LARAMIE COUNTY COMMUNITY COLLEGE
BUSINESS BUILDING
EXTERIOR RENOVATION

LARAMIE COUNTY COMMUNITY COLLEGE
1400 EAST COLLEGE DRIVE DRIVE
CHEYENNE, WYOMING

DATE: 05/01/2019

Architect’s Project No. 17-07-13
Owner’s Project No. IFB-19211

TOBIN
AND ASSOCIATES
ARCHITECTURE
AND PLANNING

P. O. Box 2420  1820 Dillon Avenue, Suite 200A  Cheyenne, Wyoming 82003
DRAWINGS AND SPECIFICATIONS FOR
LARAMIE COUNTY COMMUNITY COLLEGE
BUSINESS BUILDING
EXTERIOR RENOVATION

LARAMIE COUNTY COMMUNITY COLLEGE
1400 EAST COLLEGE DRIVE
CHEYENNE, WYOMING

Date: May 1, 2019
Architects’ Project No. 17-07-13
Owners’ Project No. IFB-19211

ARCHITECT:
Tobin & Associates, P.C.
P.O. Box 2420
Cheyenne, Wyoming 82003
(307) 632-3144

STRUCTURAL ENGINEERS:
Martin & Martin of Wyoming
4020 Laramie Street
Cheyenne, Wyoming 82001
Structural – John Shaffer PE
(307) 637-8422

ELECTRICAL ENGINEERS:
Wood Environmental & Infrastructure Solutions, Inc.
920 E. Sheridan Street, Suite A
Laramie, Wyoming 82070
Electrical – Rick Shields PE
(303) 919-2184
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PROJECT: Business Building Exterior Renovation

BID No.: IFB-19211

DUE DATE & TIME: May 23, 2019 @ 3:00 p.m. *(prevailing local time)*

BID: Sealed Bids, subject to the terms, conditions and specifications herein stipulated and/or attached hereto, will be received at the Laramie County Community College Contracts Office located in the Administration Building on 1400 East College Drive, Cheyenne, WY 82007 at Administration Building room AM-104 in until May 23, 2019 at 3:00 p.m. *(prevailing local time)*, and then publicly opened, read aloud and duly recorded.

PRE-BID MEETING: A MANDATORY Pre-Bid meeting and job walk will be held on May 9, 2019 @ 2:00 p.m. *(prevailing local time)* in the Plant Operations room PO-106. Attendance at the Mandatory Pre-Bid meeting is required to bid on this project. ***Doors will be locked at 2:00 p.m.***

Jamie Spezzano
Director, Contracting & Procurement
Laramie County Community College
1400 East College Drive
Cheyenne, WY 82007
Phone: (307) 778-1280
Fax: (307) 778-4300
E-mail: jspezzano@lccc.wy.edu

Document Issue Date: May 1, 2019
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SECTION ONE
DEFINITIONS AND TERMINOLOGY

Wherever used in this bid these or other related procurement documents, the following terms have meanings indicated which are applicable to both the singular and plural thereof.

Addenda: Written or graphic instruments issued prior to the opening of bids which clarify, correct, or change the bid documents or the related procurement documents.

Architect: Owner’s contract consultant and contracted project representative.

Bid and/or Bid Documents: Bid Document, applicable addenda, other affiliated or referenced data specific to said bid.

Bid Process or Period: Begins with issue/publication of bid document to public sector, and concludes at the award of the bid.

Bidder: Vendor, firm, or contractor submitting a Bid

Contractor: Vendor, firm, or company awarded a contract or PO for this Bid

Contract Document: A legally enforceable (binding) agreement between two competent parties; evidenced by an offer and acceptance of offer. Document shall include by reference, all Bid Documents, contractor’s bid, negotiated documents, issued addendums, special or supplemental conditions, specifications, and any mutually agreed upon modifications, and/or additions.

Firm: Same as vendor or contractor

Issuing Office: The issuing office for this IFB is: Tobin & Associates, P.C., 1820 Dillon Avenue, Cheyenne, WY 82001

LCCC: Laramie County Community College (College) or Owner, one in the same.

Purchase Order: A contractual agreement with a vendor for goods or services that specifies payment terms, delivery dates, item identification, quantities, freight terms, and other obligations and conditions.

Specifications: Those portions of this proposal consisting of written or graphic technical descriptions of materials, equipment, construction systems, standards, workmanship, goods, services, and administrative details applicable thereto.

Vendor: Same as company/contractor/firm.

END OF SECTION ONE
SECTION TWO

INSTRUCTIONS TO BIDDERS AND BID REQUIREMENTS

1. GENERAL CONDITIONS

1.1 Notice is hereby given that LCCC will receive sealed bids up to 3:00 p.m. (prevailing local time), May 23, 2019, at that time to be publicly opened and recorded in the Administration Building room AM-108, for the LCCC project in accordance with the requirements, terms, specifications, conditions, and provisions hereinafter contained.

1.2 Successful firm shall provide LCCC with the services and/or materials as defined by LCCC Policies and this certain Bid Package.

1.3 Bids must be received by the time and date specified. Bids received after the specified time and date will not be accepted and will be returned unopened to the respective firm.

1.4 Bids shall be sent to the LCCC Purchasing Office or hand-delivered prior to the Bid Opening in a sealed envelope (or package) marked “Sealed Bid”, and referencing the Bid # IFB-19211.

1.5 All bids shall be submitted on the LCCC “BID SUBMITTAL & PRICING DOCUMENT” and must be signed by an authorized official of the firm submitting the Bid.

1.6 Telephone, telegraph, or fax bids will not be accepted.

1.7 Any bid which modifies, deletes, or changes any of the conditions or provisions, specifications, or bid requirements will be rejected. Do not deface or alter any portion of the original Bid package.

1.8 By submitting this bid, each firm certifies under penalty of perjury that they have not acted in collusion with any other firm or potential firms. Neither the said bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham bid in connection with the contract of which the attached bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement, collusion, communication or conference with any other bidder, firm or person to fix the price or prices in the attach bid or of any other bidder; to fix any overhead, profit, or cost element of the bid price or the bid price of any other bidder; or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the owner or any person interested in the proposed contract.
2. **PREPARATION OF BID**

2.1 Firms are expected to examine all Drawings, Specifications, instructions and/or requirements of this Bid package. Failure to do so will be at the bidder’s risk. The Bid and all referenced documents must be used in preparation of each bid. LCCC assumes no responsibility for errors, misinterpretations and/or verbal communication resulting from the use of incomplete Bid Documents.

2.2 Each firm shall furnish the information required by the Bid. The **BID SUBMITTAL & PRICING DOCUMENT** *(see SECTION THREE)* shall be completed, signed, and returned by the respective firm’s authorized agent. All required bid documents must be returned with the bidder’s sealed bid.

2.3 Time, if stated as a number of days, will be in calendar days.

2.4 Any clarification of instructions, terms and conditions, IFB document, or proposal preparation shall be made **only** by the Director of Contracting & Procurement listed in this Bid document under IFB SECTION TWO, Article 6, Paragraph 6.1. Verbal clarifications will not be binding upon LCCC or their Architect. Written clarifications will be by addenda and forwarded to all interested parties.

2.5 Written addenda will be issued by LCCC for any matters regarding submittal of Bid, or issues, questions, comments, and/or clarifications that will affect, alter, modify, or change the original Bid intent or language.

2.6 To ensure uniformity and consistency, strict rules will apply to the communication process and methods during the bid process, all inquiries shall be via written instrument, mailed, faxed or hand-delivered to the appropriate individual as detailed in IFB SECTION TWO, Article 6 Paragraph 6.1. All matters, issues, questions, answers, comments and/or clarifications which meet the criteria identified above in Paragraph 2.5 will be distributed in written format to all potential bidders.

2.7 Each erasure, marking, or other changes that appear on your Bid must be initialed individually by the person signing the Bid.

2.8 Any violation of Bid requirements shall be just cause for rejection of that particular bid without further consideration.

2.9 In the case of error in the extension of prices in the Bid, the unit price will govern. In case of discrepancy in the price between the written and numerical amounts, the written amount will govern.

2.10 All Bid prices shall be quoted F.O.B Destination *(Cheyenne WY)* with transportation payment terms prepaid and allowed.
3. **PRE-BID MEETING, SITE INSPECTION AND BID DOCUMENTS**

3.1 Prior to submitting bids, vendors are welcome to visit the campus to inform themselves thoroughly as to the conditions involved in providing the materials required by this Bid. Arrangements for such tours should be coordinated thru the Contracts Office.

3.2 A **MANDATORY** pre-bid meeting and job-walk will commence on **May 9, 2019 @ exactly 2:00 pm (prevailing local time)**; **“doors will be locked at 2:00 p.m.”** The meeting will be held in the Plant Operations room PO-106 on the Cheyenne WY campus. All potential bidders shall be present and signed in prior to the start of the mandatory Pre-Bid meeting. Once everyone has signed, the sign-in sheet will be taken and the meeting will “officially” start. Anyone not signed in at the “official” start of the meeting will be considered late and will not be allowed to bid on the project.

3.3 LCCC and Architect’s personnel will be present at the pre-Bid meeting to receive questions with respect to interpretation or clarification of this Bid. Any other request(s) by vendors for interpretation or clarification shall be in writing and shall be addressed to the office of the Director of Contracting and Procurement. The receipt of any request and/or corresponding reply will not alter the bid and bid due date. All requests for interpretations of Bid Documents and other questions received at the pre-Bid will be taken with the formal response through an Addendum and be issued to all plan holders.

3.4 Complete sets of the Bid Documents will be available at no charge via pdf format and may be obtained by going to the LCCC website [https://lccc.wy.edu/about/purchasing](https://lccc.wy.edu/about/purchasing).

3.5 Complete sets of the Bid Documents must be used in preparing bids, neither LCCC or Architect assumes any responsibility for errors or misinterpretations from the use of incomplete sets of Bid Documents.

3.6 LCCC and Architect in making copies of Bid Documents available on the above terms do so only for the purpose of obtaining bids for the work and/or services specified herein, and do not confer a license or grant for any other use.

4. **SUBMISSION / WITHDRAWALS / LATE BIDS / MODIFICATIONS**

4.1 Prospective vendors are instructed to send or deliver their sealed Bids complete with required “BID SUBMITTAL & PRICING DOCUMENT”, attachments, and addenda, enclosed in one sealed and secure box, envelope, or other package, in a manner that assures receipt by **May 23, 2019 at 3:00 p.m. (prevailing local time)**. Package must be sealed, secured and marked in a prominent manner. A public opening and recording of each received bid will be conducted at this date and time. The Bid opening is a public meeting, open to anyone interested in attending.
4.2 Bids may be withdrawn or amended at any time prior to Bid due date. All such requests must be done via written instrument.

4.3 A Bid that is in the possession of the LCCC Contracts Office may be altered by a telegram, fax, or letter bearing the signature of the official authorizing the Bid, provided that it is received prior to the bid due date and time. Telephone or verbal alterations of a Bid will not be accepted.

4.4 Formal, advertised Bids indicate a date and time by which Bids must be received. Bids received after that time will be returned, unopened to the vendor.

4.5 Each firm submitting a bid agrees that their Bid shall remain valid for a minimum of thirty (30) calendar days from the date of closing of this Bid.

5. **CERTIFICATE OF NON-DISCRIMINATION**

5.1 The bidder hereby certifies that all persons employed by their firm, their affiliates, subsidiaries, or holding companies are treated equally by their firm without regard to or because of race, religion, ancestry, national origin or sex as required by federal and state anti-discrimination laws. The bidder further certifies and agrees that it will deal with subcontractors, bidders or vendors without regard to or because of race, religion, ancestry, national origin or sex. Violation of this certification may constitute a material breach of contract upon which the owner may determine to cancel, terminate, or suspend the contract.

6. **QUESTIONS CONCERNING BID**

6.1 All inquiries, matters, issues, questions, answers, comments, and/or clarifications concerning this Bid shall be directed to the following individual, and shall be done so via written instrument, mailed, faxed or hand-delivered to:

6.1.1 For matters pertaining to this Bid Document, contact;
- Jamie Spezzano, Director, Contracting & Procurement
- 1400 East College Drive
- Cheyenne, WY 82007
- Phone: (307) 778-1280
- Fax: (307) 778-4300
- E-mail: jspezzano@lccc.wy.edu

6.1.2 All matters, issues, questions, answers, comments, and/or clarifications concerning this Bid shall be submitted no later than **May 14, 2019 at 5:00 p.m. MST** and may be e-mailed to jspezzano@lccc.wy.edu

6.2 All matters, issues, questions, answers, comments, and/or clarifications that alter, modify, or change the original Bid intent or
language will be addressed formally via a written Bid Addenda. Information gathered by bidders through verbal conversations, phone conversations, e-mails and fax transmittals will NOT be considered formal information and should NOT be used for Bid preparation.

6.3 All issued Addenda must be acknowledged by each respective firm submitting a Bid on the document located in IFB SECTION THREE, titled Addenda Acknowledgement Document.

7. **CONTRACT CONDITIONS**

7.1 The scope of work and/or services shall commence upon signing of a Contract.

7.2 The vendor who is awarded a Contract is prohibited from sub-contracting, assigning, transferring, or otherwise disposing of the agreement or its’ rights, title or interest therein to any other party without the prior written consent of the Vice President of Administration and Finance Services or the Director of Contracting and Procurement, or their designated representative. All approved assignments or other transfers referred to herein must abide by the provisions of the Contract.

7.3 LCCC will execute the contract incorporating all of the specifications, requirements, terms, conditions, and provisions included in the Bid and any additional documents or data provided by LCCC or the successful firm and are deemed relevant for inclusion by LCCC.

7.4 The successful firm will be expected to properly and promptly execute this Contract. Failure to do so could result in cancellation of this Bid award to the recommended vendor. Should this happen, the Bid process may be started anew, if deemed necessary by LCCC.

8. **INSURANCE REQUIREMENTS**

8.1 Throughout the term of the Contract, the successful firm shall carry and pay the premium for Certificate of Liability Insurance per Exhibit “A”, with such policies of insurance limits satisfactory to LCCC as will protect LCCC; its Board of Trustees, officers, employees, Architect’s, and agents; individually and collectively from Worker’s Compensation claims and from any other claims for damages to property or for bodily injury, including death, which may arise from or in connection with the operations under this Contract, whether such operations be by the successful firm or by any subcontractor firm or anyone directly or indirectly employed by either of them. Such insurance shall cover all contractual obligations which the successful firm has assumed.

8.2 The limits of the insurance coverage(s) listed above shall be in compliance with IFB Document Exhibit “A”

8.3 Prior to the commencement of the Contract, the successful firm shall deliver certificates of insurance evidencing such policy or policies to
the LCCC Director of Contracting & Procurement. These certificates of insurance are to contain the endorsements set forth below.

8.4 **“Hold Harmless” Clause:** [with statement on certificate that these endorsements are included in the policy(ies)]. The successful firm assumes the liability for all losses, damages (including loss of use), expenses, demands and claims in connection with or arising out of any injury or alleged injury to persons (including death) or damages or alleged damage to property, sustained or alleged to have been sustained in connection with or to have arisen out of the performance of the work by the successful firm, the subcontractor firms, and their agents, servants and employees, including losses, expenses, or damages sustained by LCCC. The successful firm hereby undertakes and agrees to indemnify and hold harmless LCCC; its Board of Trustees, officers, employees, Architect’s and agents; individually and collectively, from any and all such losses, expenses, damages (including loss of use), demands and claims, and shall defend any suit or action brought against them, or any of them, based on any such alleged injury (including death) or damage (including loss of use), shall pay all damages, judgments, costs, and expenses, including attorney’s fees in connection with said demands and claims resulting therefrom. However, successful firm does not assume liability for nor indemnify LCCC against any such losses resulting from the sole negligence of LCCC or its employees or agents.

8.5 **“Cancellation” Clause:** The policies of insurance covered by this certificate will not be allowed to expire, be canceled, terminated or materially altered prior to their maturity date unless there shall be given no less than thirty (30) days prior written notice by certified or registered mail to LCCC’s Director of Contracting & Procurement.

8.6 **“Additional Insured” Clause:** LCCC shall be listed as an additional named insured on all policies, but only with respect to operations of successful firm under the Contract.

8.7 The procuring of the insurance required under the Contract shall not relieve the successful firm of any obligation or liability assumed under this Contract, including specifically the Indemnification Agreement that follows below in Paragraph 8.8. The successful firm may carry at own expense such additional insurance as it may deem necessary. The successful firm shall assist and cooperate in every manner possible in connection with the adjustment of all claims arising out of successful firm’s operations within the scope provided for under the Contract, and shall cooperate with the insurance carrier in all litigated claims and demands, arising from said operations, which the insurance carrier or carriers are called upon to adjust or resist.

8.8 **Indemnification Agreement:** To the extent permitted by law, successful firm shall indemnify and hold harmless LCCC; and its Board of Trustees, officers, employees, Architect’s and agents; individually and collectively, from any and all losses, damages (including loss of use), expenses, demands and claims in connection with or arising out of
any injury or alleged injury to persons (including death) or damage or alleged damage to property, sustained or alleged to have been sustained in connection with or to have arisen out of the performance of the work by the successful firm, the subcontractor firms, and their agents, servants, and employees, including losses, expenses, or damages sustained by LCCC. The successful firm shall defend any suit or action brought against them, or any of them, based on any such alleged injury (including death) or damage (including loss of use), and shall pay all damages, judgments, costs, and expenses, including attorneys’ fees in connection with said demands and claims resulting therefrom.

8.9 In the event that the successful firm shall fail to maintain and keep in force Comprehensive General Bodily Injury and Property Damage Liability Insurance, Workers’ Compensation Coverage, and other insurance coverage’s, as hereinafore provided, LCCC shall have the right to cancel and terminate the Contract forthwith and without notice.

9. APPLICABLE WYOMING STATE STATUTES

9.1 LCCC shall apply the following State of Wyoming Statutes to this Bid.

9.1.1 §16-6-101 through 121 titled “Public Property – Public Works and Contracts”.
9.1.2 §16-6-201 through 206 titled “Preference for State Laborers”.
9.1.3 §16-6-701 through 708 titled “Construction Contracts with Public Entities”.
9.1.4 §16-1-1001 titled “Capital Construction Projects Temporary Restrictions”.
9.1.5 §27-4-401 through 413 titled “Prevailing Wages”.
9.1.6 §16-6-901 through 902 titled “Use of Apprenticeship Programs on Public Works Projects”.

