
- C. Submit request for Substitution for Convenience are not permitted during construction.
- D. Substitutions will not be considered under one or more of the following circumstances:
  - 1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
  - 2. Without a separate written request during the bidding period.
- E. Failure to order product in a timely manner to meet project timeline requirements, does not constitute justification for a substitution. Any additional costs incurred related to obtaining the specified product in a expedited manner, as a result of this failure, will not be approved in Change Orders and are the responsibility of the ordering party.

### **3.04 RESOLUTION**

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect will notify Contractor in writing of decision to accept or reject request.
  - 1. Architect's decision following review of proposed substitution will be noted on the submitted form.

### **3.05 ACCEPTANCE**

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

**3.06 CLOSEOUT ACTIVITIES**

- A. See Section 017800 - Closeout Submittals, for closeout submittals.

**END OF SECTION**

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**SECTION 016000  
PRODUCT REQUIREMENTS**

**PART 1 GENERAL**

**1.01 RELATED REQUIREMENTS**

- A. Section 012500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.

**1.02 SUBMITTALS**

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

**PART 2 PRODUCTS**

**2.01 NEW PRODUCTS**

- A. Provide new products unless specifically required or permitted by Contract Documents.

**2.02 PRODUCT OPTIONS**

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

**PART 3 EXECUTION**

**3.01 SUBSTITUTION LIMITATIONS**

- A. See Section 012500 - Substitution Procedures.

**3.02 TRANSPORTATION AND HANDLING**

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

### **3.03 STORAGE AND PROTECTION**

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 017419.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions, if any.
- H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

**END OF SECTION**



## SECTION 061500 WOOD DECKING

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Plywood structural wood decking.

#### 1.02 REFERENCE STANDARDS

- A. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- B. PS 1 - Structural Plywood; 2023.

### PART 2 PRODUCTS

#### 2.01 MANUFACTURERS

- A. Plywood Decking:
  - 1. Boise Cascade Company: [www.bc.com/#sle](http://www.bc.com/#sle).
  - 2. Georgia-Pacific LLC: [www.buildgp.com/#sle](http://www.buildgp.com/#sle).
  - 3. Weyerhaeuser Company: [www.weyerhaeuser.com/#sle](http://www.weyerhaeuser.com/#sle).
  - 4. Substitutions: See Section 016000 - Product Requirements.

#### 2.02 WOOD MATERIALS

- A. Wood fabricated from recovered timber (abandoned in transit) is permitted in lieu of sustainably harvested lumber, unless otherwise noted, provided it meets the specified requirements for new wood and is free of contamination; identify source.
- B. Regulatory Requirements:
  - 1. Marking or Certificate of Inspection: For sawn lumber units load-supporting applications, provide grade marking or certificate of inspection in accordance with ICC (IBC).
- C. Plywood Decking: PS 1 veneer plywood; APA Rated Sheathing, Span Rating \_\_\_\_; Exterior grade; 1 Tongue and Groove, unless noted otherwise.

#### 2.03 ACCESSORIES

- A. Fasteners and Anchors:
  - 1. Fastener Type and Finish: See structural drawings.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify that support framing is ready to receive decking.

#### 3.02 INSTALLATION - PLYWOOD DECKING

- A. Install decking perpendicular to framing members with ends staggered over firm bearing. On sloped surfaces, lay decking with tongue upward.
- B. Engage plywood tongue and groove edges.
- C. Allow expansion space at edges and ends.

**END OF SECTION**

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**SECTION 066105  
MISC. CARPENTRY**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

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

**1.02 SUMMARY**

- A. This Section includes the following:
  - 1. Wood blocking, cants, and nailers.
  - 2. Plywood backing panels.

**1.03 DEFINITIONS**

- A. Lumber grading agencies, and the abbreviations used to reference them, include the following:
  - 1. WCLIB - West Coast Lumber Inspection Bureau.
  - 2. WWPA - Western Wood Products Association.

**1.04 SUBMITTALS**

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used, net amount of preservative retained, and chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
  - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials, both before and after exposure to elevated temperatures when tested according to ASTM D 5516 and ASTM D 5664.
  - 3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
- B. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
  - 1. Preservative-treated wood.
  - 2. Fire-retardant-treated wood.
  - 3. Expansion anchors.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

**PART 2 - PRODUCTS**

**2.01 WOOD PRODUCTS, GENERAL**

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
  - 1. Factory mark each piece of lumber with grade stamp of grading agency.
  - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
  - 3. Provide dressed lumber, S4S, unless otherwise indicated.
  - 4. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal (38-mm actual) thickness or less, unless otherwise indicated.
- B. Wood Structural Panels:
  - 1. Plywood: Either DOC PS 1 or DOC PS 2, unless otherwise indicated.
  - 2. Oriented Strand Board: DOC PS 2.

3. Thickness: As needed to comply with requirements specified but not less than thickness indicated.
4. Comply with "Code Plus" provisions in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial."
5. Factory mark panels according to indicated standard.

## **2.02 WOOD-PRESERVATIVE-TREATED MATERIALS**

- A. Preservative Treatment by Pressure Process: AWPA C2 (lumber) and AWPA C9 (plywood), except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).
  1. Preservative Chemicals: Acceptable to authorities having jurisdiction and one of the following:
    - a. Chromated copper arsenate (CCA) - HIM Fir
    - b. Ammoniacal copper zinc arsenate (ACZA) - Douglas Fir
    - c. Ammoniacal, or amine, copper quat (ACQ) - Douglas Fir
  2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.
- B. Kiln-dry material after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
  1. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.

## **2.03 MISCELLANEOUS LUMBER**

- A. General: Remove all damaged nailers/blocking and replace with new treated lumber at edge locations as detailed. Do not reuse existing nailers or blocking that will not provide specified anchoring loads. Provide new and/or additional blocking for support or attachment of new membrane and flashing, including the following:
  1. Blocking.
  2. Cants.
  3. Nailers.
  4. Grounds.
- B. For items of dimension lumber size, provide Construction, Stud, or No. 2 Standard, Stud, or No. 3 grade lumber with 19 percent maximum moisture content and any of the following species:
  1. Hem-fir or Hem-fir (north); NLGA, WCLIB, or WWPA.
  2. Northern species; NLGA.
  3. Western woods; WCLIB or WWPA.
  4. Hem-fir or Hem-fir (north), Exterior grade.
  5. Northern species, Exterior grade.
  6. Western woods, Exterior grade.