9.2 Expenditures or contracts involving federal funds are subject to federal rules and regulations, therefore under these conditions, State of Wyoming preference laws do not apply.

9.3 Final payment will be made subsequent to a forty-one (41) day advertising period, as required by Wyoming Statute §16-6-117. The final payment is also conditioned upon receipt of a sworn affidavit as required by this Statute. Said affidavit shall be completed by Contractor stating that all claims for materials and labor under the contract have been paid in full. Should there be a disputed claim, the affidavit shall so state the exact amount to be withheld from the final payment.

9.4 Acknowledgement and compliance with applicable State Statutes is the sole responsibility of the “Prime” or “General” Contractor and all subcontractors. LCCC reserves the right to request written verification of same.
10. **LAWS AND REGULATIONS**

Successful firm shall comply with all laws, ordinances, and regulations of any applicable federal, state, county, or city government applicable to the performance of the services described herein. LCCC agrees to provide all cooperation reasonably necessary for such compliance. In addition, successful firm shall also comply with all LCCC policies and regulations as may currently and/or in the future pertain to service under the subsequent Contract. These laws, ordinances, regulations, and policies shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though written out in full.

11. **LICENSES, PERMITS AND TAXES**

Contractor shall secure and pay for all federal, state, and local licenses and permits required for the performance of the work and/or services provided for herein. LCCC will cooperate with successful firm in obtaining all licenses and permits and will execute such documents as shall be reasonably necessary or appropriate for such purposes. Successful firm shall pay for any and all taxes and assessments attributable to the performance of the contract work and/or services provided herein including but not limited to sales taxes, excise taxes, payroll taxes, and federal, state, and local income taxes.

12. **QUALIFICATIONS OF CONTRACTOR**

12.1 The contractor quoting on this project may be required submit three (3) letters of reference from persons for whom they have done the type of work described by these specifications within the last three (3) years. In the event that the contractor has performed this type of work for Laramie County Community College within the last three (3) years, no letters of reference are required. In the event that such letters are not available, contractors shall supply the owner’s representative with the names, phone numbers, and addresses of persons or firms for whom they have done this type of work during the last three (3) years.

12.2 Contractor and each of its sub-contractors hereunder, if any, shall at its sole expense, obtain insurance as detailed in Exhibit “A” from reliable insurance companies acceptable to LCCC, with limits specified in U.S. currency or equivalent. Such insurance shall be in force at the time the contract has commenced and shall remain in force for the duration of this contract, unless a later date is specified by LCCC.

12.3 Contractor shall secure and pay for all federal, state or local licenses and/or permits required for this specific scope of work provided for herein.

12.4 The Contractor shall function as an independent contractor for the purposes of this Agreement and shall not be considered an employee of LCCC. It is intended that the fees paid hereunder shall constitute
earnings from self-employment income. The Contractor shall assume sole responsibility for and indemnify LCCC against liability for any debts, liabilities, taxes, duties, fees or fiscal charges that may be incurred by the Contractor in fulfilling the terms of this Agreement. LCCC will not withhold any amounts therefrom as U.S. Federal income tax withholdings from wages or as employee contributions under the U.S. Federal Insurance Contributions Act or make employer contributions thereunder with respect thereto. Contractor shall be solely responsible for the reporting, estimation and payment of all income taxes, fees, and other contributions on or attributable to self-employment income attributable to the fees payable hereunder.

13. **SAFETY AND HEALTH**

13.1 The successful firm shall comply with the Occupational Safety and Health Act (OSHA) of 1970 and the American Disability Act (ADA) of 1992 or the applicable standards promulgated under said Acts.

13.2 The successful firm shall take reasonable and proper care and shall use and maintain LCCC property, facilities and equipment under its care, custody, and control in a manner which shall not cause any violations, abuse, or misuse of said property, facilities, and/or equipment.

13.3 The contractor shall be responsible for implementing safety measures for the protection of their employees and members of the public during all phases of the contract work. The contractor shall be responsible for the supply and placement of traffic safety cones, barricades, warning signs, etc. Work shall be performed in compliance with OSHA regulations and other relevant and applicable codes and regulations.

13.4 If successful firm’s bid requires a capital investment for the performance of this Contract, such capital investment program shall be free of conditions which violate OSHA and ADA or other applicable standards. Should repairs, alterations, modifications, or replacements be required to comply with the cited Acts, such action shall be the responsibility of the successful firm. Should a determination be required as to whether a specific condition violates said Acts, such determination shall be made by a competent safety Architect or safety consultant.

13.5 Should successful firm furnish equipment for the performance of this Bid, such equipment shall be free of conditions which violate OSHA and ADA, or their applicable standards. Should repairs, alterations, modifications, or replacements be required to comply with the cited Acts, such action shall be the responsibility of successful firm.

13.6 The successful firm shall comply with and conform to all applicable fire, and public safety, laws, regulations, ordinances, code requirements, as well as LCCC’s safety regulations.
14. **HAZARDOUS MATERIALS**

14.1 The contractor agrees to indemnify and hold Laramie County Community College harmless for any release of any kind of toxic wastes or hazardous material, or any violation of any law or regulation of the EPA or DEQ that is caused by the contractor or any of the contractor’s subcontractors.

14.2 Contractor shall provide LCCC with a current copy of all applicable Material Safety Data Sheets (MSDS) for each chemical, material, or product used during the performance of this scope of work.

14.3 Contractor is responsible for ensuring that all personnel who handle chemicals, materials, or products (and their respective wastes) are knowledgeable and properly trained, and that these chemicals, materials, or products are properly used, applied, handled, stored, transported and disposed of in accordance with federal, state, and local rules, regulations, and/or requirements.

14.4 Contractor shall provide knowledge of proper spill prevention and spill response methods for all chemicals or hazardous materials in use.

14.5 Contractor shall NOT dispose of any hazardous waste on campus. Contractor is responsible for off-site hazardous waste disposal, and any associated costs, fees, or permits associated with such disposal.

15. **RESPONSIBILITIES OF BIDDER**

15.1 The firm awarded the Bid shall comply with all applicable City of Cheyenne WY, Laramie County WY, State of Wyoming, and federal laws, regulation, codes, and standards.

15.2 Each bidder is solely responsible for all costs borne and associated with the preparation and delivery of this Bid, and shall not be reimbursed by LCCC. Said costs may include (but not limited to) labor, travel, materials, licenses, administrative expenses, and personal charges.

15.3 It is the responsibility of each firm before submitting a Bid to:
   a) Examine, study, and be familiar with complete Bid and referenced documents.
   b) Visit the LCCC site and become familiar with local and site conditions, if necessary.
   c) Promptly give LCCC written notice of all conflicts, errors, ambiguities, or discrepancies that the bidder discovers in the Bid or its’ related documents.

15.4 Each Bid shall be accompanied by a bid bond, certified check, or cashier’s check in an amount of 5% of the Bid. The bid security shall be drawn upon a surety company with a rating of “A” or better.
according to the Best Publication and licensed in the state of Wyoming. The security shall be made payable without condition to LCCC as a guarantee that if the bid is accepted, the bidder will enter into a contract with LCCC for the work prescribed by said bid. The bid security of all bidders will be retained until the contract is awarded or other disposition has been made. If the successful bidder fails to execute a contract and/or agreement and to furnish other required documentation within ten (10) days of notice of award, LCCC shall be entitled to collect the amount of the bidder’s proposal guarantee and costs of any legal fees incurred for collection of the bid bond or any damages incurred by LCCC as liquidated damages as to award the prescribed bid work by the successful bidder to another bidder or to re-advertise the bid or otherwise dispose of the said bid as LCCC may see fit.

15.5 The successful bidder shall be required as per Wyoming Statute §16-6-112 to provide a contractor’s performance and payment bond or other guarantee in an amount equal to 100% of the contract sum. If the contract sum is one hundred thousand dollars ($100,000.00) or less, other forms of bond or guarantee may be approved by LCCC prior to acceptance of such bond or guarantee. The bonding company must have a rating of “A” or better according to Best Publication.

15.6 Each applicant is solely responsible for any cost incurred prior to issuance of a legally executed contract. No property interest, of any kind or nature, shall accrue until a contract is awarded and signed by all parties.

15.7 Each applicant is solely responsible for any cost incurred prior to issuance of a legally executed contract. No property interest, of any kind or nature, shall accrue until a contract is awarded and signed by all parties.

15.8 **OSHA Training Certification:** For public construction contracts estimated to cost more than $30,000, contractors must certify in the bid or the contract that all employees to be employed at the worksite will have completed a course in construction safety and health that is at least ten hours (10-hour card) in duration and has been approved by the United States Occupational Safety and Health Administration.

16. **TRADE NAME AND SUBSTITUTION PROVISIONS**

16.1 Trade names designated in the specifications are used as an acceptable standard quality. Products of other manufacturers will not be considered unless specifically stated. Substitutes or equals are not acceptable where non-substitution is specified in the Bid Document.

16.2 It is the intent of the Bid Documents that the work be completed in all respects in accordance with the subsequent Contract Documents. **This work is to be bid exactly as specified.** Where details and/or
specifications are incomplete or unclear, the Bidder should request clarification in writing prior to the Bid due date.

17. **BID EVALUATION CRITERIA / AWARD OF BID**

17.1 In evaluating Bids, LCCC personnel will consider whether or not the Bid complies with the prescribed Bid requirements and specifications per the Bid Document.

17.2 Acceptable and responsive Bids will be evaluated per the criteria detailed in the Bid Documents. Any assumptions, exceptions or exclusions related to any part of the Bid Documents may result in a bidder being disqualified or reduced in standing.

17.3 LCCC reserves the right to reject any or all Bids, including without limitation, if they are, in its’ sole discretion judged unacceptable, non-responsive, non-conforming, conditional, to waive any technical or formal defect therein, to accept or reject any part of a Bid, to reject or disapprove of any vendor as may be in the best interests of LCCC.

17.4 Cost **may not** be the sole basis for selection, since it is in LCCC’s best interest to obtain materials and/or services which best meet our needs, specifications, and requirements. In addition to price, the following will be considered in the evaluation of this Bid:

17.4.1 The ability, capacity, and skill of the bidder to perform the service or provide the material required, including the sufficiency of financial resources available.

17.4.2 The character, integrity, reputation, judgment, and experience of the bidder.

17.4.3 The quality and quantity of performance of previous contracts.

17.5 Upon review of the Bids, LCCC reserves the right to request the following additional information:

17.5.1 A break-down of bid costs to a reasonable level of detail.

17.5.2 An accounting review of bidders costs and submitted Bid.

17.5.3 Written Bidder verification of Bid Pricing and Specifications.

17.5.4 Other additional information that may be applicable to the evaluation and award of this Bid.

17.6 The Bid will be awarded to the lowest, most responsive and most responsible bidder complying with the prescribed Bid requirements and specifications, provided the price is reasonable and it is in the best interests of, and most advantageous to LCCC to accept it. The Director of Contracting & Procurement reserves the right to reject any and all bids and to waive any informality in bids received whenever
such rejection or waiver is in the best interest of LCCC. Said individual also reserves the right to reject the Bid of a bidder who has previously failed to perform properly or complete on time or on budget services of a similar nature, or a Bid of a bidder whose investigation shows is not in a position to perform the specified service.

17.7 LCCC reserves the right to negotiate with the successful Bidder any required changes and/or modifications to this Bid prior to signature of a Contract, if deemed in the best interest of LCCC to obtain the objectives and intent of this Bid, including (but not limited to) budget compliance, scope of work modification, additions and/or deletions.

18. OWNERSHIP OF DOCUMENTS / COLLEGE PROPERTY

All drawings, specifications, pictures, data, information, documents, Bid related documents, and subsequent contract and/or PO documents are considered the sole property of LCCC and/or the Consulting Architect, and shall not be transmitted in any fashion or form without the express written consent of the LCCC legal counsel, Vice President of Administration and Finance Services, or their designated representative and the Consulting Architect’s Principal-in-Charge.

19. MATERIAL AVAILABILITY

19.1 It is the responsibility of each bidder to verify the availability of material(s), delivery schedules, fabrication and manufacturing schedules and other pertinent data prior to submission of their Bid; and the responsibility of the successful bidder to provide same after award of the Bid. It is the responsibility of the bidder to notify LCCC immediately if material(s) specified are discontinued, replaced, or not available for an extended period of time. LCCC reserves the right to charge back additional costs, including but not limited to, freight, special handling, and purchase price difference due to delays, etc., to the successful bidder when items are not supplied as bid.

19.2 Failure of a bidder to furnish, within the time specified per the Bid for equipment, supplies, materials, services, and/or other items on which a Bid award is made, shall be cause for removal of bidder from the active list of bidders.

20. PUBLIC INFORMATION

All information, except that classified as confidential and/or proprietary, will become public information at the time that the Bid is awarded in accordance with applicable sections of the federal “Freedom of Information Act (FOIA) and Wyoming State Statute §16-4-201. Confidential and/or proprietary information must be marked “CONFIDENTIAL” and/or “PROPRIETARY” in bold letters in the upper right hand corner of each sheet (page) containing the confidential information. Price and information concerning the Bid specifications cannot be considered confidential. All information identified as confidential and/or proprietary will remain confidential unless LCCC is
required by legal order to make it available to the public or to particular parties.

21. PROTESTS

Any firm or vendor who is allegedly aggrieved in connection with the solicitation of a Bid, or award of a contract may protest. The protest must be submitted in writing to the Director of Contracting & Procurement within five (5) days after notification to all firms of intent to award. If the protest is not resolved by mutual agreement, the Director of Contracting & Procurement will promptly issue a decision in writing to the protestant. If the protestant wished to appeal the decision rendered, such appeal must be made in writing to the LCCC Vice President of Administration and Finance Services. The decision of this VP will be final. Unless this procedure is followed, a protest need not be considered by LCCC.

22. RESPONSIBILITIES OF LCCC

22.1 Execute Notice of Award, Notice to Proceed, Contract and/or Agreement following approval and award to the successful bidder.

22.2 Provide to all bidders any applicable documentation, drawings, specifications, records, or other data required to complete this bid.

22.3 Provide as required, uniform and consistent written documentation to all potential bidders deemed to be support assistance and as necessary to complete a Bid submittal.

22.4 LCCC may conduct such investigations as deemed necessary to establish the responsibility, qualifications, and financial ability of a bidder, their suppliers, affiliates, consultants, and/or sub-contractors to perform the services in accordance with this Bid.

23. PAYMENT SCHEDULE

23.1 LCCC shall make progress payments against the Bid Compensation sum which shall be submitted on an “Application and Certification for Payment (AIA Document G702 or equivalent). Each Application for Payment shall be one (1) calendar month ending on the last day of the respective month.

23.2 Each payment shall include detailed invoices as required by LCCC policies and procedures or other applicable regulations.

23.3 Final payment will be made subsequent to a forty-one (41) day advertising period, as required by Wyoming Statute §16-6-116 and 117. The final payment is also conditioned upon receipt of a sworn affidavit as required by this Statute. Said affidavit shall be completed by Contractor stating that all claims for materials and labor under the contract have been paid in full. Should there be a disputed claim, the affidavit shall so state the exact amount to be withheld from the final payment.
24. **TAX EXEMPTION**

LCCC is exempt from Wyoming sales or use tax for direct purchases of materials and supplies. A copy of the Wyoming Sales Tax Exemption Form will be issued upon request. LCCC’s federal identification number is 83-6009473.

END OF SECTION TWO
SECTION THREE

BID SUBMITTAL & PRICING DOCUMENT

DO NOT MODIFY BID DOCUMENT – Any modification or alteration to this Document from its original format will result in rejection of the respective Bid. BID FORM TO BE COMPLETED IN ITS ENTIRETY, SIGNED IN INK, AND SUBMITTED IN ITS ENTIRETY.

Bid No.: IFB-19211

Bid Description: Business Building Exterior Renovation

Bid Due/Opening Date: May 23, 2019 @ 3:00 p.m. (prevailing local time)

This Bid shall be submitted to:
Laramie County Community College
Administration & Finance/AM-104
1400 East College Drive, Cheyenne, WY 82007

1. BID REQUIREMENTS AND FORMAT

1.1 An original Bid shall be completed on this document titled “BID SUBMITTAL & PRICING DOCUMENT” and submitted per the specifications and requirements of Bid No. IFB-19211. Failure to complete or submit any required portion of this BID SUBMITTAL & PRICING DOCUMENT; and/or to deface or alter any portion of the Bid Documents shall be cause for rejection of said Bid as being unacceptable, non-responsive, non-conforming or conditional.

1.2 The undersigned agrees that their Bid will not be withdrawn for a period of forty-five (45) days from the date of Bid opening.

1.3 The undersigned Bidder proposes and agrees, if this Bid is accepted, to perform all work and/or services as specified or indicated in the Bid Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bid Documents. Bidder acknowledges that they have included the cost of all insurance requirements, permits, bonds and taxes as required, and will execute and return same in the time allotted within the general conditions of the Bid Documents and subsequently issued Contract.

1.4 Bidder has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, and performance of the work and/or services. Bidder has correlated
the information known to bidder, information and observations from
visits to the work site, reports and drawings identified in the Bid
Documents.

1.5 Bidder is familiar with and is satisfied as to all federal, state and local
laws and regulations that may affect cost, progress and performance
of the work and/or services.

1.6 Bidder does not consider that any further examinations,
investigations, explorations, tests, studies, specifications, or date are
necessary for the determination of this bid for performance of the work
and/or services at the price(s) bid and within the times and in
accordance with the other items and conditions of the Bid Documents.

1.7 Bidder has given LCCC and Architect written notice of all conflicts,
errors, ambiguities or discrepancies that the bidder has discovered in
the Bid Documents, and the written resolution thereof by LCCC and
Architect is acceptable to bidder. The Bid Documents are generally
sufficient to indicate and convey understanding of all terms and
conditions for the performance of the work and/or services for which
this Bid is submitted.

1.8 Any assumption, exception or exclusion related to any part of the Bid
Documents must be noted prior to Bid Due/Opening Date, and may
result in bidder being disqualified or reduced in standing.
Assumptions, exceptions or exclusions taken after issuance of a
“Notice of Award” document may also result in disqualification.

1.9 Bidder acknowledges receipt of complete Bid Document package,
including all incorporated and attached Bid Documents.

1.10 Acknowledgement and compliance with applicable State Statutes is
the sole responsibility of the “Prime” or “General” Contractor and all
subcontractors. LCCC reserves the right to request written verification
of same.

2. PROJECT SCOPE AND DETAILS

2.1 The Work includes and consists of furnishing all labor, operations,
materials, accessories, incidentals, services and equipment indicated,
specified, mentioned, scheduled, or implied per the Bid Documents for
the work on the specific aforementioned project. The specific Work
includes, but not be limited to: removal of the existing exterior
windows and existing exterior hollow metal entry doors; excavation to
pour new footings and install new insulated concrete forms, saw
cutting existing concrete walls for added window locations, interior
framing and touch up at new and existing window locations; attaching
steel furring system to existing concrete twin T walls, installing
continuous insulation, installing new storefront window framing system
and storefront entry doors, installing of new metal siding panels over
furring system, new exterior lighting, relocating existing wall mounted
fans and other fixtures to face of new finished wall; and new concrete slabs at the exterior doors. Additionally, the roof is being replaced and this work will include; removing all layers of existing roofing including but not limited to Mod bit membrane, insulation, flashings and metal coping. Install new Roof system including but not limited to new single ply roof system, insulation, flashings, and metal coping as specified in the Construction Documents. All materials, services and/or work not specifically mentioned which are necessary in order to provide a complete project shall be included in the bid and shall conform to all Local, State, and Federal requirements in accordance with the requirements, terms, specifications, conditions, and provisions hereinafter contained.

2.2 Project Representatives

**LCCC**
Bill Zink
Director, Physical Plant
(307) 778-1121
bzink@lccc.wy.edu

**Architect’s Representative**
Joshua Schmidt, AIA, NCARB
Tobin & Associates
(307) 632-3144 x124
josh@tobin-assoc.com

2.3 Project Schedule

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release bid</td>
<td>May 1, 2019</td>
</tr>
<tr>
<td>Mandatory pre-bid meeting</td>
<td>May 9, 2019 @ 2:00 p.m.</td>
</tr>
<tr>
<td>Questions due</td>
<td>May 14, 2019</td>
</tr>
<tr>
<td>Issue addendum if necessary</td>
<td>May 17, 2019</td>
</tr>
<tr>
<td>Bid opening</td>
<td>May 23, 2019</td>
</tr>
<tr>
<td>Notice of Award</td>
<td>May 27, 2019</td>
</tr>
<tr>
<td>Notice to Proceed</td>
<td>June 5, 2019</td>
</tr>
<tr>
<td>Interior Construction complete</td>
<td>July 26, 2019</td>
</tr>
<tr>
<td>Roofing complete</td>
<td>November 1, 2019</td>
</tr>
<tr>
<td>Substantial Completion</td>
<td>November 8, 2019</td>
</tr>
</tbody>
</table>

2.4 Liquidated Damages: For failure to complete the Work on time, It is mutually agreed by and between the parties hereto that time is of the essence and that in the case of the Contractor’s failure to complete the contract within the time specified and agreed upon (substantial completion date), the Owner will be damaged thereby; and because it is difficult to definitely ascertain and prove the amount of said damages, it is hereby agreed that the amount of such damages shall be the liquidated sum of **two hundred fifty dollars ($250.00)** per calendar day for every day’s delay in finishing the Work until such time as the Work is completed and accepted via written instrument by the Owner; and the Contractor hereby agrees that said sum shall be deducted from monies due the contractor under the contract or if no money is due the Contractor, the Contractor hereby agrees to pay to the Owner as liquidated damages, and not by way of penalty, such total sum as shall be due for such delay.
If the Contractor has not completed all Punch List items within sixty (60) days from when the list was generated, the Owner may address the Punch List items with other forces and back-charge the Contractor for those forces in addition to days of non-compliance.

3. **BASE BID PRICE SCHEDULE**

3.1 The undersigned, in compliance with the Bid Document package requirements and instructions, having read and examined same, and having visited the site of the proposed work, and being familiar with the conditions surrounding the Bid Project, including availability of materials, utilities and labor, proposes to perform the proposed scope of work for the proposed price which includes (*but is not limited to*) the furnishing of labor, materials, shop drawings (*if required*), transportation, tools, equipment, insurance, bonds, applicable taxes, temporary provisions, escalation, overhead and profits necessary for the completion of the work in accordance with and described, indicated or reasonably inferred per this certain Bid Document package.

3.2 Each submitted Bid shall provide a Base Bid per Paragraph 3.3 below. Lump sum Base Bid shall be written in words and in figures, discrepancies between words and figures will be resolved in favor of written words.

3.3 **Total Base Bid Price (Not to Exceed Sum of):**

<table>
<thead>
<tr>
<th>Total Written in Words</th>
<th>$____________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Written in Figures</td>
<td></td>
</tr>
</tbody>
</table>

4. **STATE STATUTES AND REGULATIONS**

4.1 **WYOMING RESIDENT CONTRACTOR**

☐ No

☐ Yes, my Contractor Residency Certification Number is ________________, and my bid complies with Wyoming Statutes §16-6-101 through 107 and §16-6-1001. This Bid will be awarded based on the Contractor’s statement of meeting the requirements of these Wyoming Statutes. Subsequent information verifying the statute retirements have been met may be required up to and including possible audits to confirm that the contractor has not subcontracted more than a total of 30% of the work covered by his contract to non-resident subcontractors and non-resident sub-tier contractors and that other applicable statute requirements have been met. (*Certificate of Residency must be current and on file with the State of Wyoming Department of Employment, Labor Standards Division (307.777.7261).*

4.2 **Debarment/Suspension:** A Vendor certifies, by submission of their respective Bid, that neither it nor its principals is presently debarred,
suspended, proposed for debarment, declared ineligible, sentenced to a denial of State or Federal benefits by State or Federal court, or voluntarily excluded from participation in this transaction by any State or Federal department or agency. Submission is also agreement that LCCC will be notified of any change in this status. Additionally:

a) Have not within a three-year period preceding this transaction been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property; and,

b) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or Local) with commission of any of the offenses enumerated in Paragraph “a” above; and have not within a three-year period preceding this transaction had one or more public transactions (Federal, State, or Local) terminated for cause or default.

Verification and Certification of Debarment Status
☐ Presently debarred, suspended, or excluded per the above criteria.
☐ Not presently debarred, suspended or excluded per the above criteria.

4.3 Electrical Apprenticeship Programs on Public Work Projects: For all public works awarded by the state, the University of Wyoming, a community college or a school district pursuant to W.S. 16-6-101 through 16-6-206 estimated to cost one million dollars ($1,000,000.00) or more, a contractor who commits to ensure that not less than ten percent (10%) of the labor hours shall be worked by apprentices shall have his bid considered as if his bid were one percent (1%) lower than the actual dollar value of his bid. The contractor awarded a contract under this section, after consideration of all other applicable preferences under this chapter, shall be awarded the contract at the actual dollar value of his bid under this section. This subsection shall not apply to those state agencies that have a recognized or approved apprenticeship training program requirement by the United States department of labor or other appropriate federally funded program.

If contractors elect to invoke the resident preference on this project, certification paperwork shall be submitted with the bid package.

Are you requesting bid preference for having an Apprenticeship Utilization Program in place?
☐ Yes ☐ No

If yes, you must submit a copy of the Letter of Certification from the US Department of Labor, Wyoming Bureau of Apprenticeship and Training with bid response.

5. REQUIRED SUBMITTALS (SUBMIT WITH BID)

The following documents shall be included with your Bid submittal:
5.1 LCCC “BID SUBMITTAL & PRICING DOCUMENT”
5.2 Bid bond or Bid security
5.3 Acknowledgement of any issued Addendums.
5.4 A list of substitutions, clarifications, qualifications, assumptions, or exceptions (if applicable).
5.5 Residency Certification
5.6 OSHA construction Training Certification: Ten (10) hour card for project manager or equivalent.
5.7 CSI Division Assignment Schedule.
5.8 Electrical Apprentice Utilization Program Letter of Certification (if applicable)

6. **BID DOCUMENT CHECKLIST**

- LCCC “BID SUBMITTAL & PRICING DOCUMENT” completed, signed in ink and submitted.
- Bid Bond completed and submitted.
- Acknowledged any issued addendum(s) and submitted.
- A listing of substitutions, qualifications, exclusions, exceptions and/or clarifications, submitted on a company letterhead.
- Residency Certification submitted.
- OSHA ten (10) hour card certification.
- CSI Division Work Assignment Schedule
- Electrical Apprentice Utilization Program Letter of Certification (if applicable)

7. **APPENDIX – BID ATTACHMENTS**

The following documents are attached hereto and incorporated by reference and shall become a part and condition of this certain Bid.

- Exhibit A: LCCC Insurance Requirements
- Exhibit B: 2019 Building Construction Prevailing Wages
- Exhibit C: CSI Division Work Assignment Schedule
- Exhibit D: Architect’s Project Drawing Package

8. **POST-BID SUBMITTALS**

The undersigned also agrees to furnish the following post-bid submittals to LCCC within ten (10) days after Notice of Award:

- Certificate of Liability Insurance
- Construction Schedule
- Schedule of Values

9. **ADDENDA ACKNOWLEDGEMENT**

9.1 All IFB Addenda must be acknowledged in writing and submitted with Bid. Confirmation and receipt of all issued Addenda is the responsibility of each prospective firm to verify. Verification can be
obtained by contacting the LCCC Purchasing Office via e-mail at: jspezzano@lccc.wy.edu.

Bid No.: IFB-19211

Project Description: Business Building Exterior Renovation

I, the undersigned, hereby acknowledge receipt of the following addenda for LCCC Bid No IFB-19211:

Addendum No._____; Addendum No._____; Addendum No._____; Addendum No._____

Name of Bidder – Company Name

Signature __________________________ Printed Name __________________________

Title __________________________ Date __________________________
10. SIGNATURE PAGE

10.1 Signature page must be completed in its’ entirety and submitted with Bid Document package.

10.2 Signature page must be signed by firm’s authorized agent, failure to do so will result in rejection of said bid as being unacceptable and non-responsive.

The undersigned, as an authorized agent for the Firm named below, acknowledges that he/she has examined, read, and understands this Request for Bid with its’ incorporated or related documents, and hereby offers to furnish all labor, materials, equipment, services, and information necessary to comply with the requirements, terms, specifications, conditions, and provisions set forth herein.

Authorized Signature       Printed Name

Title                        Name of Firm

Mailing Address              City, State, Zip

Phone #                      Fax #

E-mail address

Dated this ______ day of ____________________, 2019

Bidder must return this entire “BID SUBMITTAL & PRICING DOCUMENT”, along with each document described in Article 6 above titled Bid Document Checklist.

END OF SECTION THREE
B. Arrange use of site and premises to allow:
   1. Owner and public occupancy of adjacent areas.

C. Provide access to and from site as required by law and by Owner:
   1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
   2. Do not obstruct roadways, sidewalks, or other public ways without permit.

D. Time Restrictions:
   1. Limit conduct of especially noisy work to the hours of the day as arranged with the Owner, prior to the work.
   2. Limit work conduct of the hours of the day as in the Contractor's Schedule, arranged with the Owner.

E. Utility Outages and Shutdown:
   1. Limit disruption of utility services to hours the building is unoccupied, or as arranged with the Owner.
   2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
   3. Prevent accidental disruption of utility services to other building areas and facilities.

1.07 WORK SEQUENCE
   A. Coordinate construction schedule and operations with Owner.

PART 2 PRODUCTS - NOT USED
PART 3 EXECUTION - NOT USED

END OF SECTION
SECTION 01 1000 - SUMMARY

PART 1 GENERAL

1.01 PROJECT

A. Project Name: Laramie County Community College Business Building - Exterior Renovation; 1400 East College Drive, Cheyenne, Wyoming.

B. Owner's Name: Laramie County Community College; 1400 East College Drive, Cheyenne, Wyoming 82007.
   1. Owner's Representative: Bill Zink, Director of Physical Plant, 1400 East College Drive, Cheyenne, Wyoming 82007.

C. Architect's Name: Tobin & Associates, P. C.; P.O. Box 2420, 1820 Dillon Avenue, Suite 200A, Cheyenne, Wyoming 82003.

D. The Project consists of the selective demolition and renovation of exterior building elevations, roof system, and windows of the building of the Laramie County Community College (LCCC) Business Building, covering the twin T wall system with a new facades of stone wainscot and metal siding, with new window systems. Existing electrical systems are to be modified and changed as necessary for the new exterior layout.

1.02 CONTRACT DESCRIPTION

A. Contract Type: A single prime contract based on a Stipulated Price.

1.03 DESCRIPTION OF ALTERATIONS WORK

A. Scope of demolition and removal work is indicated on the drawings and called for in the specifications of the Project Manual.

B. Renovate the areas, complete including operational mechanical and electrical work.

C. Refinish surface areas as specified.

D. Plumbing: Alter existing and add new construction. Provide selective construction of the roof drainage system.

E. Electrical Power and Lighting: Alter existing and add new construction. Keep existing power and lighting system operational as much as possible, only shutting it down on a temporary basis for the selective construction of the space.

F. Fire Alarm: Alter existing fire alarm system, if applicable. Keep existing alarm system operational as much as possible, only shutting it down on a temporary basis for the selective construction of the space.

G. Owner will remove all furnishings from the spaces affected by the work before start of contractor's work.

1.04 WORK BY OWNER

A. Items noted NIC (Not in Contract or By Owner) will be supplied and installed by Owner after Substantial Completion.

1.05 OWNER OCCUPANCY

A. Owner intends to continue to occupy adjacent portions of the existing building during the entire construction period.

B. Owner intends to occupy the Project upon Substantial Completion.

C. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.

D. Schedule the Work to accommodate Owner occupancy.

1.06 CONTRACTOR USE OF SITE AND PREMISES

A. Construction Operations: Limited to areas noted on Drawings.
   1. Locate and conduct construction activities in ways that will limit disturbance to site.
   2. Staging and Material Storage at the site, will be discussed and determined at the Preconstruction Meeting.
SECTION 01 1015 - ELECTRONIC DRAWINGS

PART 1 GENERAL

1.01 RELATED DOCUMENTS
   A. Drawings and general provisions of Contract, including General and any Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY
   A. The Architect, if requested, will provide the General Contractor with one electronic copy of the Contract Document Drawings for distribution to subcontractors and suppliers as a convenience in the preparation of Shop Drawings and Site Work. The electronic copy will be provided on a compact disk or e-mail transfer in AutoCad format.
   B. The Architect shall be paid a service fee of One Hundred and no/100 Dollars per file ($100/file) in accordance with the Agreement. This fee shall be paid by the party requesting the CAD files.

1.03 REFERENCES
   A. A copy of the Agreement is included at the end of this Section.

PART 2 PRODUCT - (NOT USED)
PART 3 EXECUTION - (NOT USED)

END OF SECTION
SECTION 01 1015.01 - ELECTRONIC FILES AGREEMENT

AN AGREEMENT BETWEEN ARCHITECT-ENGINEER OF RECORD AND CONTRACTOR
FOR TRANSFER OF COMPUTER AIDED DRAFTING (CAD) FILES ON ELECTRONIC MEDIA

ARCHITECT-ENGINEER OF RECORD (AER) ___________________  CONTRACTOR ___________________

______________________________________________________________  __________________________________________

ARCHITECT PROJECT NO. ___________________  DATE: ___________________

PROJECT NAME: ________________________________________________

LOCATION:

THE AER WILL PROVIDE THE FOLLOWING CAD FILES, DATED ____________, FOR THE CONVENIENCE OF THE CONTRACT IN PREPARING SHOP FABRICATION DRAWINGS:

______________________________________________________________  __________________________________________

______________________________________________________________  __________________________________________

______________________________________________________________  __________________________________________

______________________________________________________________  __________________________________________

DRAWINGS WERE PREPARED ON THE FOLLOWING:

COMPUTER SOFTWARE: __________________________  VERSION __________________________

CONTRACTOR SHALL PAY AER A SERVICE FEE OF ___________ ($ __________)

TERMS AND CONDITIONS:

A. AER makes no representation as to the compatibility of the CAD files with any hardware or software.

B. Since the information set forth on the CAD files can be modified unintentionally or otherwise, the AER reserves the right to remove all indicia of its ownership and/or involvement from each electronic display. This media should not be considered a certified document.

C. All information on the CAD files is considered instruments of service of the AER and shall not be used for other projects, for additions to this project, or completion of this project by others. CAD files shall remain the property of the AER, and in no case shall the transfer of these files be considered a sale.

D. AER makes no representation regarding the accuracy, completeness, or permanence of CAD files, nor of their merchantability or fitness for a particular purpose. Addenda information or revisions made after the date indicated on the CAD files may not have been incorporated. In the event of a conflict between the AER’s sealed Contract Drawings and CAD files, the sealed Contract Drawings shall govern. It is the Contractor’s responsibility to determine if any conflicts exist. The CAD files shall not be considered to be Contract Documents as defined by the General Conditions of the Contract for Construction.

E. The use of CAD files prepared by the AER shall not in any way obviate the Contractor’s responsibility for the proper checking and coordination of dimensions, details, member sizes.
and gage, and quantities of materials as required to facilitate complete and accurate fabrication and erection.

F. The Contractor shall, to the fullest extent permitted by law, indemnify, defend and hold harmless the AER, and its subconsultants from all claims, damages, losses, expenses, penalties and liabilities of any kind, including attorney’s fees, arising out of or resulting from the use of the CAD files by the Contractor, or by third party recipients of the CAD files from the Contractor.

G. The AER believes that no licensing or copyright fees are due to others on account of the transfer of the CAD files, but to the extent any are, the Contractor will pay the appropriate fees and hold the AER harmless from such claims.

H. Any purchase order number provided by the Contractor is for Contractor’s accounting purposes only. Purchase order terms and conditions are void and are not a part of this Agreement.