## **2.04 FASTENERS**

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
  1. Where carpentry is exposed to weather, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Nails, Wire, Brads, and Staples: FS FF-N-105.
- C. Wood Screws: ASME B18.6.1.
- D. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.

- E. Lag Bolts: ASME B18.2.1. (ASME B18.2.3.8M).
- F. Bolts: Steel bolts complying; with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
- G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
  - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

### **PART 3 - EXECUTION**

#### **3.01 INSTALLATION, GENERAL**

- A. Discard units of material with defects that impair quality of carpentry and that are too small to use with minimum number of joints or optimum joint arrangement.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- C. Apply field treatment complying with AWWPA M4 to cut surfaces of preservative-treated lumber and plywood.
- D. Securely attach carpentry work as indicated and according to applicable codes and recognized standards.
- E. Use fasteners of appropriate type and length.

#### **3.02 WOOD BLOCKING, AND NAILER INSTALLATION**

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

#### **3.03 PANEL PRODUCT INSTALLATION**

- A. Wood Structural Panels: Comply with applicable recommendations contained in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial," for types of structural-use panels and applications indicated.

**END OF SECTION**

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**SECTION 075400  
PREPARATION FOR RE-ROOFING**

**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:
  - 1. Roof tear-off.
  - 2. Roof re-cover preparation.
  - 3. Removal of base flashings.
  - 4. Life Safety requirements

**1.03 MATERIALS OWNERSHIP**

- A. Except for items or materials indicated to be reused, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site and disposed of in a legal disposal site.

**1.04 DEFINITIONS**

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Existing Membrane Roofing System: Single-ply roofing membrane, roof insulation, surfacing, and components and accessories between deck and roofing membrane.
- C. Roof Re-Cover Preparation: Existing roofing membrane that is to remain and be prepared for reuse.
- D. Roof Tear-Off: Removal of existing membrane roofing system from deck, walls, curbs and penetrations.
  - 1. Sweep, Blow or Vacuum all debris off the roof deck.
- E. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.
- F. Existing to Remain: Existing items of construction that are not indicated to be removed.

**1.05 ACTION SUBMITTALS**

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

**1.06 INFORMATIONAL SUBMITTALS**

- A. Qualification Data: For Installer.
- B. Fastener pull-out test report.
- C. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces that might be misconstrued as having been damaged by reroofing operations. Submit to the Architect before work begins.

**1.07 QUALITY ASSURANCE**

- A. Installer Qualifications: Installer of new membrane roofing system.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning membrane roofing removal. Comply with hauling and disposal regulations of authorities having jurisdiction. Spray tear-off with water to prevent blowing dust as needed.

**1.08 PROJECT CONDITIONS**

- A. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- B. Life safety - provide covered walkways for doorways and chain-link fence for areas of work with appropriate OSHA signage.

- C. Provide protective measures for overhead crane use with the appropriate OSHA signage.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- E. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
- F. Clean up shall occur daily to prevent debris from scattering through the facility or adjacent properties
- G. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.
- H. 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 Architect and Owner in writing. Hazardous materials will be removed by Owner under a separate contract.
- I. Protect above roof gas line and coordinate any damage, testing and replacement of existing lines to working condition shall be the contractor's responsibility.

## **PART 2 PRODUCTS**

## **PART 3 EXECUTION**

### **3.01 PREPARATION**

- A. Coordinate with Owner to shut down 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 activate smoke detectors in the ductwork.
- B. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- C. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast. Rags are no acceptable.
  - 1. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new membrane roofing system, provide alternative drainage method to remove water and eliminate ponding. Do not permit water to enter into or under existing membrane roofing system components that are to remain. Any damaged or wetted materials will be replaced by the contractor at no additional cost to the Owner or Architect.
- D. Verify that rooftop utilities and service piping have been shut off before beginning the Work.

### **3.02 ROOF TEAR-OFF**

- A. General: Notify Owner each day of extent of roof tear-off proposed for that day.
- B. Roof Tear-Off: Remove existing roofing membrane and other membrane roofing system components down to the deck.
  - 1. Remove cover boards, roof insulation, and substrate boards.
  - 2. Remove fasteners from deck.
  - 3. Verify condition of (E) substrate and notify Owner's rep of any deterioration or moisture locations.
  - 4. Clean brick and concrete wall surfaces where roofing and/or sealant has been extended vertical.
  - 5. Protect existing mechanical, electrical and plumbing systems at roof locations. If removal is required for new work reinstall to original condition or better.
  - 6. Provide notice to Owners rep for inspection of (E) roof after tear off and prior to new work.

### **3.03 DECK PREPARATION**

- A. Inspect deck after tear-off of membrane roofing system.



- B. Verify that substrate is visibly dry and free of moisture.
- C. If broken or loose fasteners that secure deck panels to one another or to structure are observed or if deck appears or feels inadequately attached, immediately notify Architect. Do not proceed with installation until directed by Architect in writing.
- D. If deck surface is not suitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect in writing. Do not proceed with installation until directed by Architect.

#### **3.04 EXISTING BASE FLASHINGS**

- A. Remove existing base flashings and penetration flashings around parapets, curbs, walls, and penetrations where shown on construction documents.
  - 1. Clean substrates of contaminants such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage metal counterflashings that are to remain. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish.

#### **3.05 DISPOSAL**

- A. Collect demolished materials and place in containers. Promptly dispose of demolished materials daily. Do not allow demolished materials to accumulate on-site.
  - 1. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off Owner's property.

**END OF SECTION**

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**SECTION 075419  
POLYVINYL CHLORIDE MEMBRANE ROOFING**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. This Section includes the following:
  - 1. Fully adhered PVC membrane roofing system over insulation.
  - 2. Installation of Cover Boards
  - 3. Install 2 layers of 1 ½" poly-isocyanate roof insulation.
  - 4. Install a .080 mil gray reinforced PVC membrane. 43% material above scrim. Thickness shall comply with a Guaranteed thickness; nominal membrane thickness will not be allowed.
  - 5. Provide a 30 yr. 90 mph system, no dollar limit (NDL) performance warranty.
  - 6. Membrane must be Energy Star & LEED Rated.
  - 7. Air and Vapor Barrier, self-adhered

**1.02 DEFINITIONS**

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

**1.03 PERFORMANCE REQUIREMENTS**

- A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Standards.
  - 1. Must meet or exceed ASTM D 4434
  - 2. Must meet or exceed ASTM D 4434 for Linear dimensional change and for heat aging.
  - 3. Must meet or exceed ASTM D 5635 for Dynamic impact resistance.
  - 4. Must meet or exceed ASTM D 2136 for low temperature flexibility.
- C. Material:
  - 1. Roofing Manufacturer must own and operate facility and equipment producing roof membrane for a period of ten years. Private labeled arrangements are not acceptable.
  - 2. Membrane shall be guaranteed in total specified thickness. ASTM manufacturing 10% tolerances for membrane thickness are not acceptable.
  - 3. Membrane reinforcement shall be balanced in the center of the total membrane thickness. Polymer over reinforcement shall be a minimum of .038 mils.
- D. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.
- E. Warranty Exclusions: Manufacturer's warranty shall have "No Dollar Limit" for the replacement of defective materials and/or labor and shall not contain any exclusion for ponding water during the 30-year warranty period.
- F. FMG Listing: Provide roofing membrane, base flashings, and component materials that comply with requirements in FMG 4450 and FMG 4470 as part of a membrane roofing system and that are listed in FMG's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FMG markings.
  - 1. Fire/Windstorm Classification: Class 1A-90.
  - 2. Hail Resistance: MH

**1.04 SUBMITTALS**

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other Work.
  - 1. Base flashings and membrane terminations.
  - 2. Hardboard and membrane fastening patterns.

- C. Samples for Verification: For the following products:
  - 1. Adjust list below to suit Project.
    - a. Sample of sheet roofing, color specified
    - b. Sample of walkway pads or rolls.
    - c. Sample length of metal termination bars.
    - d. Six insulation plates and fasteners of each type and finish.
- D. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is accepted, authorized, or licensed by manufacturer to install roofing system.
- E. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
  - 1. Submit evidence of meeting performance requirements.
- F. Qualification Data: For Installer and manufacturer.
- G. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing system.
- H. Research/Evaluation Reports: For components of membrane roofing system.
- I. Maintenance Data: For roofing system to include in maintenance manuals.
- J. Warranties: Special warranties specified in this Section.
- K. Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.

#### **1.05 QUALITY ASSURANCE**

- A. Installer Qualifications: A qualified firm that is accepted, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty.
- B. Installer Certification: Obtain written certification from manufacturer of PVC membrane roofing system certifying that Installer is approved by manufacturer for installation of specified roofing system. Certification to have been in effect for at least 5 years prior to bidding. Provide copy of certification prior to award of roofing work. *EVIDENCE OF SAID CERTIFICATION SHALL BE WRITTEN TO THE OWNER AND SIGNED BY THE MANUFACTURER AND FORWARDED TO THE OWNER ALONG WITH THE BID.*
- C. Installer's Field Supervision: Require Installer to maintain a full-time supervisor / foreman on job site during times that modified bituminous sheet roofing work is in progress and who is experienced in installation of roofing systems similar to type and scope required for this Project.
- D. Manufacturer's Field Supervision: The manufacturer shall maintain supervision of the work and shall provide a full-time representative who shall witness the work in progress on site for not less than eight (8) hours per week.
- E. Manufacturer Qualifications: A qualified manufacturer that has UL Class A and FM 1-90 approvals for membrane roofing system identical to that used for this Project.
- F. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.
- G. Source Limitations: Obtain components for membrane roofing system from roofing membrane manufacturer.
- H. Fire-Test-Response Characteristics: Provide membrane roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below by UL, FMG, or another testing and inspecting agency acceptable to authorities having jurisdiction. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
  - 1. Exterior Fire-Test Exposure: Class A; ASTM E 108, for application and roof slopes indicated.
  - 2. Fire-Resistance Ratings: ASTM E 119, for fire-resistance-rated roof assemblies of which roofing system is a part.

- I. Preliminary Roofing Conference: Before starting construction, conduct conference at Project site. Comply with requirements for pre-installation conferences in Division 1 Section "Quality Control." Review methods and procedures related to roof preparation and roofing system including, but not limited to, the following:
  - 1. Meet with Owners Representative, insurer (if applicable), testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Examine deck conditions and finishes for compliance with requirements, including flatness and fastening.
  - 5. Review structural loading limitations of roof deck during and after roofing.
  - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
  - 7. Review governing regulations and requirements for insurance and certificates if applicable.
  - 8. Review temporary protection requirements for roofing system during and after installation.
  - 9. Review roof observation and repair procedures after roofing installation.
- J. Pre-installation Conference: Conduct conference at Project site. Comply with requirements in Division 1 Section "Quality Control." Review methods and procedures related to roofing system including, but not limited to, the following:
  - 1. Meet with Owner, insurer (if applicable), testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Examine deck conditions and finishes for compliance with requirements, including flatness and fastening.
  - 5. Review structural loading limitations of roof deck during and after roofing.
- K. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
  - 1. Review governing regulations and requirements for insurance and certificates if applicable.
  - 2. Review temporary protection requirements for roofing system during and after installation.
  - 3. Review roof observation and repair procedures after roofing installation.

#### **1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
  - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation. Any wet or moisture damaged insulation is to be removed from the job site.

- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

### 1.07 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

### 1.08 WARRANTY:

- A. Roofing Manufacturer's Warranty:
  - 1. 30-year System warranty without monetary limitation, in which the manufacturer agrees to repair or replace roofing components and total roof system.
  - 2. Warranty shall provide coverage for wind speeds up to and including 99 miles per hour.
- B. Installer's Warranty: Submit roofing Installer's warranty, including verbiage outlined at end of this Section, provided and signed by Installer, covering Work of this Section, including all components of membrane roofing system such as roofing membrane, base flashing, fasteners, cover boards, and walkway products, for the following warranty period:
  - 1. Warranty Period: 5 years.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
  - 1. Products: Subject to compliance with requirements, provide one of the products specified.
  - 2. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified
- B. Base bid: The following roofing membrane shall be bid as Base Bid. A separate line item shall be provided on the bid form for the BASE BID roofing. ***Sarnafil Inc is basis of design***
  - 1. PVC Sheet: ASTM D 4434, Type III, fabric reinforced.
    - a. Available Manufactures:
      - 1) Sarnafil Inc
      - 2) Carlisle SynTec Inc. SureFlex PVC
      - 3) Johns Manville International. Inc. JMKEE SP8RM
    - b. Thickness: 80 mils (2.032 mm), Minimum
    - c. Exposed Face Color: Gray
    - d. Or approved equal.