I. Payment of the service fee is due upon receipt of the CAD files.

J. This Agreement shall be governed by the laws of the principal place of business of the AER.

AUTHORIZED ACCEPTANCE
BY ARCHITECT-ENGINEER

______________________________________________

SIGNATURE

______________________________________________

PRINT NAME AND TITLE

______________________________________________

DATE

END OF SECTION

______________________________________________

SIGNATURE

______________________________________________

PRINT NAME AND TITLE

____________________________

DATE
SECTION 01 2000 - PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedures for preparation and submittal of applications for progress payments.
B. Documentation of changes in Contract Sum and Contract Time.
C. Change procedures.
D. Procedures for preparation and submittal of application for final payment.

1.02 SCHEDULE OF VALUES

A. Use Schedule of Values Form: AIA G703, edition stipulated (or an approved equivalent) in the Agreement.
   1. Format: Utilize the Project Table of Contents specification sections to identify each item with number and title of the specification section. Also identify site mobilization.
   2. Submit Schedule of Values in duplicate within 15 days after the date of Owner-Contractor Agreement.
B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

A. Payment Period: Submit at intervals stipulated in the Agreement.
B. Use Form AIA G702 and Form AIA G703, edition stipulated (or an approved equivalent) in the Agreement.
C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
D. For each item, provide a column for listing each of the following:
   1. Item Number.
   2. Description of work.
   4. Previous Applications.
   5. Work in Place and Stored Materials under this Application.
   6. Authorized Change Orders.
   7. Total Completed and Stored to Date of Application.
   8. Percentage of Completion.
   10. Retainage.
E. Execute certification by signature of authorized officer.
F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
H. Submit one electronic and three hard-copies of each Application for Payment.
I. Include the following with the application:
   1. Transmittal letter as specified for submittals in Section 01 3000.
   2. Construction progress schedule, revised and current as specified in Section 01 3000.
   3. Partial release of liens from major subcontractors and vendors.
   4. Affidavits attesting to off-site stored products.

1.04 MODIFICATION PROCEDURES

A. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's employ or subcontractors of changes to Contract Documents.
B. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect
will issue instructions (AIA Document G710 - Architect's Supplemental Instructions) directly to
Contractor.

C. For other required changes, Architect will issue a document (AIA Document G701) signed by
Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change
Order.
   1. The document will describe the required changes and will designate method of
determining any change in Contract Sum or Contract Time.
      a. For proposed changes to be considered by the Owner, Contractor to use AIA
Document G709 (or an approved equivalent).
   2. Promptly execute the change.

D. For changes for which advance pricing is desired, Architect will issue a document that includes
a detailed description of a proposed change with supplementary or revised drawings and
specifications, a change in Contract Time for executing the change with a stipulation of any
overtime work required and the period of time during which the requested price will be
considered valid. Contractor shall prepare and submit a fixed price quotation within an agreed
time frame or number of days.

E. Contractor may propose a change by submitting a request for change to Architect, describing
the proposed change and its full effect on the work, with a statement describing the reason for
the change, and the effect on the Contract Sum and Contract Time with full documentation.
Document any requested substitutions in accordance with Section 01 6000.

F. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of
the Contract.
   1. For change requested by Architect for work falling under a fixed price contract, the amount
will be based on Contractor's price quotation.
   2. For change requested by Contractor, the amount will be based on the Contractor's request
for a Change Order as approved by Architect.
   3. For change ordered by Architect without a quotation from Contractor, the amount will be
determined by Architect based on the Contractor's substantiation of costs as specified for
Time and Material work.

G. Substantiation of Costs: Provide full information required for evaluation.
   1. On request, provide the following data:
      a. Quantities of products, labor, and equipment.
      b. Taxes, insurance, and bonds.
      c. Overhead and profit.
      d. Justification for any change in Contract Time.
      e. Credit for deletions from Contract, similarly documented.

H. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as
provided in the Conditions of the Contract.

I. After execution of Change Order, promptly revise Schedule of Values and Application for
Payment forms to record each authorized Change Order as a separate line item and adjust the
Contract Sum.

J. Promptly revise progress schedules to reflect any change in Contract Time, revise
sub-schedules to adjust times for other items of work affected by the change, and resubmit.

1.05 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, identifying total
adjusted Contract Sum, previous payments, and sum remaining due.

B. Application for Final Payment will not be considered until the following have been accomplished:
   1. All closeout procedures specified in Section 01 7000.
   2. All punch list items are complete within an agreed on time frame.
PART 2 PRODUCTS - NOT USED
PART 3 EXECUTION - NOT USED

END OF SECTION
Application and Certificate for Payment

ARCHITECT'S CERTIFICATE FOR PAYMENT

ARCHITECT:

DATE:

OWNER:

APPLICATION FOR PAYMENT

CONTRACTOR:

TO OWNER:

APPLICATION NO.

CONTRACTOR:

ARCHITECT:

PROJECT NO.

CONTRACTOR ADDRESS:

OWNER ADDRESS:

AMOUNT CERTIFIED:

TREATMENT OF AMOUNT CERTIFIED:

TOTALS:

RECEIVED:
AIA Document G703™ – 1992

Continuation Sheet

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor’s signed certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retainage for line items may apply.

<table>
<thead>
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<th>ITEM NO.</th>
<th>DESCRIPTION OF WORK</th>
<th>SCHEDULED VALUE</th>
<th>WORK COMPLETED FROM PREVIOUS APPLICATION (D + E)</th>
<th>WORKED THIS PERIOD</th>
<th>MATERIALS PRESENTLY STORED (NOT IN D OR E)</th>
<th>TOTAL COMPLETED AND STORED TO DATE (D+E+F)</th>
<th>% (G / C)</th>
<th>BALANCE TO FINISH (C - G)</th>
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SECTION 01 2500 - SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS (INCLUDED IN THIS SECTION)
   A. Substitution Request Form - During Procurement: Required form for substitution requests made prior to award of contract (During procurement).
   B. Substitution Request Form - During Construction: Required form for substitution requests made after award of contract (During construction).

1.03 RELATED REQUIREMENTS
   A. Section 01 3000 - Administrative Requirements: Submittal procedures, coordination.
   B. Section 01 6000 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

1.04 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 to the Owner or to the Contractor will not be considered, without strict approval of the Owner.

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.
      1. Note explicitly any non-compliant characteristics.
   D. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
      1. Forms indicated in the Project Manual are adequate for this purpose, and must be used.
E. Limit each request to a single proposed substitution item.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

A. Instructions to Bidders specifies time restrictions for submitting requests for substitutions during the bidding period, and the documents required.

B. Submittal Form (before award of contract):
   1. Submit substitution requests by completing the form attached to this section. See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

A. Submittal Form (after award of contract):
   1. Submit substitution requests by completing the form attached to this section. See this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.

B. Architect will consider requests for substitutions only within 15 days after date of submission.

C. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.

D. Submit request for Substitution for Convenience immediately upon discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
   1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.
   2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
   3. Bear the costs engendered by proposed substitution of:
      a. Owner's compensation to the Architect for any required redesign, time spent processing and evaluating the request.
      b. Other construction by Owner.
      c. Other unanticipated project considerations.

E. 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.

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 01 7800 - Closeout Submittals, for closeout submittals.

B. Include completed Substitution Request Forms as part of the Project record. Include both approved and rejected Requests.
3.07 ATTACHMENTS

A. A facsimile of the Substitution Request Form (Pre-Construction or During Construction) required to be used on the Project is included after this section.

END OF SECTION
### Pre-Bid Request for Substitution

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- Will changes be required to the building design or drawing dimensions in order to properly install the proposed substitution?  
  - Yes
  - No

- Will the undersigned pay for changes to the building design, including engineering and drawing costs, caused by the requested substitution?  
  - Yes
  - No

- Does the manufacturer’s warranty of the proposed substitution differ from that specified?  
  - Yes
  - No

I/we have investigated the proposed substitution and:

- Manufacturer certifies that the proposed substitution is appropriate for the proposed use and is equal or better than the specified product.
  - Yes
  - No

- Product Supplier certifies that the proposed substitution is appropriate for the proposed use and is equal or better than the specified product.
  - Yes
  - No

- Product Installer certifies that the proposed substitution is appropriate for the proposed use and is equal or better than the specified product.
  - Yes
  - No

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<tr>
<th>Signature</th>
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## Post-Bid Request for Substitution

<table>
<thead>
<tr>
<th>Date</th>
<th>Project</th>
<th>Project No.</th>
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<thead>
<tr>
<th>Contractor/Vendor</th>
<th>Address</th>
<th>City, State, Zip</th>
<th>Phone</th>
<th>E-mail</th>
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<th>Reason for Request</th>
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<thead>
<tr>
<th>Specified Product</th>
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<thead>
<tr>
<th>Description/Name</th>
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<th>Model No.</th>
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<tr>
<th>Proposed Change to Contract Sum</th>
<th>Credit to Owner</th>
<th>Additional Cost to Owner</th>
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<td>$ _____________________________</td>
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<th>Proposed Change to Contract Time</th>
<th>Reduction in days</th>
<th>Increase in days</th>
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<td>________________________________</td>
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<td>days</td>
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I/we have investigated the proposed substitution and:

- [ ] Believe that it is equal or superior in all respects to the original specified product.
- [ ] Will provide the same warranty as required.
- [ ] Will pay redesign and special installation costs caused by the use of this product.
- [ ] Will pay additional costs to other contractors caused by the substitution.
- [ ] Will coordinate the incorporation of the proposed substitution into the Work.
- [ ] Will modify other parts of the Work as may be necessary to complete the Work.

Signature: ____________________________
SECTION 01 3000 - ADMINISTRATIVE REQUIREMENTS

PART 1  GENERAL

1.01  SECTION INCLUDES

A. General administrative requirements.
B. Electronic document submittal service.
C. Preconstruction meeting.
D. Progress meetings.
E. Construction progress schedule.
F. Progress photographs.
G. Coordination drawings.
H. Submittals for review, information, and project closeout.
I. Number of copies of submittals.
J. Requests for Interpretation (RFI) procedures.
K. Submittal procedures.

1.02  RELATED REQUIREMENTS

A. Section 01 6000 - Product Requirements: General product requirements.
B. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements.
C. Section 01 7800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.03  REFERENCE STANDARDS


1.04  GENERAL ADMINISTRATIVE REQUIREMENTS

A. Comply with requirements of Section 01 7000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
B. Make the following types of submittals to Architect:
   1. Requests for Interpretation (RFI).
   2. Requests for substitution.
   3. Shop drawings, product data, and samples.
   4. Test and inspection reports.
   5. Design data.
   6. Manufacturer's instructions and field reports.
   7. Applications for payment and change order requests.
   8. Progress schedules.
   9. Coordination drawings.
   10. Correction Punch List and Final Correction Punch List for Substantial Completion.
   11. Closeout submittals.

PART 2  PRODUCTS - NOT USED

PART 3  EXECUTION

3.01  ELECTRONIC DOCUMENT SUBMITTAL SERVICE

A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF, MS Word, or MS Excel) format, as appropriate to the document, and transmitted via an Internet-based submittal service that receives, logs and stores documents, provides electronic stamping and signatures, and notifies addressees via email.
B. Besides submittals for review, information, and closeout, this procedure applies to Requests for Interpretation (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders),
applications for payment, field reports and meeting minutes, Contractor's correction punchlist, and any other document any participant wishes to make part of the project record.
2. It is Contractor's responsibility to submit documents in allowable format.
3. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.

3.02 PRECONSTRUCTION MEETING
A. Schedule meeting after Notice of Award.
B. Attendance Required:
   1. Owner.
   3. Contractor.
   4. Subcontractors, at Contractor's discretion.
C. Agenda:
   1. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
   2. Submission of initial Submittal schedule.
   3. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
   4. Scheduling.
D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.03 PROGRESS MEETINGS
A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.
B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
C. Attendance Required:
   1. Contractor.
   2. Owner.
   3. Architect.
   4. Contractor's superintendent.
   5. Major subcontractors.
D. Agenda:
   1. Review minutes of previous meetings.
   2. Review of work progress.
   3. Field observations, problems, and decisions.
   4. Identification of problems that impede, or will impede, planned progress.
   5. Review of submittals schedule and status of submittals.
   6. Maintenance of progress schedule.
   7. Corrective measures to regain projected schedules.
   8. Planned progress during succeeding work period.
10. Effect of proposed changes on progress schedule and coordination.
11. Other business relating to work.
E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 CONSTRUCTION PROGRESS SCHEDULE
A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
C. Submit updated schedule with each Application for Payment.

3.05 PROGRESS PHOTOGRAPHS
A. Submit photographs after being taken, upon request by Owner or Architect.
B. Provide photographs of site and construction throughout progress of work.
C. In addition to periodic, recurring views, take photographs of each of important conditions to the Contractor as proof of existing conditions or new renovated conditions, affecting the work.

3.06 COORDINATION DRAWINGS
A. Provide information required by Project Coordinator for preparation of coordination drawings.
B. Review drawings prior to submission to Architect.

3.07 REQUESTS FOR INTERPRETATION (RFI)
A. Definition: A request seeking one of the following:
   1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
   2. A resolution to an issue which has arisen due to field conditions and affects design intent.
B. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
   1. Prepare a separate RFI for each specific item.
      a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
      b. Do not forward requests which solely require internal coordination between subcontractors.
   2. Prepare in a format and with content acceptable to Owner.
      a. Use AIA G716 - Request for Information (or an approved equivalent).
   3. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
C. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
   1. Official Project name and number, and any additional required identifiers established in Contract Documents.
D. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
E. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
   1. Indicate current status of every RFI. Update log promptly and on a regular basis.
   2. Note dates of when each request is made, and when a response is received.
   3. Highlight items requiring priority or expedited response.
   4. Highlight items for which a timely response has not been received to date.
F. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
   1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
G. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
2. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.

3.08 SUBMITTAL SCHEDULE
   A. Submit to Architect for review a schedule for submittals in tabular format.
      1. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.

3.09 SUBMITTALS FOR REVIEW
   A. When the following are specified in individual sections, submit them for review:
      1. Product data.
      2. Shop drawings.
      3. Samples for selection.
      4. Samples for verification.
   B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
   C. Samples will be reviewed for aesthetic, color, or finish selection.
   D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

3.10 SUBMITTALS FOR INFORMATION
   A. When the following are specified in individual sections, submit them for information:
      1. Design data.
      2. Certificates.
      3. Test reports.
      4. Inspection reports.
      5. Manufacturer's instructions.
      6. Manufacturer's field reports.
      7. Other types indicated.
   B. Submit for Architect's knowledge as contract administrator or for Owner.

3.11 SUBMITTALS FOR PROJECT CLOSEOUT
   A. Submit Correction Punch List for Substantial Completion.
   B. Submit Final Correction Punch List for Substantial Completion.
   C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
      1. Project record documents.
      2. Operation and maintenance data.
      3. Warranties.
      5. Other types as indicated.
   D. Submit for Owner's benefit during and after project completion.

3.12 NUMBER OF COPIES OF SUBMITTALS
   A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
   B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
      1. After review, produce duplicates.
2. Retained samples will not be returned to Contractor unless specifically so stated.

3.13 SUBMITTAL PROCEDURES

A. General Requirements:
   1. Use a separate transmittal for each item.
   2. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
   3. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
   4. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
   5. Schedule submittals to expedite the Project, and coordinate submission of related items.
      a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
      b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
   6. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
   7. Provide space for Contractor and Architect review stamps.
   8. When revised for resubmission, identify all changes made since previous submission.
   9. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
  10. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
  11. Submittals not requested will be recognized, and will be returned "Not Reviewed".

B. Product Data Procedures:
   1. Submit only information required by individual specification sections.
   2. Collect required information into a single submittal.
   3. Do not submit (Material) Safety Data Sheets for materials or products.

C. Shop Drawing Procedures:
   1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
   2. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.

D. Samples Procedures:
   1. Transmit related items together as single package.
   2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.

3.14 SUBMITTAL REVIEW

A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.

B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.

C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.

D. Architect's and consultants' actions on items submitted for review:
   1. Authorizing purchasing, fabrication, delivery, and installation:
      a. "Approved", or language with same legal meaning.
      b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
   c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.

2. Not Authorizing fabrication, delivery, and installation:

E. Architect's and consultants' actions on items submitted for information:
   1. Items for which no action was taken:
      a. "Received" - to notify the Contractor that the submittal has been received for record only.
   2. Items for which action was taken:
      a. "Reviewed" - no further action is required from Contractor.

END OF SECTION
PART 1 GENERAL

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

1.02 SUMMARY
   A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
      1. Coordination Drawings.
      2. Administrative and supervisory personnel.
      3. Project meetings.
      4. Requests for Interpretation (RFIs).
   B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.
   C. Related Sections include the following:
      1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
      2. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
      3. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.03 DEFINITIONS
   A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.04 COORDINATION
   A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
      1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
      2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
      3. Make adequate provisions to accommodate items scheduled for later installation.
      4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
   B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
      1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
   C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
      1. Preparation of Contractor's Construction Schedule.
      2. Preparation of the Schedule of Values.
      3. Installation and removal of temporary facilities and controls.
      4. Delivery and processing of submittals.
      5. Progress meetings.
      6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
   1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work.

1.05 SUBMITTALS

A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
   1. Content: Project-specific information, drawn accurately to scale. Do not base Coordination Drawings on reproductions of the Contract Documents or standard printed data. Include the following information, as applicable:
      a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
      b. Indicate required installation sequences.
      c. Indicate dimensions shown on the Contract Drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
   2. Sheet Size: At least 8-1/2 by 11 inches but no larger than 24 by 36 inches.
   3. Number of Copies: one electronic PDF copy of each submittal. Architect will return one electronic PDF copy.
      a. Submit one electronic PDF where Coordination Drawings are required for operation and maintenance manuals. Architect will retain two copies; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.
   4. Refer to individual Sections for Coordination Drawing requirements for Work in those Sections.

B. Key Personnel Names: Within 5 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
   1. Post copies of list in temporary field office. Keep list current at all times.

1.06 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
   1. Include special personnel required for coordination of operations with other contractors.