### 2.02 PVC ROOFING MEMBRANE

- A. PVC Sheet: ASTM D 4434, Type III, fabric reinforced.
  - 1. Thickness:
    - a. Base bid: 80 mil minimum thickness membrane
- B. Exposed Face Color: Light Gray Energy Star Rated.

### 2.03 COVER BOARD:

- A. ASTM C IJJ>C 1177M, glass-mat, water-resistant gypsum substrate, 1/2 inch (12 mm) thick.
  - 1. Products: Subject to compliance with requirements of Contract Documents, available products that may be incorporated into the Work include, but are not limited to, the following
    - a. Manufacturer: Georgia-Pacific Corporation or USG Corp or approved equal
    - b. Product: DensDeck or USG Coated Glassmat at horizontal applications; DensDeck Prime USG Coated Glassmat at vertical applications (or where required by roofing manufacturer for warranty). Substrate shall be approved by roof membrane manufacturer.
  - 2. Install cover board over insulation and immediately below PVC roof membrane.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate board to roof

deck.

## **2.04 PVC FLASHING MEMBRANE**

- A. PVC Sheet: ASTM D 4434, Type III, Fabric reinforced.
  - 1. Manufacturers:
    - a. Sika Sarnafil Inc.
    - b. Carlisle SynTec SureFlex PVC
  - 2. Flashing Membranes:
  - 3. Sarnafil G410 – 80 mils
  - 4. SureFlex PVC
- B. 3. Thickness: 80 mils (ASTM tolerances are not acceptable).
- C. 4. Exposed Face Color: Energy Smart Light Gray
- D. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.
  - 1. Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.
- E. Bonding Adhesive: Manufacturer's standard solvent-based bonding adhesive for membrane, and solvent-based bonding adhesive for base flashings that meet Low VOC adhesives requirements.
- F. Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum bars, approximately 1 by 1/8-inch thick; with anchors.
- G. Fasteners:
  - 1. Factory-coated steel fasteners and metal plates and/or batten bars meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.
- H. Coated sheet metal flashing: Applicator fabricated membrane coated galvanized steel edge flashing and scuppers. Color of membrane coated sheet metal flashing and membrane cover strip accessories shall be as selected by Architect / University Representative.
- I. Sheet metal accessories: hold down cleats, flashing extensions etc. shall be fabricated of 22-gauge galvanized sheet metal unless exposed. Exposed accessories shall be 24-gauge galvanized sheet metal with a Kynar or Hylar finished surface.
- J. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, termination reglets, cover strips as required by Membrane Manufacture.
- K. Damaged or replacement pipe supports shall be MIRO model 3-R-4 by MIRO Industries Inc. 800.768.6978

## **2.05 WALKWAYS**

- A. Flexible Hot Air Welded Walkways: A polyester reinforced, 0.096 inch (96 mil), weldable walkway roll with surface embossment. Used as an adhered and hot air welded protection layer from rooftop traffic.
  - 1. Sarnatred: Supplied in rolls of 39.3 inches wide and 32.8 feet long.
  - 2. SureFlex Walkway Roll: 36" wide x 60' long PVC walkway.

## **2.06 AUXILIARY MEMBRANE ROOFING MATERIALS**

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.
  - 1. VapAir Seal 725TR Air and Vapor Barrier – 40 mil thick composite consisting of 35 mil self-adhering rubberized asphalt membrane laminated to an 5 mil UB resistant poly film with an anti-skid surface. 725TR can also function as a temporary roof for up to 120 days.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Remove and dispose of existing built up roofing assembly including flashing, termination and underlayment.

- B. Dispose or recycle debris in approved location.
- C. Examine substrates, areas, and conditions for compliance with the following requirements and other conditions affecting performance of roofing system:
  1. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
  2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and nailers that match thicknesses of insulation.
  3. Proceed with installation only after unsatisfactory conditions have been corrected.

### **3.02 PREPARATION**

- A. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

### **3.03 AIR/VAPOR BARRIER INSTALLATION (DIRECT TO DECK)**

- A. Prime substrate if required to obtain proper adhesion. Allow primer to cure as required. Decking shall be completely dry. The surface shall be a smooth finish and free of release agents.
- B. Unroll and position pressure sensitive air/vapor retarder so membrane remains in contact with top flat steel surface of steel roof decking, concrete roof deck, nailers, curbs and side walls.
- C. Remove film backing from underside of barrier and while applying pressure to top surface of barrier, apply barrier to primed substrate. Repeat process over-lapping first installed barrier a minimum of two (2) inches in the side lap(s) and five (5) inches of end laps unless otherwise directed by manufacture. Surfaces to receive VapAir Seal 725TR must be clean and dry. Use CavGrip III as required on all substrates. 725TR material must be stored and kept above 60 degrees F prior to installation. Apply from low to high points in a shingle fashion so that the laps shed water. Roll the 725TR membrane immediately after installation with a 100-150 lb roller.
- D. Apply approved sealant to all cut and termination barrier edges to ensure a watertight seal and to prevent surface film from curling over an extended time period.

### **3.04 INSULATION INSTALLATION**

- A. Lay out base insulation layer with snug joints and ends. Cut to fit around curbs and pipes. Repeat installation for additional layers of flat stock insulation ensuring that joints and ends of additional insulation are offset a minimum of twelve (12) inches from underlying application. Tapered layers shall be installed in pattern and direction as required by membrane manufacturer to satisfy roof drainage requirements.

### **3.05 ADHERED ROOFING MEMBRANE INSTALLATION**

- A. Install roofing membrane according to roofing system manufacturer's written instructions. Unroll roofing membrane and allow to relax before installing.
- B. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.
- C. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions. Install sheet according to ASTM D 5036.
- D. Accurately align roofing membranes and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- E. Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow to partially dry before installing membrane roofing. Do not apply to splice area of membrane roofing.
- F. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.



- G. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity.
  - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas. Mark date on samples and retain for Manufacturers technicians review.
  - 3. Repair tears, voids, and lapped seams in roofing membrane that does not meet requirements.
- H. Hot air weld all membrane overlaps (seams) as required by membrane manufacturer.
- I. Roof Drains: In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- J. Spread sealant over deck drain flange at deck drains and securely seal roofing membrane in place with clamping ring.
- K. Provide and install a PVC buffer membrane under all pipe supports.
- L. MEMBRANE FLASHINGS
- M. All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior approval of the Owner or Owners representative.
- N. If any water is allowed to enter under the newly completed roof section, the affected area shall be removed and replaced at the Applicators expense. Flashing shall be adhered to compatible, dry, smooth and solvent resistant surfaces. Use caution to ensure adhesive fumes are not drawn into the building.
- O. Apply adhesive according to membrane manufacturer's directions. Only an area which can be completely covered in the same day's operations shall be flashed. The bonded sheet shall be pressed firmly in place with a hand roller.
- P. No adhesive shall be applied in overlap areas to be welded into seams.
- Q. All flashing terminations shall be in accordance with manufacturers requirements.