1.07 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
   1. Attendees: Contractor to inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
   2. Agenda: Contractor to prepare the meeting agenda. Distribute the agenda to all invited attendees.
   3. Minutes: Contractor to record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
B. Preconstruction Conference: Contractor to schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Discuss items of significance that could affect progress, including the following:
   a. Tentative construction schedule.
   b. Phasing.
   c. Critical work sequencing and long-lead items.
   d. Designation of key personnel and their duties.
   e. Procedures for processing field decisions and Change Orders.
   f. Procedures for testing and inspecting.
   g. Procedures for processing Applications for Payment.
   h. Distribution of the Contract Documents.
   i. Submittal procedures.
   j. Preparation of Record Documents.
   k. Use of the premises and existing building.
   l. Work restrictions.
   m. Owner's occupancy requirements.
   n. Responsibility for temporary facilities and controls.
   q. Parking availability.
   r. Office, work, and storage areas.
   s. Equipment deliveries and priorities.
   t. First aid.
   u. Security.
   v. Progress cleaning.
   w. Working hours.

3. Minutes: Contractor to record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.

2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
   b. Options.
   c. Related RFI.
   d. Related Change Orders.
   e. Purchases.
   f. Deliveries.
   g. Submittals.
   h. Review of mockups.
   i. Possible conflicts.
   j. Compatibility problems.
   k. Time schedules.
   l. Weather limitations.
   m. Manufacturer's written recommendations.
n. Warranty requirements.
o. Compatibility of materials.
p. Acceptability of substrates.
q. Temporary facilities and controls.
r. Space and access limitations.
s. Regulations of authorities having jurisdiction.
t. Testing and inspecting requirements.
u. Installation procedures.
v. Coordination with other work.
w. Required performance results.
x. Protection of adjacent work.
y. Protection of construction and personnel.

3. Contractor to record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.

4. Reporting: Contractor to distribute minutes of the meeting to each party present and to parties who should have been present.

5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Coordination and Progress Meetings: Conduct Project coordination meetings at bi-weekly intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
   a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
      1) Review schedule for next period.
   b. Schedule Updating: Revise Combined Contractor's Construction Schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
   c. Review present and future needs of each entity present, including the following:
      1) Interface requirements.
      2) Sequence of operations.
      3) Status of submittals.
      4) Deliveries.
      5) Off-site fabrication.
      6) Access.
      7) Site utilization.
      8) Temporary facilities and controls.
      9) Work hours.
     10) Hazards and risks.
     11) Progress cleaning.
     12) Quality and work standards.
     13) Change Orders.
14) Status of correction of deficient items.
15) Field observations.
16) RFIs.
17) Status of proposal requests.
18) Pending changes.
19) Status of Change Orders.
20) Pending claims and disputes.
21) Documentation of information for payment requests.

3. Minutes: Contractor to record the meeting minutes.
4. Reporting: Contractor to distribute minutes and results of the meeting to each party present and to others affected by decisions or actions resulting from each meeting.
5. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.08 REQUESTS FOR INTERPRETATION (RFI)

A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
1. Project name.
2. Date.
3. Name of Contractor.
5. RFI number, numbered sequentially.
6. Specification Section number and title and related paragraphs, as appropriate.
7. Drawing number and detail references, as appropriate.
8. Field dimensions and conditions, as appropriate.
9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
10. Contractor's signature.
11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
   a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.

C. Software-Generated RFIs: Software-generated form with substantially the same content as indicated above.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
2. Identify each page of attachments with the RFI number and sequential page number.

D. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow fourteen working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
   a. Requests for approval of submittals.
   b. Requests for approval of substitutions.
   c. Requests for coordination information already indicated in the Contract Documents.
   d. Requests for adjustments in the Contract Time or the Contract Sum.
   e. Requests for interpretation of Architect's actions on submittals.
f. Incomplete RFIs or RFIs with numerous errors.

2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.

3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
   a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 5 days of receipt of the RFI response.

E. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within five days if Contractor disagrees with response.

F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit software log weekly prior to coordination meeting, with not less than the following:
   1. Project name.
   2. Name and address of Contractor.
   3. Name and address of Architect.
   4. RFI number including RFIs that were dropped and not submitted.
   5. RFI description.
   6. Date the RFI was submitted.
   7. Date Architect's response was received.
   8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

END OF SECTION
PART 1 GENERAL

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

1.02 SUMMARY
A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
   1. Preliminary Construction Schedule.
   2. Contractor’s Construction Schedule.
   4. Daily construction reports.
   5. Material location reports.
   6. Field condition reports.
   7. Special reports.
B. Related Sections include the following:
   1. Division 01 Section “Application for Payment” for submitting the Schedule of Values.
   2. Division 01 Section “Project Management and Coordination” for submitting and distributing meeting and conference minutes.
   3. Division 01 Section “Submittal Procedures” for submitting schedules and reports.
   4. Division 01 Section “Quality Requirements” for submitting a schedule of tests and inspections.

1.03 DEFINITIONS
A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
   1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
   2. Predecessor Activity: An activity that precedes another activity in the network.
   3. Successor Activity: An activity that follows another activity in the network.
B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by Architect.
C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
E. Event: The starting or ending point of an activity.
F. Float: The measure of leeway in starting and completing an activity.
   1. Float time belongs to the Owner is not for the exclusive use or benefit of the Contractor.
   2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
   3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
G. Fragment: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
H. Major Area: A story of construction, a separate building, or a similar significant construction element.
I. Milestone: A key or critical point in time for reference or measurement.
J. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

K. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.04 SUBMITTALS

A. Submittals Schedule: Submit one electronic copy in PDF format. Arrange the following information in a tabular format:
   1. Scheduled date for first submittal.
   2. Specification Section number and title.
   3. Submittal category (action or informational).
   4. Name of subcontractor.
   5. Description of the Work covered.
   6. Scheduled date for Architect's final release or approval.

B. Preliminary Construction Schedule: Submit one electronic copy in PDF format.
   1. Approval of cost-loaded preliminary construction schedule will not constitute approval of Schedule of Values for cost-loaded activities.

C. Contractor's Construction Schedule: Submit one electronic copy in PDF format of initial schedule, large enough to show entire schedule for entire construction period.
   1. Submit an electronic copy of schedule, using software indicated, on CD-R, and labeled to comply with requirements for submittals. Include type of schedule (Initial or Updated) and date on label.

D. Daily Construction Reports: Submit electronic copies in PDF format prior to weekly coordination meeting.

E. Material Location Reports: Submit two copies monthly to coincide with Applications for Payment.

F. Field Condition Reports: Submit two copies at time of discovery of differing conditions.

G. Special Reports: Submit two copies at time of unusual event.

1.05 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
   1. Secure time commitments for performing critical elements of the Work from parties involved.
   2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 PRODUCTS

2.01 SUBMITTALS SCHEDULE

A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
   1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
   2. Initial Submittal: Submit concurrently with preliminary bar-chart schedule or network diagram. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
      a. Show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.02 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."

B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Substantial Completion.
   1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

C. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
   1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
   2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
   4. Startup and Testing Time: Include not less than thirty days for startup and testing.
   5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.

D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
   1. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicate stipulate the earliest possible delivery date.
   2. Work Restrictions: Show the effect of the following items on the schedule:
      a. Coordination with existing construction.
      b. Limitations of continued occupancies.
      c. Uninterruptible services.
      d. Partial occupancy before Substantial Completion.
      e. Use of premises restrictions.
      f. Seasonal variations.
      g. Environmental control.
   3. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
      a. Subcontract awards.
      b. Submittals.
      c. Purchases.
      d. Fabrication.
      e. Sample testing.
      f. Deliveries.
      g. Installation.
      h. Tests and inspections.
      i. Project closeout.
   4. Area Separations: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
      a. Roof Tare-off
      b. Insulation and membrane installation
c. Substantial Completion.

E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion, and the following interim milestones:
   1. Completion of mechanical installation.

2.03 PRELIMINARY CONSTRUCTION SCHEDULE

A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within seven days of date established for the Notice to Proceed.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 60 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

2.04 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within 30 days of date established for the Notice to Proceed. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

2.05 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
   1. List of subcontractors at Project site.
   2. List of separate contractors at Project site.
   3. Approximate count of personnel at Project site.
   4. Equipment at Project site.
   5. Material deliveries.
   6. High and low temperatures and general weather conditions.
   7. Accidents.
   8. Meetings and significant decisions.
   9. Unusual events (refer to special reports).
   10. Stoppages, delays, shortages, and losses.
   11. Emergency procedures.
   12. Orders and requests of authorities having jurisdiction.
   13. Change Orders received and implemented.
   14. Construction Change Directives received and implemented.
   15. Services connected and disconnected.

B. Material Location Reports: At monthly intervals to coincide with Applications for Payment, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site.

C. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.06 SPECIAL REPORTS

A. General: Submit special reports directly to Owner within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.
B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 EXECUTION

3.01 CONTRACTOR’S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.

2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.

3. As the Work progresses, indicate Actual Completion percentage for each activity.

B. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

1. Post copies in Project meeting rooms and temporary field offices.

2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION
SECTION 01 4000 - QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES
A. References and standards.
B. Testing and inspection agencies and services.
C. Control of installation.
D. Mock-ups.
E. Tolerances.
F. Manufacturers' field services.
G. Defect Assessment.

1.02 RELATED REQUIREMENTS
A. Section 01 6000 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCES AND STANDARDS
A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
D. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in any reference document.

1.04 TESTING AND INSPECTION AGENCIES AND SERVICES
A. Contractor shall be responsible to contact Authority Having Jurisdiction (AHJ) for required inspections and any documentation of testing the AHJ requires. Any documentation of such inspections and testing, shall be copied to the Architect.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION
A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
B. Comply with manufacturers' instructions, including each step in sequence.
C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
E. Have work performed by persons qualified to produce required and specified quality.
F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.
3.02 MOCK-UPS
A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.
B. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.
C. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
D. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Architect.

3.03 TOLERANCES
A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 TESTING AND INSPECTION
A. Testing Agency Duties:
2. Perform specified sampling and testing of products in accordance with specified standards.
3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
5. Perform additional tests and inspections required by Architect.
6. Submit reports of all tests/inspections specified.
B. Limits on Testing/Inspection Agency Authority:
1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
2. Agency may not approve or accept any portion of the Work.
3. Agency may not assume any duties of Contractor.
4. Agency has no authority to stop the Work.
C. Contractor Responsibilities:
1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
3. Provide incidental labor and facilities:
   a. To provide access to Work to be tested/inspected.
   b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
   c. To facilitate tests/inspections.
   d. To provide storage and curing of test samples.
4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
D. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.

E. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.05 MANUFACTURERS’ FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers’ written instructions.

3.06 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not complying with specified requirements.

B. If, in the opinion of Architect, it is not practical to remove and replace the work, Architect will direct an appropriate remedy or adjust payment.

END OF SECTION
SECTION 01 4200 - REFERENCES

PART 1 GENERAL

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

1.02 DEFINITIONS
A. General: Basic Contract definitions are included in the Conditions of the Contract.
B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
H. "Provide": Furnish and install, complete and ready for the intended use.
I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.03 INDUSTRY STANDARDS
A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
D. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.04 ABBREVIATIONS AND ACRONYMS
A. Industry Organizations, Code Agencies, Federal Government Agencies, State Government Agencies, Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in a publication from Thomson Gale's "Encyclopedia of Associations" or as provided by a pertaining publication from Thomas Gale Publishing. www.gale.com

END OF SECTION
SECTION 01 5000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Temporary utilities.
B. Temporary telecommunications services.
C. Temporary sanitary facilities.
D. Temporary Controls: Barriers, enclosures, and fencing.
E. Security requirements.
F. Waste removal facilities and services.

1.02 TEMPORARY UTILITIES
A. Owner will provide the following:
   1. Electrical power and metering, consisting of connection to existing facilities.
   2. Water supply, consisting of connection to existing facilities. Owner will direct Contractor on where water supply may be obtained.

1.03 TELECOMMUNICATIONS SERVICES
A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.
   1. Cellular telephones may be used by Contractor's and Subcontractor's personnel in lieu of temporary telephone service.

1.04 TEMPORARY SANITARY FACILITIES
A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
B. Maintain daily in clean and sanitary condition.

1.05 BARRIERS
A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.06 FENCING
A. Construction: Contractor's option, or as required by Owner or AHJ.

1.07 SECURITY
A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

1.08 WASTE REMOVAL
A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
B. Provide containers with lids. Remove trash from site periodically.
C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

1.09 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS
A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
B. Clean and repair damage caused by installation or use of temporary work.
C. Restore existing facilities used during construction to original condition.
D. Restore new permanent facilities used during construction to specified condition.
PART 2 PRODUCTS - NOT USED
PART 3 EXECUTION - NOT USED

END OF SECTION
SECTION 01 6000 - PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. General product requirements.
   B. Re-use of existing products.
   C. Transportation, handling, storage and protection.
   D. Product option requirements.
   E. Substitution limitations.
   F. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS
   A. Section 01 1000 - Summary: Lists of products to be removed from existing building.
   B. Section 01 2500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
   C. Section 01 4000 - Quality Requirements: Product quality monitoring.
   D. Section 01 7419 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.03 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 EXISTING PRODUCTS
   A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.
   B. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, shall become the property of the Contractor; remove from site.
   C. Specific Products to be Reused: The reuse of certain materials and equipment already existing on the project site is if required, are addressed in the Construction Documents.

2.02 NEW PRODUCTS
   A. Provide new products unless specifically required or permitted by Contract Documents.

2.03 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 01 2500 - 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.

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 01 7419.
   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. Do not store products directly on the ground.
   I. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
   J. Prevent contact with material that may cause corrosion, discoloration, or staining.
   K. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
   L. 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 01 7000 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.
B. Requirements for alterations work, including selective demolition.
C. Pre-installation meetings.
D. Cutting and patching.
E. Surveying for laying out the work.
F. Cleaning and protection.
G. Starting of systems and equipment.
H. Demonstration and instruction of Owner personnel.
I. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
J. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

A. Section 01 1000 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
B. Section 01 3000 - Administrative Requirements: Submittals procedures, Electronic document submittal service.
C. Section 01 4000 - Quality Requirements: Testing and inspection procedures.
D. Section 01 7800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.
E. Section 02 4100 - Demolition: Demolition of whole structures and parts thereof; site utility demolition.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
   1. Structural integrity of any element of Project.
   2. Integrity of weather exposed or moisture resistant element.
   3. Efficiency, maintenance, or safety of any operational element.
   5. Work of Owner or separate Contractor.
C. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.04 COORDINATION

A. See Section 01 1000 for occupancy-related requirements.
B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
C. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION
A. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
B. Examine and verify specific conditions described in individual specification sections.
C. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
D. Verify that utility services are available, of the correct characteristics, and in the correct locations.
E. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION
A. Clean substrate surfaces prior to applying next material or substance.
B. Seal cracks or openings of substrate prior to applying next material or substance.
C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PREINSTALLATION MEETINGS
A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
B. Require attendance of parties directly affecting, or affected by, work of the specific section.
C. Notify Architect and Owner four days in advance of meeting date.
D. Prepare agenda and preside at meeting:
   1. Review conditions of examination, preparation and installation procedures.
   2. Review coordination with related work.
E. Record minutes and distribute copies within two days after meeting to participants, with one copies to Architect, Owner, participants, and those affected by decisions made.

3.04 GENERAL INSTALLATION REQUIREMENTS
A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

3.05 ALTERATIONS
A. Drawings showing existing construction and utilities are based on investigative information.
   1. Verify that construction and utility arrangements are as indicated.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of alterations work constitutes acceptance of existing conditions.
B. Remove existing work as indicated and as required to accomplish new work.
   1. Remove items indicated on drawings.
2. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
3. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.

C. Protect existing work to remain.
   1. Prevent movement of structure; provide shoring and bracing if necessary.
   2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
   3. Repair adjacent construction and finishes damaged during removal work.

D. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
   1. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.

E. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.

F. Clean existing systems and equipment.

G. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.

H. Comply with all other applicable requirements of this section.

3.06 CUTTING AND PATCHING
A. Whenever possible, execute the work by methods that avoid cutting or patching.
B. See Alterations article above for additional requirements.
C. Perform whatever cutting and patching is necessary to:
   1. Complete the work.
   2. Fit products together to integrate with other work.
   3. Provide openings for penetration of mechanical, electrical, and other services.
   4. Match work that has been cut to adjacent work.
   5. Repair areas adjacent to cuts to required condition.
   6. Repair new work damaged by subsequent work.
   7. Remove samples of installed work for testing when requested.
   8. Remove and replace defective and non-complying work.

D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

F. Restore work with new products in accordance with requirements of Contract Documents.

G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

H. Patching:
   1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
   2. Match color, texture, and appearance.
   3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.07 PROGRESS CLEANING
A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.08 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

D. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

E. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.09 FINAL CLEANING

A. Execute final cleaning prior to final project assessment.

B. Use cleaning materials that are nonhazardous.

C. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, and drainage systems.

D. Clean site; sweep paved areas, rake clean landscaped surfaces.

E. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.10 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities.

B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.

C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.

D. Submit written notice containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.

E. Owner will occupy all of the building as specified in Section 01 1000.

F. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.

G. Inspections: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect that must be completed or corrected before certificate will be issued.

1. Reinspections: Request for Reinspections when the Work identified in previous inspections as required to make extensive Reinspections. The Contractor shall be prudent in completing corrective items, and limit Reinspections periods. The Contractor could be subject to additional fees to the Architect or the Architect's consultants for extensive Reinspections requirements.

2. Results of completed inspection will form the basis of requirements for Final Completion.
H. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
I. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
J. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

END OF SECTION
SECTION 01 7419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

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. This Section includes administrative and procedural requirements for the following:
      1. Recycling nonhazardous construction waste, is at the discretion of the Contractor, but
         encouraged by the Owner.
      2. Disposing of nonhazardous construction waste.
   B. Related Sections include the following:
      1. Division 01 Section "Temporary Facilities and Controls" for environmental-protection
         measures during construction.

1.03 DEFINITIONS
   A. Construction Waste: Building and site improvement materials and other solid waste resulting
      from construction, remodeling, renovation, or repair operations. Construction waste includes
      packaging.
   B. Disposal: Removal off-site of demolition and construction waste and subsequent sale,
      recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
   C. Recycle: Recovery of demolition or construction waste for subsequent processing in
      preparation for reuse.