### **3.06 FIELD QUALITY CONTROL**

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Owner's Representative.
  - 1. Notify manufactures rep 48 hours in advance of date and time of inspection.
- B. Repair or remove and replace components of membrane roofing system where test results or inspections indicate that they do not comply with specified requirements.
- C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

### **3.07 PROTECTING AND CLEANING**

- A. Protect membrane roofing system from damage and wear during remainder of construction period.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements, repair substrates, and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

### **3.08 ROOFING WARRANTIES**

- A. MANUFACTURER'S WARRANTY:
  - 1. Manufacturer's Thirty (30) year System No Dollar Limit (NDL).
  - 2. Warranty shall include coverage for wind speeds up to 99 mph.
- B. INSTALLERS WARRANTY (Shall include the following):

1. WHEREAS <<b style="mso-bidi-font-weight:normal;">Insert name> of <<b style="mso-bidi-font-weight:normal;">Insert address>, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
  - a. Property:
  - b. Address:
  - c. Building Name/Type:
  - d. Address:
  - e. Area of Work:
  - f. Acceptance Date: <<b style="mso-bidi-font-weight: normal;">Insert date.>
  - g. Warranty Period: <<b style="mso-bidi-font-weight: normal;">Insert time.>
  - h. Expiration Date: <<b style="mso-bidi-font-weight: normal;">Insert date.>
- C. AND WHEREAS Roofing Installer has contracted (either directly or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- D. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- E. This Warranty is made subject to the following terms and conditions:
  1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
    - a. lightning;
    - b. peak gust wind speed exceeding 90 mph;
    - c. fire;
    - d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
    - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
    - f. vapor condensation on bottom of roofing; and
    - g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
  2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
  3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
  4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
  5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
  6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.

7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.
- F. IN WITNESS THEREOF, this instrument has been duly executed this <<b style="mso-bidi-font-weight:normal;">Insert day> day of <<b style="mso-bidi-font-weight:normal;">Insert month>, <<b style="mso-bidi-font-weight:normal;">Insert year>.
1. Authorized Signature: <<b style="mso-bidi-font-weight: normal;">Insert signature.>
  2. Name: <<b style="mso-bidi-font-weight:normal;">Insert name.>
  3. Title: <<b style="mso-bidi-font-weight:normal;">Insert title.>

**END OF SECTION**

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**SECTION 075600  
FLUID-APPLIED ROOFING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Fluid-applied roofing materials.
- B. Accessories.

**1.02 RELATED REQUIREMENTS**

- A. Section 076200 - Sheet Metal Flashing and Trim: Metal parapet covers, copings, and counterflashings.

**1.03 REFERENCE STANDARDS**

- A. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers--Tension; 2016 (Reapproved 2021).
- B. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness; 2015 (Reapproved 2021).

**1.04 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide manufacturer's data for membrane and accessory materials.
- C. Manufacturer's qualification statement.
- D. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacture of fluid-applied roofing or waterproofing systems.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver materials in manufacturer's original containers, dry and undamaged, with seals and labels intact.
- B. Store materials in weather protected environment, clear of ground and moisture.
- C. Ensure storage and staging of materials does not exceed static and dynamic load-bearing capacities of roof decking.

**1.07 WARRANTY**

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Fluid-Applied Roofing:
  - 1. Provide product compatible with any adjacent single-ply membrane roofing from single-ply membrane manufacturer. Product must not void warranty of single-ply membrane.
  - 2. Substitutions: See Section 016000 - Product Requirements.

**2.02 MATERIALS**

- A. Fluid-Applied Roofing: White, cold-applied; single-component or two-component; polyurethane, solvent-based, asphalt-based, silicone elastomer, water-based acrylic elastomeric, or styrene-ethylene-butylene-styrene (SEBS), approved by manufacturer for permanent exposure to weather and sunlight.

**2.03 ACCESSORIES**

- A. Flexible Flashing Sheet: Neoprene or other elastic type sheets approved by roofing membrane manufacturer.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify existing conditions prior to starting this work.
- B. Verify substrate surfaces are free of frozen matter, dampness, loose particles, cracks, pits, projections, penetrations, or foreign matter detrimental to adhesion or application of roofing system.
- C. Verify that substrate surfaces are smooth, free of honeycombs or pitting, and not detrimental to full contact bond of roofing materials.
- D. Verify that roof openings, curbs, and items that penetrate surfaces to receive roofing materials are securely and properly installed.

### **3.02 PREPARATION**

- A. Clean and prepare surfaces to receive roofing in accordance with manufacturer's instructions and recommendations.
- B. Seal cracks and non-moving open joints less than 1/2 inch (12.7 mm) wide with sealant using methods recommended by roofing and sealant manufacturers; do not seal expansion joints or moving joints of any width.
- C. Install cant strips at inside corners, where indicated and where required by roofing manufacturer.
- D. Protect adjacent surfaces not designated to receive roofing.

### **3.03 INSTALLATION**

- A. Install fluid-applied roofing in accordance with manufacturer's instructions and recommendations, to specified minimum thickness.
- B. Apply roofing materials to surfaces that are acceptable to manufacturer.
- C. Installations Over Sealant-Filled Joints: Install an extra coating of roofing material over joints at least 6 inches (152 mm) on each side of joint.
- D. Penetrations: Unless otherwise indicated on drawings, or recommended by roofing manufacturer, seal flexible flashing sheet around penetrations and to roofing substrate prior to installation of roofing material, embedding flashing sheet in one coat of roofing material.
- E. Embedded Flexible Flashing Sheet: Apply full thickness of roofing material over exposed flashing sheet.

### **3.04 PROTECTION**

- A. Protect installed roofing and flashings from construction operations.
- B. Where traffic must proceed over installed roofing materials, protect surfaces using durable materials acceptable to roofing material manufacturer.

**END OF SECTION**

**SECTION 077200  
ROOF ACCESSORIES**

**PART 1 - GENERAL**

**1.01 REFERENCE STANDARDS**

- A. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic); 2019.