1.04 PERFORMANCE GOALS
   A. Recycle Goals: Laramie County's goal is to encourage recycling as much nonhazardous
      construction waste as possible. However, recycling of nonhazardous construction waste is not
      mandatory, only encouraged by the Owner, when beneficial for the Contractor.
      1. Construction Waste:
         a. Site-clearing waste.
         b. Masonry and CMU.
         c. Lumber.
         d. Wood sheet materials.
         e. Metals.
         f. Insulation.
         g. Piping.
         h. Electrical conduit.
         i. Packaging: Regardless of salvage/recycle goal indicated above, salvage or recycle
            100 percent of the following uncontaminated packaging materials.
            1) Paper.
            2) Cardboard.
            3) Boxes.
            4) Plastic sheet and film.
            5) Polystyrene packaging.
            7) Plastic pails.

1.05 QUALITY ASSURANCE
   A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having
      jurisdiction.
1.06 PRODUCTS (NOT USED)

PART 3 EXECUTION

2.01 PLAN IMPLEMENTATION

A. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
   1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
   2. Comply with Division 01 Section “Temporary Facilities and Controls” for controlling dust and dirt, environmental protection, and noise control.

2.02 RECYCLING CONSTRUCTION WASTE, GENERAL

A. General: Owner encourages the recycle of paper and beverage containers used by on-site workers.
B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.
C. Procedures: Separate recyclable waste from other waste materials, trash, and debris.
   1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
      a. Inspect containers and bins for contamination and remove contaminated materials if found.
   2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
   3. Stockpile materials away from construction area.
   4. Store components off the ground and protect from the weather.

2.03 RECYCLING CONSTRUCTION WASTE

A. Packaging:
   1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
   3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
   4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

2.04 DISPOSAL OF WASTE

A. General: Except for items or materials to be recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
   1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
B. Burning: Do not burn waste materials.
C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION
SECTION 01 7800 - CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Project Record Documents.
B. Operation and Maintenance Data.
C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

A. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
B. Section 01 7000 - Execution and Closeout Requirements: Contract closeout procedures.
C. Individual Product Sections: Specific requirements for operation and maintenance data.
D. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
B. Operation and Maintenance Data:
   1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
   2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
   3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
   4. Submit two sets of revised final documents in final form within 10 days after final inspection.
C. Warranties and Bonds:
   1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
   2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
   3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed shop drawings, product data, and samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.
B. Ensure entries are complete and accurate, enabling future reference by Owner.
C. Store record documents separate from documents used for construction.
D. Record information concurrent with construction progress.
E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
1. Manufacturer's name and product model and number.
2. Product substitutions or alternates utilized.
3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   2. Field changes of dimension and detail.
   3. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.

D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.

B. Where systems involve more than one specification section, provide separate tabbed divider for each system.

C. Binders: Commercial quality, 8-1/2 by 11 inch (216 by 280 mm) three D side ring binders with durable plastic covers; 2 inch (50 mm) maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.

E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.

F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.

G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.

H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.

I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

J. Arrangement of Contents: Organize each volume in parts as follows:
   1. Project Directory.
   2. Table of Contents, of all volumes, and of this volume.
   3. Operation and Maintenance Data: Arranged by system, then by product category.
      a. Source data.
      b. Operation and maintenance data.
      c. Field quality control data.
      d. Photocopies of warranties and bonds.
3.04 WARRANTIES AND BONDS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.

B. Verify that documents are in proper form, contain full information, and are notarized.

C. Co-execute submittals when required.

D. Retain warranties and bonds until time specified for submittal.

E. Include originals of each in operation and maintenance manuals, indexed separately on Table of Contents.

END OF SECTION
Certificate of Substantial Completion

<table>
<thead>
<tr>
<th>PROJECT: (name and address)</th>
<th>CONTRACT INFORMATION:</th>
<th>CERTIFICATE INFORMATION:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Contract For: General Construction</td>
<td>Certificate Number:</td>
</tr>
<tr>
<td></td>
<td>Date:</td>
<td>Date:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OWNER: (name and address)</th>
<th>ARCHITECT: (name and address)</th>
<th>CONTRACTOR: (name and address)</th>
</tr>
</thead>
</table>

The Work identified below has been reviewed and found, to the Architect’s best knowledge, information, and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project or portion designated below is the date established by this Certificate.

(Identify the Work, or portion thereof, that is substantially complete.)

<table>
<thead>
<tr>
<th>ARCHITECT (Firm Name)</th>
<th>SIGNATURE</th>
<th>PRINTED NAME AND TITLE</th>
<th>DATE OF SUBSTANTIAL COMPLETION</th>
</tr>
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</table>

WARRANTIES

The date of Substantial Completion of the Project or portion designated above is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:

(Identify warranties that do not commence on the date of Substantial Completion, if any, and indicate their date of commencement.)

WORK TO BE COMPLETED OR CORRECTED

A list of items to be completed or corrected is attached hereto, or transmitted as agreed upon by the parties, and identified as follows:

(Identify the list of Work to be completed or corrected.)

The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Unless otherwise agreed to in writing, the date of commencement of warranties for items on the attached list will be the date of issuance of the final Certificate of Payment or the date of final payment, whichever occurs first. The Contractor will complete or correct the Work on the list of items attached hereto within (____) days from the above date of Substantial Completion.

Cost estimate of Work to be completed or corrected: $

The responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work, insurance, and other items identified below shall be as follows:

(Identify the responsibilities assigned to the Owner and Contractor.)

(Owner’s and Contractor’s legal and insurance counsel should review insurance requirements and coverage.)

The Owner and Contractor hereby accept the responsibilities assigned to them in this Certificate of Substantial Completion:

<table>
<thead>
<tr>
<th>CONTRACTOR (Firm Name)</th>
<th>SIGNATURE</th>
<th>PRINTED NAME AND TITLE</th>
<th>DATE</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>OWNER (Firm Name)</th>
<th>SIGNATURE</th>
<th>PRINTED NAME AND TITLE</th>
<th>DATE</th>
</tr>
</thead>
</table>
Contractor's Affidavit of Payment of Debts and Claims

STATE OF:
COUNTY OF:

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the owner or owner's property might in any way be held responsible or encumbered.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:
1. Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707. Consent of Surety, may be used for this purpose.
   Indicate Attachment ☐ Yes ☒ No

The following supporting documents should be attached hereto if required by the Owner:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.

2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.


CONTRACTOR: (Name and address)

BY:

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:
My Commission Expires:
Contractor's Affidavit of Release of Liens

PROJECT: (Name and address)  ARCHITECT’S PROJECT NUMBER:  

ARCHITECT: □  OWNER: □

CONTACT FOR: General  CONTRACTOR: □

Construction  SURETY: □

TO OWNER: (Name and address)  OTHER: □

STATE OF: COUNTY OF:

The undersigned hereby certifies that to the best of the undersigned’s knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens or encumbrances or the right to assert liens or encumbrances against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Contractor’s Release or Waiver of Liens, conditional upon receipt of final payment.

2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

CONTRACTOR: (Name and address)

BY: (Signature of authorized representative)

(Date of document)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:
My Commission Expires:
Consent Of Surety to Final Payment

PROJECT: (Name and address)  
ARCHITECT'S PROJECT NUMBER:  
ARCHITECT:  
OWNER:  

TO OWNER: (Name and address)  
CONTRACT FOR: General Construction  
CONTRACT DATED:  
CONTRACTOR:  
SURETY:  
OTHER:  

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the (Insert name and address of Surety)

on bond of (Insert name and address of Contractor)  

SURETY,  

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety of any of its obligations to (Insert name and address of Owner)

as set forth in said Surety's bond.

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date: (Insert in writing the month followed by the numeric date and year.)

(Surety)

(Signature of authorized representative)

(Printed name and title)

Attest: (Seal):
SECTION 01 7800.05 - NO LEAD

AFFIDAVIT CERTIFYING
THAT NO LEAD
WAS USED OR INSTALLED
P.C.

OWNER:

ARCHITECT: TOBIN & ASSOCIATES,

____________________________________________________________________________________

TO:

PROJECT NUMBER:

____________________________________________________________________________________

CONTRACT AMOUNT:

PROJECT:

CONTRACT DATE:

____________________________________________________________________________________

STATE OF:

COUNTY OF:

THE UNDERSIGNED, HEREBY CERTIFIES THAT NO LEAD OR LEAD CONTAINING MATERIALS
WERE USED OR INSTALLED ON THE ABOVE-REFERENCED PROJECT. EXCEPT WHERE
SPECIFICALLY SHOWN OR SPECIFIED.

CONTRACTOR:

________________________________

________________________________

________________________________

BY:_____________________________

_______________________________________________________________

NOTARY PUBLIC

_______________________________________________________________

MY COMMISSION EXPIRES

END OF SECTION
SECTION 01 7800.06 - NO ASBESTOS

AFFIDAVIT CERTIFYING
THAT NO ASBESTOS
WAS USED OR INSTALLED

OWNER:

ARCHITECT: TOBIN & ASSOCIATES, P.C.

TO:

PROJECT NUMBER:

CONTRACT AMOUNT:

PROJECT:

CONTRACT DATE:

STATE OF

COUNTY OF

The undersigned, hereby certifies that no asbestos or asbestos containing materials were used or installed on the above-referenced project.

CONTRACTOR:

__________________________

__________________________

__________________________

__________________________

BY:________________________

SUBSCRIBED AND SWORN TO ME BEFORE ME THIS _____ DAY OF ___________________, 201_

_______________________________________________________________

NOTARY PUBLIC

_______________________________________________________________

END OF SECTION
SECTION 02 4100 - DEMOLITION

PART 1  GENERAL

1.01  SECTION INCLUDES
   A. Selective demolition of built site elements.
   B. Selective demolition of building elements for alteration purposes.

1.02  RELATED REQUIREMENTS
   A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
   B. Section 01 1000 - Summary: Sequencing and staging requirements.
   C. Section 01 1000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
   D. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
   E. Section 01 6000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
   F. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
   G. Section 01 7419 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.

1.03  REFERENCE STANDARDS

1.04  SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Demolition Procedure: Provide a plan describing procedures for protecting:
      1. Vegetation to be protected.
      2. Areas for temporary construction.
      3. Areas for temporary and permanent placement of removed materials.
   C. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.05  QUALITY ASSURANCE
   A. Qualifications of firm performing demolition procedures: Company experienced in the type of work required.

PART 2  PRODUCTS -- NOT USED

PART 3  EXECUTION

3.01  SCOPE
   A. Remove portions of existing buildings in the following sequence:
      1. Sequence to be as best procedure to accomplish description of demolition illustrated in the Construction Documents.
   B. Remove other items indicated, for salvage, relocation, recycling, and reuse.

3.02  GENERAL PROCEDURES AND PROJECT CONDITIONS
   A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
      1. Obtain required permits.
      2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
3. Provide, erect, and maintain temporary barriers and security devices.
4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
5. Do not close or obstruct roadways or sidewalks without permit.
6. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.

B. Do not begin removal until receipt of notification to proceed from Owner.

C. Protect existing structures and other elements that are not to be removed.
1. Provide bracing and shoring.
2. Prevent movement or settlement of adjacent structures.
3. Stop work immediately if adjacent structures appear to be in danger.

3.03 EXISTING UTILITIES

A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.

B. Protect existing utilities to remain from damage.

C. Do not disrupt public utilities without permit from authority having jurisdiction.

D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 3 days prior written notification to Owner.

E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.

F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
1. Verify that construction and utility arrangements are as indicated.
2. Report discrepancies to Architect before disturbing existing installation.
3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Remove existing work as indicated and as required to accomplish new work.
1. Remove items indicated on drawings.

C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications, and Data): Remove existing systems and equipment as indicated.
1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
3. Verify that abandoned services serve only abandoned facilities before removal.
4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.

D. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
3. Repair adjacent construction and finishes damaged during removal work.
4. Patch as specified for patching new work.

3.05 DEBRIS AND WASTE REMOVAL
   A. Remove debris, junk, and trash from site.
   B. Remove from site all materials not to be reused on site; comply with requirements of Section 01 7419 - Waste Management.
   C. Leave site in clean condition, ready for subsequent work.
   D. Clean up spillage and wind-blow debris from public and private lands.

END OF SECTION
SECTION 03 1119 - INSULATING CONCRETE FORMING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Insulating concrete forms: Modular unit formwork system for cast-in-place concrete walls; formwork designed to remain in place after concrete work is complete.
B. Shoring, bracing and anchorage.
C. Openings for other work.
D. Accessories.

1.02 RELATED REQUIREMENTS

A. Section 03 3000 - Cast-in-Place Concrete: Concrete to be placed into formwork specified in this section.
B. Section 04 4313 - Stone Masonry Veneer: Stone veneer to be installed as specified in this section.

1.03 REFERENCE STANDARDS

A. ACI 301 - Specifications for Structural Concrete; 2016.
B. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2018).
C. ACI 347R - Guide to Formwork for Concrete; 2014.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by all affected installers.
B. Sequencing: Ensure that utility connections are achieved in an orderly and expeditious manner.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Provide data form materials and installation requirements.
C. Shop Drawings: Indicate pertinent dimensions, materials, bracing, and arrangement of joints and ties; reinforcing, anchorage, size and type of fasteners, and accessories.
D. Design Data: As required by authorities having jurisdiction.

1.06 QUALITY ASSURANCE
A. Maintain one copy of each installation standard on site throughout the duration of concrete work.
B. Welder Qualifications: Show certification of welders employed on the Work, verifying AWS qualification within the previous 12 months.

1.07 DELIVERY, STORAGE, AND HANDLING
A. Deliver insulating concrete form system units and accessories with manufacturer's printed installation instructions and in manufacturer's original packaging.
B. Protect insulating concrete form system units and accessories from exposure to sunlight.
C. Store insulating concrete form system units off ground in ventilated and protected manner to prevent damage and deterioration from moisture.

1.08 WARRANTY
A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS
A. AMVIC Building System; Amvic ICF; www.amvicsystem.com/#sle.
B. Fox Blocks; Fox Blocks: www.foxblocks.com/#sle.
C. Substitutions: See Section 01 6000 - Product Requirements.

2.02 FORMWORK - GENERAL
A. Provide insulating concrete forms, accessories, shoring, and bracing as required to accomplish insulated cast-in-place concrete work.
B. Design and construct to provide resultant concrete that conforms to design with respect to shape, lines, and dimensions.
C. Comply with applicable state and local codes with respect to design, fabrication and erection of formwork.
D. Comply with relevant portions of ACI 347R, ACI 301, and ACI 318.

2.03 INSULATING CONCRETE FORMS
A. Insulating Concrete Form Units for Walls: Rigid, expanded polystyrene boards; boards connected horizontally with injection--molded polypropylene webs and vertically by means of interlocking edges.
   1. Board Thickness: 2 inches thick.
   2. Web Spacing: 8 inches (203 mm) on center, vertically.
   3. Web Configuration: 1/2 inch (12.7 mm) wide by 15 inches (381 mm); integral supports for horizontal reinforcing steel; continuous end plates recessed 1/2 inch (12.7 mm) below surface of insulation on each face of unit to allow attachment of interior and exterior finishes without damage to insulation board.
   4. Concrete Core Thickness: 6 inches (152.4 mm) and 8 inches (203.2 mm).
   5. Unit Types:
      a. Reversible straight form.
      b. Reversible 90 degree corner.
      c. Height-adjustable.
2.04 COMPONENTS

A. Expanded Polystyrene (EPS) Insulation Board, General: Comply with the minimum requirements of ASTM C578, Type II and the specified characteristics below.
   1. Density: 1.35 pounds per cubic foot (22 kg/cu m) when tested in accordance with ASTM D1622/D1622M.
   2. Compressive Strength: 15 psi (104 kPa) when tested in accordance with ASTM D1621.
   3. Flexural Strength: 35 psi (240 kPa) when tested in accordance with ASTM C203.
   4. Water Absorption: 3.0 percent by volume, maximum.
   5. Dimensional Stability: 2.0 percent, maximum, when tested in accordance with ASTM D2126.
   6. Oxygen Index: 24 percent by volume, minimum, when tested in accordance with ASTM D2863.
   7. Flammability; when tested in accordance with ASTM E84:
      a. Flame Spread: 25 or less.
      b. Smoke Developed: 450 or less.

B. Expanded Polystyrene (EPS) Insulation Boards: Comply with the minimum requirements of ASTM C578, Type II and the specified characteristics below.
   1. Thermal Resistance: R-value (RSI-value) of 4.0 deg F hr sq ft/Btu (0.70 K sq m/W), minimum, when tested at 1 inch (25.4 mm) thickness in accordance with ASTM C177.
   2. Water Vapor Permeance: 3.5 perms (201 ng/Pa sec sq m), maximum, when tested at 1 inch (25.4 mm) thickness in accordance with ASTM E96/E96M.
   3. Tolerances:
      a. Edge and Face Trueness: 0.03 inch/ft (2.5 mm/m), maximum.
      b. Length and Width Squareness: 0.06 inch/ft (5.0 mm/m), maximum.

C. Injection Molded Polypropylene Ties and Profiles:
   1. Tensile Strength: 253.3 pounds (1127 N) when tested in accordance with ASTM D638.
   2. Ignition Temperature: 400 degrees F (204 degrees C).
   3. Burn Rate: 0.80 inch (20.2 mm) per minute when tested in accordance with ASTM D635.
   4. Smoke Density: 25.9 percent maximum when tested in accordance with ASTM D2843.

D. Accessories: Provide the manufacturer's standard items listed below.
   1. Internal bracing and alignment.
   2. Sleeves for wall penetrations, when applicable.

2.05 MATERIALS

A. Concrete, for Use with insulating Concrete Forms: Comply with the applicable requirements of Section 03 3000 and specific requirements listed below.
   1. Aggregate:
      a. Normal weight.
      b. Size: 3/8 inch (9.5 mm) to 1/2 inch (12.7 mm) diameter.
   2. Compressive Strength: 4000 pounds per square inch, minimum.
   3. Water to Cement Ratio: 0.55 or less.
   4. Slump: 5 inches (127 mm) to 6 inches (152 mm).

B. Reinforcing Steel: Comply with the applicable requirements of Section 03 1000. Size, material grade, placement and spacing as indicated on the structural drawings.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify lines, levels and centers before proceeding with insulating concrete form work. Ensure that dimensions agree with drawings.