**1.02 RELATED DOCUMENTS**

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

**1.03 SUMMARY**

- A. This Section includes the following:
  - 1. Pipe / Conduit Support
- B. Related Sections include the following:
  - 1. Division 6 Section "Miscellaneous Carpentry" for roof sheathing, wood cants, and wood nailers.
  - 2. Division 7 Section "Sheet Metal Flashing and Trim" for shop- and field-fabricated metal flashing and counterflashing, scuppers, gutters and downspouts, roof expansion-joint covers, and miscellaneous sheet metal trim and accessories.
  - 3. Division 7 Section "Polyvinyl Chloride" Roofing (PVC) for flashings associated with the roofing membrane and fascia.

**1.04 SUBMITTALS**

- A. Product Data: For each type of product indicated. Include construction details, materials, dimensions of individual components and profiles, and finishes.

**1.05 QUALITY ASSURANCE**

- A. Standards: Comply with the following:
  - 1. SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated.
  - 2. NRCA's "Roofing and Waterproofing Manual" details for installing units.

**PART 2 - PRODUCTS**

**2.01 MANUFACTURERS**

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Pipe / Conduit Supports:
    - a. Miro Industries
    - b. Advanced support products by ASP, Inc.
    - c. Versablock by Freedom Inc.
  - 2. nVent Caddy

**2.02 MATERIALS, GENERAL**

- A. Galvanized Steel Sheet: ASTM A 653/A 653M with G90 (Z275) coating designation; commercial quality, unless otherwise indicated.
  - 1. Structural Quality: Grade 40 (Grade 275), where indicated or as required for strength.
- B. Insulation: Manufacturer's standard rigid or semirigid glass-fiber board of thickness indicated.
- C. Fasteners: Same metal as metals being fastened, or nonmagnetic stainless steel or other noncorrosive metal as recommended by manufacturer. Match finish of exposed fasteners with finish of material being fastened.
  - 1. Where removing exterior exposed fasteners affords access to building, provide nonremovable fastener heads.
- D. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, or PVC; or flat design of foam rubber, sponge neoprene, or cork.

- E. Elastomeric Sealant: Generic type recommended by unit manufacturer that is compatible with joint surfaces; ASTM C 920, Type S, Grade NS, Class 25, and Uses NT, G, A, and, as applicable to joint substrates indicated, O.
  - 1. FINISHES, GENERAL
- F. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- G. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- H. 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 the same piece are not acceptable. 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.

### **2.03 GALVANIZED STEEL SHEET FINISHES**

- A. Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a conversion coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas, and apply galvanizing repair paint specified below to comply with ASTM A 780.
  - 1. Galvanizing Repair Paint: High-zinc-dust-content paint for re-galvanizing welds in steel, complying with SSPC-Paint 20.
- B. Factory Priming for Field-Painted Finish: Where field painting after installation is indicated, apply the air-dried primer specified below immediately after cleaning and pretreating.
  - 1. Shop Primer: Exterior galvanized metal primer per Division 9 Section "Painting."

### **2.04 PIPE / CONDUIT SUPPORT**

- A. Pipe / Conduit Support: Provide support for pipes and conduits that occur above the roof membrane and is acceptable to the single ply roofing manufacture.

## **PART 3 - EXECUTION**

### **3.01 INSTALLATION**

- A. General: Comply with manufacturer's written instructions. Coordinate installation of roof accessories with installation of roof deck, roof insulation, flashing, roofing membranes, penetrations, equipment, and other construction involving roof accessories to ensure that each element of the Work performs properly and that combined elements are waterproof and weathertight. Anchor roof accessories securely to supporting structural substrates so they are capable of withstanding lateral and thermal stresses, and inward and outward loading pressures.
- B. Install roof accessory items according to construction details of NRCA's "Roofing and Waterproofing Manual," unless otherwise indicated.
- C. Roof curbs for roof hatches and skylights: Roof curbs are to be raised up as required for proper flashing of equipment per the manufacture's recommendations. Interior finishes are to be extend up to new equipment as required to match existing conditions.
- D. Cover and protect all roof openings each night with plywood or similar material and waterproof membrane as required to protect the school during construction.

### **3.02 CLEANING AND PROTECTION**

- A. Clean exposed surfaces according to manufacturer's written instructions. Touch up damaged metal coatings.

**END OF SECTION**



**SECTION 077620  
SHEET METAL FLASHING AND TRIM**

**PART 1 - GENERAL**

**1.01 REFERENCE STANDARDS**

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2022.

**1.02 RELATED DOCUMENTS**

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

**1.03 SUMMARY**

- A. This Section includes the following sheet metal flashing and trim:
  - 1. Manufactured reglets.
  - 2. Formed low-slope roof flashing and trim.
  - 3. Formed wall flashing and trim.
  - 4. Formed equipment support flashing.
- B. Related Sections include the following:
  - 1. Division 6 Section "Miscellaneous Carpentry" for wood nailers, curbs, and blocking.
  - 2. Division 7 Section "PVC" for installing sheet metal flashing and trim integral with roofing membrane.
  - 3. Division 7 Section "Roof Accessories" for set-on-type curbs, equipment supports, roof hatches, vents, and other manufactured roof accessory units.
  - 4. Division 7 Section "Joint Sealants" for field-applied sheet metal flashing and trim sealants.

**1.04 PERFORMANCE REQUIREMENTS**

- A. General: Install sheet metal flashing and trim to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing, rattling, leaking, and fastener disengagement.
- B. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.

**1.05 SUBMITTALS**

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Show layouts of sheet metal flashing and trim, including plans and elevations. Distinguish between shop- and field-assembled work. Include the following:
  - 1. Identify material, thickness, weight, and finish for each item and location in Project.
  - 2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
  - 3. Details for fastening, joining, supporting, and anchoring sheet metal flashing and trim, including fasteners, clips, cleats, and attachments to adjoining work.
  - 4. Details of expansion-joint covers, including showing direction of expansion and contraction.
- C. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:
  - 1. Sheet Metal Flashing: 12 inches (304.8 mm) long. Include fasteners, cleats, closures, and other attachments.
  - 2. Trim: 12 inches (304.8 mm) long. Include fasteners and other exposed accessories.
  - 3. Accessories: Full-size Sample.

**1.06 QUALITY ASSURANCE**

- A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual", Fourth Edition. Conform to dimensions and profiles shown unless more stringent

requirements are indicated.

### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver sheet metal flashing materials and fabrications undamaged. Protect sheet metal flashing and trim materials and fabrications during transportation and handling.
- B. Unload, store, and install sheet metal flashing materials and fabrications in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack materials on platforms or pallets, covered with suitable weathertight and ventilated covering. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.

### **1.08 COORDINATION**

- A. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leakproof, secure, and noncorrosive installation.

## **PART 2 - PRODUCTS**

### **2.01 SHEET METALS**

- A. Exposed to view flashings & trim.
  - 1. High-Performance Organic Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions
  - 2. Kynar Fluoropolymer 3-coat system: Manufacturer's standard 3-coat, thermocured system consisting of specially formulated inhibitive primer, fluoropolymer color coat, and clear fluoropolymer topcoat, with both color coat and clear topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight, with a minimum total dry film thickness of 1.5 mil (0.0381 mm); complying with AAMA 2605.:
    - a. Color: As selected by Architect to match existing. (Firestone Silver Metallic or equal)

### **2.02 UNDERLAYMENT MATERIALS**

- A. Felts: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, nonperforated.
- B. MISCELLANEOUS MATERIALS
- C. General: Provide materials and types of fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.
- D. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.
  - 1. Exposed Fasteners: Heads matching color of sheet metal by means of plastic caps or factory-applied coating.
  - 2. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws, gasketed, with hex washer head.
  - 3. Blind Fasteners: High-strength aluminum or stainless-steel rivets.
  - 4. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
- E. Solder: ASTM B 32, Grade Sn50, use with rosin flux.

### **2.03 MANUFACTURED SHEET METAL FLASHING AND TRIM**

- A. Reglets: Units of type, material, and profile indicated, formed to provide secure interlocking of separate reglet and counterflashing pieces, and compatible with flashing indicated with factory-mitered and -welded corners and junctions.
  - 1. Material: Galvanized steel, 0.025 inch (0.64 mm) thick.
  - 2. Masonry Type: Provide with offset top flange for embedment in masonry mortar joint.
  - 3. Flexible Flashing Retainer: Provide resilient plastic or rubber accessory to secure flexible flashing in reglet where clearance does not permit use of standard metal counterflashing or where Drawings show reglet without metal counterflashing.

4. Counterflashing Wind-Restraint Clips: Provide clips to be installed before counterflashing to prevent wind uplift of counterflashing lower edge.

## 2.04 FABRICATION, GENERAL

- 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, metal, and other characteristics of item indicated. Shop fabricate items where practicable. Obtain field measurements for accurate fit before shop fabrication.
- B. 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. Minimum thickness- .025 inches (0.64 mm) Kynar metal.
- C. Fabricate 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.
  1. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
- D. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA recommendations.
- E. Expansion Provisions: Where lapped or bayonet-type expansion provisions in the Work cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25.4 mm) deep, filled with elastomeric sealant concealed within joints.
- F. Conceal fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.
- G. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
  1. Thickness: As recommended by SMACNA's "Architectural Sheet Metal Manual" and FMG Loss Prevention Data Sheet 1-49 for application but not less than thickness of metal being secured.
  2. Minimum Thickness: 0.0375 inch (0.95 mm) thick.
  3. Lengths: Full continuous length, (partial clips at seams not allowed).
  4. Fastening: 6" on center staggered.
- H. Downspouts: Fabricate square open faced SMACNA figure 132H downspouts complete with mitered elbows. Furnish with metal hangers, from same material as downspouts, and anchors.
  1. Manufactured Hanger Style: Conceal Hanger - SMACNA Plate 134A.
  2. Fabricate downspouts from the following material:
    - a. Aluminum: 0.024 inch (0.61 mm) thick. Factory finished (3) coat Kynar 500 finish.
- I. Gutters: Fabricate gutters as recommended by SMACNA GIGI-2 Style H - hanging gutter installation. Aluminum 0.024-inch-thick factory finished 3 coat Kynar 500.
- J. Copings: Fabricate in minimum 96-inch- (2400-mm-) long, but not exceeding 10-foot- (3-m-) long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and drill elongated holes for fasteners on interior leg. Miter corners, seal, and solder or weld watertight.
  1. Fabricate copings from the following material:
    - a. Kynar finished, Metallic-Coated: 0.025 inch (0.64 mm) thick.
    - b. Fastening: Cap must be secured a minimum of 18" on center.
- K. Roof to Wall Transition and Roof to Sheet Metal Roof Edging Transition Expansion-Joint Cover: Fabricate from the following material:
  1. Galvanized Steel: 0.0336 inch (0.85 mm) thick.
- L. Base Flashing: Fabricate from the following material:
  1. Galvanized Steel: 0.0276 inch (0.7 mm) thick.
- M. Counterflashing: Fabricate from the following material:
  1. Galvanized Steel: 0.0217 inch (0.55 mm) thick.
- N. Flashing Receivers: Fabricate from the following material:

1. Galvanized Steel: 0.0217 inch (0.55 mm) thick.
- O. Roof-Penetration Flashing: Fabricate from the following material:
  1. Galvanized Steel: 0.0276 inch (0.7 mm) thick.

## **2.05 FINISHES**

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. 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 the same piece are not acceptable. 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.
- D. Exposed to view items to be factory finished (3) coat Kynar 500 finish. Color as selected by Architect from full range of available standard colors.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of work.
  1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
  2. Proceed with installation only after unsatisfactory conditions have been corrected.

### **3.02 INSTALLATION, GENERAL**

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  1. Torch cutting of sheet metal flashing and trim is not permitted.
- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by fabricator or manufacturers of dissimilar metals.
  1. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet or install a course of polyethylene underlayment.
- C. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
- D. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and elastomeric sealant.
- E. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
  1. Cleats shall be continuous and anchored at 6" on center staggered. Bend tabs over fasteners.
- F. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (304.8 cm) with no joints allowed within 24 inches (609.6 mm) of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25.4 mm) deep, filled with elastomeric sealant concealed within joints.
- G. Fasteners: Use fasteners of sizes that will penetrate substrate not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19.05 mm) for wood screws.
  1. Galvanized or Prepainted, Metallic-Coated Steel: Use stainless-steel fasteners.

- H. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches (38 mm) except where pretinned surface would show in finished Work.
  - 1. Do not use open-flame torches for soldering. Heat surfaces to receive solder and flow solder into joints. Fill joints completely. Completely remove flux and spatter from exposed surfaces.