B. Verify placement of dowels and other anchors in foundations comply with the approved Contract Documents and the recommendations of the insulating concrete form manufacturer.
3.02 PREPARATION
A. Clean tops of footings and other foundation elements before starting formwork.

3.03 ERECTION - FORMWORK
A. Erect formwork, shoring and bracing as recommended by the manufacturer. Protect forms from damage.
B. Erect formwork, shoring and bracing to achieve design requirements. Comply with applicable requirements of ACI 301.
C. Brace forms as recommended by manufacturer to ensure stability. Shore or strengthen formwork subject to overstressing by construction loads.
D. Align joints. Install units in running bond.
E. Ensure webs and attachment strips are properly aligned.
F. Install steel reinforcement as insulating concrete form work progresses and as indicated on the structural engineering drawings.
G. Install alignment system as recommended by manufacturer and as work progresses.

3.04 INSERTS, EMBOTTED PARTS, AND OPENINGS
A. Remove insulating concrete form material and provide sleeves or other means to create formed openings where required. Cut forms for utility penetrations as needed. Coordinate location of openings for items to be embedded in or pass through concrete work.
B. Locate and set in place items that will be cast directly into concrete.
C. Install accessories in accordance with manufacturer's instructions, so they are straight, level, and plumb. Ensure items are not disturbed during concrete placement.

3.05 FORMWORK TOLERANCES
A. Construct formwork to maintain tolerances required by ACI 301.

3.06 FIELD QUALITY CONTROL
A. Inspect insulating concrete form system, shoring, and bracing to ensure that work complies with the approved shop drawings and to verify that supports, fastenings, webs, alignment devices, attachment strips and other items are secure.

3.07 CLEANING
A. Clean forms as installation progresses. Remove dirt, dust, debris, excess material, etc. within forms.
B. Clean formed cavities and openings.
C. Flush completed forms with compressed air or water.
  1. If water is used, ensure that water and debris drain to exterior through clean-out ports and that formwork is free of standing water and dry before concreting begins.
  2. During weather cold enough that water could be reasonably expected to freeze, do not use water to clean out forms unless form installation and concreting proceed within a heated enclosure.
D. Remove snow and ice from within forms. Do not use de-icing salts or solutions.

END OF SECTION
1.01 SECTION INCLUDES
   A. Concrete formwork, or as called for in Section 03 1119 - INSULATING CONCRETE FORMS.
   B. Floors and slabs on grade.
   C. Concrete reinforcement.
   D. Joint devices associated with concrete work.
   E. Miscellaneous concrete elements, including floor patch for plumbing drain installation.
   F. Concrete curing.

1.02 RELATED REQUIREMENTS
   A. Section 07 9200 - Joint Sealants: Products and installation for sealants and joint fillers for saw cut joints and isolation joints in slabs.

1.03 REFERENCE STANDARDS
   B. ACI 301 - Specifications for Structural Concrete; 2016.
   C. ACI 302.1R - Guide to Concrete Floor and Slab Construction; 2015.
   E. ACI 308R - Guide to External Curing of Concrete; 2016.
   F. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2018).
   O. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2015.

1.04 SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Mix Design: Submit proposed concrete mix design.
      1. Indicate proposed mix design complies with requirements of ACI 301, Section 4 - Concrete Mixtures.
2. Indicate proposed mix design complies with requirements of ACI 318, Chapter 5 - Concrete Quality, Mixing and Placing.

C. Test Reports: Submit report for each test or series of tests specified.

1.05 QUALITY ASSURANCE
A. Perform work of this section in accordance with ACI 301 and ACI 318.

PART 2 PRODUCTS
2.01 FORMWORK
A. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
   1. Form Coating: Release agent that will not adversely affect concrete or interfere with application of coatings.

2.02 REINFORCEMENT MATERIALS
A. Reinforcing Steel: ASTM A615/A615M, Grade 40 (40,000 psi) (280 MPa).
   1. Type: Deformed billet-steel bars.
   2. Finish: Unfinished, unless otherwise indicated.
B. Reinforcement Accessories:
   1. Epoxy Embedment: Hilti HY150 or approved equal.

2.03 CONCRETE MATERIALS
A. Cement: ASTM C150/C150M, Type I - Normal Portland type.
B. Fine and Coarse Aggregates: ASTM C33/C33M.
C. Fly Ash: ASTM C618, Class C or F.
D. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.

2.04 ADMIXTURES
A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.
B. Air Entrainment Admixture: ASTM C260/C260M.
C. Water Reducing Admixture: ASTM C494/C494M Type A.
D. Alkali-Silica Reactivity: Evaluate aggregates for potential alkali-silica reactivity. Control reactivity per Portland Cement Association Guide Specification for Concrete Subject to Alkali-Silica Reaction.

2.05 ACCESSORY MATERIALS
A. Epoxy Adhesive (when applicable): High strength structural adhesive meeting ASTM C-881.
   1. Products:
      e. Substitutions: See Section 01 6000 - Product Requirements.

2.06 BONDING AND JOINTING PRODUCTS
A. Latex Bonding Agent: Non-redispersable acrylic latex, complying with ASTM C1059/C1059M, Type II.

2.07 CONCRETE MIX DESIGN
A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
B. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.
C. Normal Weight Concrete:
1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 4,000 pounds per square inch (27.6 MPa).
2. Total Air Content: 4 percent, determined in accordance with ASTM C173/C173M.
3. Maximum Aggregate Size: 1/2 inch (13 mm).

PART 3  EXECUTION
3.01  EXAMINATION
   A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02  PREPARATION
   A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.
   B. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in accordance to bonding agent manufacturer's instructions.
      1. Use latex bonding agent only for non-load-bearing applications.
   C. In locations where new concrete is dowled to existing work, drill holes in existing concrete, minimum 6 inches deep and clean holes of all concrete fines. Inject epoxy adhesive and insert steel rebar dowel. Let adhesive cure before pouring new slab patch.
   D. Interior Slabs on Grade: Install vapor retarder (when called for) under interior slabs on grade. Lap joints minimum 6 inches (150 mm). Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions. Repair damaged vapor retarder before covering.

3.03  INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS
   A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.
   B. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with concrete placement.

3.04  PLACING CONCRETE
   A. Place concrete in accordance with ACI 304R.
   B. Place concrete for floor slabs in accordance with ACI 302.1R.
   C. Ensure reinforcement and embedded parts will not be disturbed during concrete placement.
   D. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.05  SLAB JOINTING
   A. Locate joints as indicated on drawings.
   B. Anchor joint fillers and devices to prevent movement during concrete placement.

3.06  CONCRETE FINISHING
   A. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:
      1. Other Surfaces to Be Left Exposed: Trowel as described in ACI 302.1R, minimizing burnish marks and other appearance defects.
   B. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at 1:100 nominal.

3.07  CURING AND PROTECTION
   A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
   B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
      1. Normal concrete: Not less than seven days.
3.08 FIELD QUALITY CONTROL
   A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.
   B. Provide free access to concrete operations at project site and cooperate with appointed firm.
   C. Submit proposed mix design to Architect for review prior to commencement of concrete operations.

3.09 DEFECTIVE CONCRETE
   A. Test Results: The testing agency shall report test results in writing to Architect and Contractor within 24 hours of test.
   B. Defective Concrete: Concrete not complying with required lines, details, dimensions, tolerances or specified requirements.
   C. Repair or replacement of defective concrete will be determined by the Architect. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
   D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect for each individual area.

3.10 PROTECTION
   A. Do not permit traffic over unprotected concrete floor surface until fully cured.

END OF SECTION
SECTION 04 4313 - STONE MASONRY VENEER

PART 1 GENERAL
1.01 SECTION INCLUDES
   A. Anchored cut stone veneer at exterior walls.
   B. Adhered cut stone veneer at exterior walls.
   C. Metal anchors and accessories for anchored veneer.
   D. Setting mortar.

1.02 RELATED REQUIREMENTS
   A. Section 07 2500 - Weather Barriers: Water-resistant barrier over sheathing.
   B. Section 07 6200 - Sheet Metal Flashing and Trim: Flashings.
   C. Section 07 9200 - Joint Sealants: Sealing joints indicated to be left open for sealant.

1.03 REFERENCE STANDARDS
   B. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.

1.04 ADMINISTRATIVE REQUIREMENTS
   A. Preinstallation Meeting: Convene one week before starting work of this section.

1.05 SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Product Data: Provide data on stone units, sample pieces, mortar, and reinforcement.
   C. Samples: Submit mortar color samples.
   D. Installer’s Qualification Statement.

1.06 QUALITY ASSURANCE
   A. Installer Qualifications: Company specializing in performing work of the type required by this section, with minimum _____ years of documented experience.

1.07 MOCK-UP
   A. Construct stone wall mock-up, 4 feet long by 4 feet wide; include stone anchor accessories, corner condition, and typical control joint in mock-up.
   B. Locate where directed.
   C. Mock-up may remain as part of the Work.

1.08 DELIVERY, STORAGE, AND HANDLING
   A. Protect stone from discoloration during storage on site.
   B. Provide ventilation to prevent condensation from forming on stone.

1.09 FIELD CONDITIONS
   A. Maintain materials and ambient air at minimum of 40 degrees F (5 degrees C) prior to, during, and for 48 hours after completion of work.

PART 2 PRODUCTS
2.01 MANUFACTURERS
   A. Stone Supplier/Manufacturer: Basis of Design.
a. Substitutions (only on strict approval by Architect and Owner): See Section 01 6000 - Product Requirements.

2.02 STONE

A. Ledgestone Strips
   1. Characteristics
      a. Size: All strips are 4 inch widths, with random lengths and thicknesses.
      b. Thickness: (Bed Depth) Normal range 2 inches to 6 inches, Jumpers - 7 inches to 12 inches.
      c. Coverage: Estimated to cover 35 to 40 square feet per ton.
      d. Color Range: Provide enough samples for Architect to make color range selection, from full line of stone colors available.

2.03 MORTAR APPLICATIONS

A. Use only factory premixed packaged dry materials for mortar, with addition of water only at project site.
B. Mortar Color: Provide full line of mortar color samples for Architect selection.

2.04 MORTAR MIXES

A. Packaged Dry Material for Mortar for Unit Masonry: Premixed Portland cement, hydrated lime, and sand; complying with ASTM C1714/C1714M and capable of producing mortar of the specified strength in accordance with ASTM C270 with the addition of water only.
   1. Type: Type S.
   2. Color: As selected by Architect.
   3. Manufacturers:
      a. Amerimix, an Oldcastle brand; www.amerimix.com/#sle.
      b. The QUIKRETE Companies; QUIKRETE® Veneer Stone Mortar – Polymer Modified: www.quikrete.com/#sle.
      c. Substitutions: See Section 01 6000 - Product Requirements.
B. Colored Mortar: Proportion selected pigments and other ingredients to match Architect’s sample, without exceeding manufacturer’s recommended pigment-to-cement ratio.
C. Mixing: Use mechanical batch mixer and comply with referenced standards.

2.05 ACCESSORIES - ANCHORED VENEER

A. Horizontal Joint Reinforcement: Truss type; stainless steel wire conforming to ASTM A580/A580M Type 304, 3/16 inch (4.8 mm) diameter side rods with 0.1483 inch (3.8 mm) diameter cross ties.
B. Wall Ties: Formed steel wire, stainless steel conforming to ASTM A580/A580M, eye and pintle type, with provision for vertical adjustment after attachment.
C. Other Anchors in Direct Contact with Stone: ASTM A666, Type 304, stainless steel, of sizes and configurations required for support of stone and applicable superimposed loads.
D. Setting Buttons and Shims: Lead.
E. Weep/Cavity Vents: Polyethylene tubing.
F. Cleaning Solution: Type that will not harm stone, joint materials, or adjacent surfaces.

2.06 STONE FABRICATION - ANCHORED VENEER

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that support work and site conditions are ready to receive work of this section.
B. Verify that substrates to receive mortar scratch coat or setting bed comply with stone veneer manufacturer’s instructions.
1. Concrete: Verify surfaces are flat, honeycomb is filled flush, and surface is ready to receive mortar setting bed. Verify no bituminous, water repellent, or form release agents exist on concrete surface that are detrimental to mortar setting bed. Verify that items built-in under other sections are properly located and sized.

3.02 PREPARATION - ANCHORED VENEER
A. Establish lines, levels, and coursing. Protect from disturbance.
B. Clean stone prior to installation. Do not use wire brushes or implements that mark or damage exposed surfaces.
C. Clean sawn surfaces of rust stains and iron particles.

3.03 INSTALLATION - ANCHORED VENEER
A. Install flashings of longest practical length and seal watertight to back-up. Lap end joints minimum 6 inches (150 mm) and seal watertight.
B. Cut stone at site to produce clean faces.
C. Size stone units to fit opening dimensions and perimeter conditions.
D. Wet absorptive stone in preparation for placement to minimize moisture suction from mortar.
E. Arrange stone pattern to provide color uniformity and minimize visual variations, and provide a uniform blend of stone unit sizes.
F. Arrange stone coursing in bond with consistent joint width.
G. Set stone in full mortar setting bed to fully support stone over bearing surface. Use setting buttons or shims to maintain correct joint width.
H. Install weep/cavity vents in vertical stone joints at 24 inches on center horizontally; immediately above horizontal flashings, above shelf angles and supports, and at top of each cavity space; do not permit mortar accumulation in cavity space.

3.04 REINFORCEMENT AND ANCHORAGE - ANCHORED VENEER
A. Install horizontal joint reinforcement 16 inches (400 mm) on center.
B. Place joint reinforcement continuous in first and second joint below top of walls.
C. Lap joint reinforcement ends minimum 6 inches (150 mm).
D. In addition, place wall ties at maximum 3 inches (75 mm) on center each way around perimeter of openings, within 12 inches (300 mm) of openings.

3.05 JOINTS - ANCHORED VENEER
A. Leave the following joints open for sealant specified in Section 07 9200:
   1. Head joints in top courses, including copings, parapets, cornices, sills, and steps.
   2. Joints in projecting units.
   3. Joints between rigidly anchored units, including soffits, panels, and column covers.
   4. Joints below lugged sills and stair treads.
   5. Joints below ledge and relieving angles.
   6. Joints labeled "expansion joint".
B. Rake out mortar joints 5/8 to 3/4 inch (16 to 19 mm) and brush joints clean to accommodate pointing mortar. Fill joints with pointing mortar.
C. Pack mortar into joints and work into voids. Neatly tool surface to concave joint.
D. At joints to be sealed, clean mortar out of joint before it sets. Brush joints clean.

3.06 INSTALLATION - WATER-RESISTIVE BARRIER
A. Where required by thin stone veneer fabricator's instructions or by local codes, install two layers of water-resistive barrier in accordance with water-resistive barrier manufacturer's instructions. Integrate water-resistive barrier with all flashing accessories, adjacent water-resistive barriers, doors, windows, penetrations, and cladding transitions.
3.07 INSTALLATION - MASONRY FLASHINGS
   A. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all
      locations where downward flow of water will be interrupted.

3.08 CONTROL AND EXPANSION JOINTS
   A. Form joints as detailed on drawings.
   B. Discontinue lath, scratch coat, and setting bed at movement joints in adhered veneer.

3.09 TOLERANCES
   A. Maximum Variation From Unit to Adjacent Unit: 1/16 inch (1.6 mm).
   B. Maximum Variation from Plane of Wall: 1/4 inch in 10 feet (6 mm in 3 m) and 1/2 inch in 20 feet
      (13 mm in 6 m) or more.
   C. Maximum Variation from Plumb: 1/4 inch (6 mm) per story non-cumulative; 1/2 inch (13 mm) in
      two stories or more.
   D. Maximum Variation from Level Coursing: 1/8 inch in 3 feet (3 mm in 1 m) and 1/4 inch in 10
      feet (6 mm in 3 m); 1/2 inch in 30 feet (13 mm in 9 m).

3.10 CLEANING
   A. Remove excess mortar as work progresses, and upon completion of work.
   B. Replace defective mortar. Match adjacent work.
   C. Clean soiled surfaces with cleaning solution.
   D. Use non-metallic tools in cleaning operations.

3.11 PROTECTION
   A. During temporary storage on site, at the end of working day, and during rainy weather, cover
      stone work exposed to weather with non-staining waterproof coverings, securely anchored.

END OF SECTION
SECTION 05 1200 - STRUCTURAL STEEL FRAMING

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Structural steel framing members.

1.02 PRICE AND PAYMENT PROCEDURES
A. See Section 01 2200 - Unit Prices, for additional unit price requirements.

1.03 REFERENCE STANDARDS
O. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength, Inch and Metric Dimensions; 2015a.
S. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.

1.04 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Shop Drawings:
   1. Indicate profiles, sizes, spacing, locations of structural members, openings, attachments, and fasteners.
   2. Indicate welded connections with AWS A2.4 welding symbols. Indicate net weld lengths.
C. Manufacturer's Mill Certificate: Certify that products meet or exceed specified requirements.
D. Mill Test Reports: Indicate structural strength, destructive test analysis and non-destructive test analysis.
E. Fabricator Test Reports: Comply with ASTM A1011/A1011M.
F. Welders Certificates: Certify welders employed on the Work, verifying AWS qualification within the previous 12 months.

**1.05 QUALITY ASSURANCE**

A. Fabricate structural steel members in accordance with AISC (MAN) "Steel Construction Manual."
B. Fabricator Qualifications: A qualified steel fabricator that is accredited by the International Accreditation Service (IAS) Fabricator Inspection Program for Structural Steel in accordance with IAS AC172.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

A. Steel Angles and Plates: ASTM A36/A36M.
B. Steel Plate: ASTM A514/A514M.
C. Structural Bolts and Nuts: Carbon steel, ASTM A307, Grade A and galvanized in compliance with ASTM A153/A153M, Class C.
D. High-Strength Structural Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, with matching compatible ASTM A563 or ASTM A563M nuts and ASTM F436/F436M washers.
E. Unheaded Anchor Rods: ASTM F1554, Grade 36, plain, with matching ASTM A563 or ASTM A563M nuts and ASTM F436/F436M Type 1 washers.
G. Load Indicator Washers: Provide washers complying with ASTM F959/F959M at connections requiring high-strength bolts.
H. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
I. Shop and Touch-Up Primer: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.
J. Touch-Up Primer for Galvanized Surfaces: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.