### **3.03 ROOF DRAINAGE SYSTEM INSTALLATION**

- A. General: Install sheet metal roof drainage items to produce complete roof drainage system according to SMACNA recommendations and as indicated. Coordinate installation of roof perimeter flashing with installation of roof drainage system.

### **3.04 ROOF FLASHING INSTALLATION**

- A. General: Install sheet metal roof flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight.
- B. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in FMG Loss Prevention Data Sheet 1-49 for specified wind zone and as indicated.
  - 1. Interlock bottom edge of roof edge flashing with continuous cleats anchored to substrate at 16-inch (400-mm) centers.
- C. Copings: Anchor to resist uplift and outward forces according to recommendations in FMG Loss Prevention Data Sheet 1-49 for specified wind zone and as indicated.
  - 1. Interlock exterior bottom edge of coping with continuous cleats anchored to substrate at 16-inch centers.
  - 2. Anchor interior leg of coping with screw fasteners and washers at 16-inch centers.
- D. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending a minimum of 4 inches (101.6 mm) over base flashing. Install stainless-steel draw band and tighten.
- E. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches (101.6 mm) over base flashing. Lap counterflashing joints a minimum of 4 inches (101.6 mm) and bed with elastomeric sealant.
- F. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Install flashing as follows:
  - 1. Turn lead flashing down inside vent piping, being careful not to block vent piping with flashing.
  - 2. Seal with elastomeric sealant and clamp flashing to pipes penetrating roof except for lead flashing on vent piping.

### **3.05 CLEANING AND PROTECTION**

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain in a clean condition during construction.
- D. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

**END OF SECTION**

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## **SECTION 079200 JOINT SEALANTS**

### **PART 1 - GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Nonsag gunnable joint sealants.
  - 1. Joint backings and accessories.

#### **1.02 REFERENCE STANDARDS**

- A. ASTM C834 - Standard Specification for Latex Sealants; 2017 (Reapproved 2023).
- B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- C. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).
- D. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2022.
- E. SCAQMD 1168 - Adhesive and Sealant Applications; 1989, with Amendment (2022).

#### **1.03 SUBMITTALS**

- A. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
  - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.

#### **1.04 DELIVERY, STORAGE, AND HANDLING**

- A. Correct defective work within a five-year period after Date of Substantial Completion.
- B. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

### **PART 2 - PRODUCTS**

#### **2.01 JOINT SEALANT APPLICATIONS:**

- A. Scope:
  - 1. Exterior Joints: Seal open joints, whether or not the joint is indicated on the drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
    - a. Joints between door, window, and other frames and adjacent construction.
    - b. Joints between different exposed materials.
  - 2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
    - a. Joints between door, window, and other frames and adjacent construction.
  - 3. Do not seal the following types of joints.
    - a. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
    - b. Joints where installation of sealant is specified in another section.
    - c. Joints between suspended panel ceilings/grid and walls.
- B. Exterior Joints: Use non-sag non-staining silicone sealant, unless otherwise indicated.
- C. Interior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.
  - 1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic emulsion latex sealant.
  - 2. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; white.
- D. Interior Wet Areas: restrooms, kitchens, and food service areas; fixtures in wet areas include plumbing fixtures, food service equipment, countertops, cabinets, and other similar items.

#### **2.02 JOINT SEALANT GENERAL:**

- A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168.
- B. Colors: By architect to match adjacent material.

### **2.03 JOINT SEALANT GENERAL:**

- A. Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
  - 1. Movement Capability: , minimum.
  - 2. Non-Staining to Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
  - 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
- B. ----- Conventional Silicone Sealant, Parking Structure and Highway -----
- C. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
  - 1. Color: White and or Gray
- D. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; not expected to withstand continuous water immersion or traffic.
  - 1. Movement Capability: Plus and minus 25 percent, minimum.
- E. Acrylic Emulsion Latex: Water-based; ASTM C834, single component, non-staining, non-bleeding, non-sagging; not intended for exterior use.

### **2.04 ACCESSORIES**

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

## **PART 3 - EXECUTION**

### **3.01 PREPARATION:**

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

### **3.02 INSTALLATION:**

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Install bond breaker backing tape where backer rod cannot be used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- E. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range or will be outside that range during the entire curing period, unless manufacturer's approval is obtained, and instructions are followed.
- F. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

**END OF SECTION**



**SECTION 221426  
ROOF DRAINS**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

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

**1.02 SUMMARY**

- A. This Section includes the following sheet metal flashing and trim:
  - 1. Roof Drains, Domes and flashing clamps

**1.03 SUBMITTALS**

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

**1.04 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver roof drains and domes undamaged. Protect drains and domes during transportation and handling.
- B. Unload, store, and install roof drain materials and fabrications in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack materials on platforms or pallets, covered with suitable weathertight and ventilated covering. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.

**1.05 COORDINATION**

- A. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leakproof, secure, and noncorrosive installation.

**PART 2 - PRODUCTS**

**2.01 FIXTURES:**

- A. Roof Drain:
  - 1. (RD) Fixture
    - a. 12" diameter cast iron body, cast iron dome with locking screws, bearing pan, sump receiver, extension piece, under deck clamp. Outlet size to be field verified. No drain insert is allowed. Drains shall be a threaded connection type only.
  - 2. Approved Manufacturer:
    - a. Josam
    - b. J. R. Smith
    - c. Zurn 121-ERC

**PART 3 - EXECUTION**

**3.01 EXAMINATION:**

- A. Verify all dimensions by field measurements. Verify that all plumbing fixtures may be installed in accordance with pertinent codes and regulations, the original design, and the referenced standards.
- B. Examine roof for suitable conditions where fixtures are to be installed.
- C. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.
- D. Provide protection of roof drain piping at built up roof installation with gravel ballast. Review how to keep rocks and debris from enter the piping system during roof removal.

**3.02 INSTALLATION:**

- A. Install plumbing fixtures level and plumb, in accordance with fixture manufacturer's written instructions, rough-in drawings, and pertinent codes and regulations, the original design, and the referenced standards.

B. Fasten plumbing fixtures securely to supports or building structure.

**3.03 3.3 FIELD QUALITY CONTROL:**

A. Test fixtures to demonstrate proper operation upon completion of installation.

B. Inspect each installed unit for damage. Replace damaged fixtures.

**3.04 CLEANING:**

A. Clean fixtures, using manufacturer's recommended cleaning methods and materials.

**3.05 PROTECTION:**

A. Provide protective covering for installed fixtures.

**END OF SECTION**