**2.02 FABRICATION**

A. Shop fabricate to greatest extent possible.
B. Continuously seal joined members by continuous welds. Grind exposed welds smooth.
C. Fabricate connections for bolt, nut, and washer connectors.

**2.03 FINISH**

A. Prepare structural component surfaces in accordance with SSPC-SP 3.
B. Galvanize structural steel members to comply with ASTM A123/A123M. Provide minimum 1.7 oz/sq ft 530 g/sq m) galvanized coating.
2.04 SOURCE QUALITY CONTROL

PART 3 EXECUTION

3.01 ERECTION

A. Erect structural steel in compliance with AISC 303.
B. Allow for erection loads, and provide sufficient temporary bracing to maintain structure in safe condition, plumb, and in true alignment until completion of erection and installation of permanent bracing.
C. Field weld components indicated on drawings.

3.02 FIELD QUALITY CONTROL

A. Welded Connections: Visually inspect all field-welded connections and test at least ten percent of welds using one of the following:
   1. Radiographic testing performed in accordance with ASTM E94/E94M.
   2. Ultrasonic testing performed in accordance with ASTM E164.
   3. Liquid penetrant inspection performed in accordance with ASTM E165/E165M.
   4. Magnetic particle inspection performed in accordance with ASTM E709.

END OF SECTION
SECTION 05 4000 - COLD-FORMED METAL FRAMING

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Formed steel stud exterior wall and interior wall framing.
   B. Exterior wall sheathing.
   C. Formed steel joist and purlin framing and bridging.

1.02 REFERENCE STANDARDS
   A. AISI S100-12 - North American Specification for the Design of Cold-Formed Steel Structural Members; American Iron and Steel Institute; 2012.
   E. ASTM C955 - Standard Specification for Cold-Formed Steel Structural Framing Members; 2018.
   G. PS 1 - Structural Plywood; 2009.

1.03 SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Shop Drawings: Indicate component details, framed openings, bearing, anchorage, loading, welds, and type and location of fasteners, and accessories or items required of related work.
      1. Design data:
         a. Shop drawings signed and sealed by a professional structural engineer.
   C. Manufacturer’s Installation Instructions: Indicate special procedures, conditions requiring special attention, and ________.

1.04 QUALITY ASSURANCE
   A. Designer Qualifications: Design framing system under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.
   B. Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, and with minimum three years of documented experience.
   C. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS
   A. Metal Framing:
      1. CEMCO: www.cemcosteel.com/#sle.

B. Framing Connectors and Accessories:
   1. Same manufacturer as metal framing.

2.02 FRAMING SYSTEM
A. Provide primary and secondary framing members, bridging, bracing, plates, gussets, clips, fittings, reinforcement, and fastenings as required to provide a complete framing system.

B. Design Requirements: Provide completed framing system having the following characteristics:
   1. Design: Calculate structural characteristics of cold-formed steel framing members according to AISI S100-12.
   2. Structural Performance: Design, engineer, fabricate, and erect to withstand specified design loads for project conditions within required limits.
   3. Design Loads: In accordance with applicable codes.
   4. Live load deflection meeting the following, unless otherwise indicated:
      a. Exterior Walls: Maximum horizontal deflection under wind load of 1/180 of span.
   5. Able to tolerate movement of components without damage, failure of joint seals, undue stress on fasteners, or other detrimental effects when subject to seasonal or cyclic day/night temperature ranges.
   6. Able to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.

2.03 FRAMING MATERIALS
A. Studs and Track: ASTM C955; studs formed to channel, "C", or "Sigma" shape with punched web; U-shaped track in matching nominal width and compatible height.

   1. Base Metal: As required to meet specified performance levels within maximum depths indicated.
   2. Gage and Depth: As indicated on drawings.

2.04 FASTENERS
A. Self-Drilling, Self-Tapping Screws, Bolts, Nuts and Washers: Hot dip galvanized per ASTM A153/A153M.

B. Anchorage Devices: As indicated on drawings.

2.05 WALL SHEATHING
A. Plywood; PS 1, Grade C-D, Exposure I.

B. Extruded polystyrene (XPS) board insulation, ASTM C578, Type IV, tongue and groove along edges; 1 inch (25 mm) thick.

2.06 ACCESSORIES
A. Bracing, Furring, Bridging: Formed sheet steel, thickness determined for conditions encountered; finish to match framing components.

B. Plates, Gusses, Clips: Formed Sheet Steel, thickness determined for conditions encountered; finish to match framing components.

C. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

PART 3 EXECUTION
3.01 EXAMINATION
A. Verify that substrate surfaces are ready to receive work.

B. Verify field measurements and adjust installation as required.
3.02 INSTALLATION OF STUDS
   A. Install components in accordance with manufacturers' instructions and ASTM C1007 requirements.

3.03 INSTALLATION OF JOISTS AND PURLINS
   A. Install framing components in accordance with manufacturer's instructions.
   B. Make provisions for erection stresses. Provide temporary alignment and bracing.

3.04 INSTALLATION OF WALL SHEATHING
   A. Install wall sheathing with long dimension perpendicular to purlins, with ends over firm bearing and staggered, using self-tapping screws.

   END OF SECTION
SECTION 06 1000 - ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Roof-mounted curbs.
   B. Roofing nailers.
   C. Preservative treated wood materials.

1.02 RELATED REQUIREMENTS
   A. Section 07 2500 - Weather Barriers: Air barrier over sheathing.
   B. Section 07 6200 - Sheet Metal Flashing and Trim: Sill flashings.
   C. Section 09 2116 - Gypsum Board Assemblies: Gypsum-based sheathing.

1.03 REFERENCE STANDARDS
   C. PS 1 - Structural Plywood; 2009.
   D. PS 2 - Performance Standard for Wood-Based Structural-Use Panels; 2010.

1.04 SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Product Data: Provide technical data on application instructions.

1.05 DELIVERY, STORAGE, AND HANDLING
   A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

1.06 WARRANTY
   A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
   B. Correct defective Work within a one year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS
   A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
      1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
      2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
   B. Lumber fabricated from old growth timber is not permitted.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS
   A. Sizes: Nominal sizes as indicated on drawings, S4S.
   B. Moisture Content: S-dry or MC19.
   C. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
      1. Lumber: S4S, No. 2 or Standard Grade.
      2. Boards: Standard or No. 3.
2.03 CONSTRUCTION PANELS
   A. Roof Sheathing: Any PS 2 type, rated Structural I Sheathing.
      2. Span Rating: 60.
      3. Performance Category: 3/4 PERF CAT.
   B. Wall Sheathing, size as called for: See Drawings.
      2. Grade: Structural I Sheathing.
      4. Performance Category: 5/16 PERF CAT.
      5. Edge Profile: Square edge.
   C. Wall Sheathing: Plywood, PS 1, Grade C-D, Exposure I.

2.04 ACCESSORIES
   A. Fasteners and Anchors:
      2. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.

2.05 FACTORY WOOD TREATMENT
   A. Treated Lumber: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
      1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.
   B. Preservative Treatment:
         a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
         b. Treat lumber in contact with roofing, flashing, or waterproofing.
         c. Treat lumber in contact with masonry or concrete.

PART 3 EXECUTION
3.01 PREPARATION
   A. Coordinate installation of rough carpentry members specified in other sections.

3.02 INSTALLATION - GENERAL
   A. Select material sizes to minimize waste.
   B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
   C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.03 BLOCKING, NAILERS, AND SUPPORTS
   A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.

3.04 ROOF-RELATED CARPENTRY
   A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.
   B. Provide wood curb at all roof openings except where prefabricated curbs are specified and where specifically indicated otherwise. Form corners by alternating lapping side members.
3.05 INSTALLATION OF CONSTRUCTION PANELS
   A. Roof Sheathing: Secure panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
      1. Nail panels to framing; staples are not permitted.
   B. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.

3.06 TOLERANCES
   A. Framing Members: 1/4 inch (6 mm) from true position, maximum.
   B. Variation from Plane (Other than Floors): 1/4 inch in 10 feet (2 mm/m) maximum, and 1/4 inch in 30 feet (7 mm in 10 m) maximum.

3.07 CLEANING
   A. Waste Disposal: Comply with the requirements of Section 01 7419 - Construction Waste Management and Disposal.
      1. Comply with applicable regulations.
      2. Do not burn scrap on project site.
      3. Do not burn scraps that have been pressure treated.
      4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.
   B. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill.
   C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION
SECTION 07 0150.19 - PREPARATION FOR RE-ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Replacement of existing roofing system in preparation for entire new roofing system.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Coordinate with affected mechanical work associated with roof penetrations.

B. Preinstallation Meeting: Convene one week before starting work of this section.
   1. Attendees:

C. Schedule work to coincide with commencement of installation of new roofing system.

1.03 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning membrane roofing removal. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Reroofing Conference: Conduct conference at project site.
   1. Meet with Owner; Architect; Owner's insurer if applicable; roofing Installer including project manager, superintendent, and foreman; and installers whose work interfaces with or affects reroofing including installers of roof accessories and roof-mounted equipment.

   2. Review methods and procedures related to roofing system tear-off and replacement including, but not limited to, the following:
      a. Reroofing preparation, including membrane roofing system manufacturer's written instructions.
      b. Temporary protection requirements for existing roofing system that is to remain during and after installation.
      c. Existing roof drains and roof drainage during each stage of reroofing, and roof drain plugging and plug removal requirements.
      d. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
      e. Condition and acceptance of existing roof deck and base flashing substrate for reuse.
      f. Structural loading limitations of deck during reroofing.
      g. Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect reroofing.
      h. HVAC shutdown and sealing of air intakes.
      i. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
      j. Governing regulations and requirements for insurance and certificates if applicable.
      k. Existing conditions that may require notification of Architect before proceeding.

1.04 FIELD CONDITIONS

A. Do not remove existing roofing membrane when weather conditions threaten the integrity of building contents or intended continued occupancy.

B. Maintain continuous temporary protection prior to and during installation of new roofing system.

C. Owner will occupy portions of building immediately below reroofing area. Conduct reroofing so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
   1. Coordinate work activities daily with Owner so Contractor can place protective dust or water leakage covers over sensitive equipment or furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below the work area.

   2. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below the affected area. Verify that occupants below the work area have been evacuated before proceeding with work over the impaired deck area.
D. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
E. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
F. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
G. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
   1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
H. Protect adjoining roofs from materials, equipment and debris. Do not stock or stack materials equipment and tools on adjoining roofs.
I. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during roofing system removal operations.

PART 2 PRODUCTS

2.01 COMPONENTS
   A. Refer to following sections for additional information on components relating to this work:

2.02 MATERIALS
   A. Temporary Protection: Design and selection of materials for temporary roofing are responsibilities of Contractor.
   1. Install approved temporary roofing membrane over area to be reroofed if the new roof cannot be completed in the same day.
   2. Install temporary roofing membrane over area to be reroofed.
   3. Unless approved in writing for temporary roof to remain, contractor shall remove temporary roofing membrane before installing new roofing membrane.
   4. Prepare the temporary roof to receive new roofing membrane according to approved temporary roofing membrane proposal. Obtain approval for temporary roof substrate from roofing membrane manufacturer and Architect before installing new roof.

2.03 AUXILIARY REROOFING MATERIALS
   A. General: Auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of existing and new membrane roofing system.

PART 3 EXECUTION

3.01 EXAMINATION
   A. Verify that existing roof surface has been cleared of materials being removed from existing roofing system and ready for next phase of work as required.

3.02 PREPARATION
   A. Sweep roof surface clean of loose matter.
   B. Remove loose refuse and dispose of properly off-site.
   C. 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.
   D. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
   E. 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.
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.

### 3.03 MATERIAL REMOVAL

A. Remove only existing roofing materials that can be replaced with new materials the same day.
   1. Remove cover boards and roof insulation.
   2. Bitumen and felts that are firmly bonded to concrete decks are permitted to remain if felts are dry. Remove unadhered bitumen and felts and wet felts.
   3. Remove fasteners from deck or cut fasteners off slightly above deck surface.

B. Existing skylights
   1. Remove existing skylights as indicated on Construction Drawings.
   2. Remove existing skylight curbs as indicated on Construction Drawings.
   3. Cover existing opening in deck as directed in Construction Documents
   4. **DO NOT** leave existing opening uncovered at any time.

C. Existing base flashings
   1. Remove existing base flashings around parapets, curbs, walls, and penetrations.
   2. Clean substrates of contaminants such as asphalt, sheet materials, dirt, and debris.

D. Wall Copings, Scuppers and Down spouts.
   1. Remove all existing wall coping.
   2. Remove all existing suppers and over flow scuppers.
   3. Remove all existing down spouts.

E. Remove metal counter flashings.

### 3.04 INSTALLATION

### 3.05 DECK PREPARATION

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

B. If broken or loose welds 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.

C. If deck surface is not suitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect. Do not proceed with installation until directed by Architect.

D. Install ice and water shield of all joints in roof deck.

### 3.06 DISPOSAL

A. Collect demolished materials and place in containers. Promptly dispose of demolished materials. 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.

### 3.07 SCHEDULES

A. All Roof Areas: Remove existing perimeter flashings, base flashings, counter flashings, vent stack flashings, roofing membrane, and insulation.

**END OF SECTION**
PART 1 GENERAL

1.01 SECTION INCLUDES
A. Board insulation at cavity wall construction and exterior wall behind stone and metal panel wall finish.
B. Batt insulation and vapor retarder in exterior wall and roof parapet construction.
C. Batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof.

1.02 RELATED REQUIREMENTS
A. Section 03 1119 - Insulating Concrete Forming: Polystyrene insulation used for forms.
B. Section 03 3000 - Cast-in-Place Concrete: Field-applied termiticide for concrete slabs and foundations.
C. Section 07 2500 - Weather Barriers: Separate air barrier and vapor retarder materials.
D. Section 09 2116 - Gypsum Board Assemblies: Acoustic insulation inside walls and partitions.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Provide data on product characteristics, performance criteria, and product limitations.
C. ABAA Field Quality Control Submittals: Submit third-party reports of testing and inspection required by ABAA QAP.
D. ABAA Manufacturer Qualification: Submit documentation of current evaluation of proposed manufacturer and materials.
E. ABAA Installer Qualification: Submit documentation of current contractor accreditation and current installer certification. Keep copies of contractor accreditation and installer certification on site during and after installation. Present on-site documentation upon request.

1.05 QUALITY ASSURANCE
A. Air Barrier Association of America (ABAA) Quality Assurance Program (QAP); www.airbarrier.org/#sle:
   1. Installer Qualification: Use accredited contractor, certified installers, evaluated materials, and third-party field quality control audit.
   2. Manufacturer Qualification: Use evaluated materials from a single manufacturer regularly engaged in air barrier material manufacture. Use secondary materials approved in writing by primary material manufacturer.

1.06 FIELD CONDITIONS
A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.
PART 2 PRODUCTS

2.01 APPLICATIONS

A. Insulation In Metal Frame Furring Channels on Exterior Walls, Continuous: Extruded polystyrene (XPS) board.

B. Insulation in Metal Stud Framing: Batt insulation with integral vapor retarder.

2.02 FOAM BOARD INSULATION MATERIALS

A. Extruded Polystyrene (XPS) Cavity Wall Insulation Board: Complies with ASTM C578, and manufactured using carbon black technology.
   1. Type and Compressive Resistance: Type IV, 25 psi (173 kPa), minimum.
   2. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
   3. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
   4. Type and Thermal Resistance, R-value (RSI-value): Type IV, 5.0 (0.88), minimum, per 1 inch (25.4 mm) thickness at 75 degrees F (24 degrees C) mean temperature.
   5. Board Size: 15-3/4 inch by 96 inch (400 mm by 2440 mm).
   6. Board Thickness: 2 and 3 inch, or as called for in Drawings.
   8. Type and Water Absorption: Type IV, 0.3 percent by volume, maximum, by total immersion.
   9. Manufacturers:
      b. Substitutions: See Section 01 6000 - Product Requirements.

2.03 BATT INSULATION MATERIALS

A. Glass Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
   1. Combustibility: Non-combustible, when tested in accordance with ASTM E136, except for facing, if any.
   2. Thermal Resistance: R-value (RSI-value) of R-19, Minimum.
   3. Thickness: 3 1/2 inch.
   4. Manufacturers:
      b. Owens Corning Corporation; EcoTouch PINK FIBERGLAS Insulation: www.ocbuildingspec.com/#sle.
      c. Substitutions: See Section 01 6000 - Product Requirements.

2.04 ACCESSORIES

A. Flashing Tape: Special polyolefin film with high performance adhesive.
   1. Application: Interior window and door sill flashing tape.
   2. Width: Are required for application.

B. Insulation Fasteners: Impaling clip of unfinished steel with washer retainer and clips, to be adhered to surface to receive insulation, length to suit insulation thickness and substrate, capable of securely and rigidly fastening insulation in place.

C. Adhesive: Type recommended by insulation manufacturer for application, when applicable.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.

3.02 BOARD INSTALLATION AT EXTERIOR WALLS

A. Install boards horizontally on walls, or as recommended by manufacturer.
   1. Place boards to maximize fastening contact.
2. Install in running bond pattern.
3. Butt edges and ends tightly to adjacent boards and to protrusions.
B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

3.03 BOARD INSTALLATION AT CAVITY WALLS
A. Install boards to fit snugly between wall ties.
B. Install boards horizontally on walls.
C. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

3.04 BOARD INSTALLATION USING COMPOSITE FRAMING SUPPORT (CFS) SYSTEM
A. Install CFS system in accordance with manufacturer’s installation instructions.
B. Install CFS system in compliance with system orientation, sizes, and locations as indicated on drawings.
C. Install CFS system to fill-in exterior wall spaces without gaps or voids, and do not compress insulation boards.
D. Trim insulation neatly to fit spaces, and insulate miscellaneous gaps and voids with approved expandable foam sealant.

3.05 BATT INSTALLATION
A. Install insulation and vapor retarder in accordance with manufacturer’s instructions.
B. Install in exterior wall and parapet spaces without gaps or voids. Do not compress insulation.
C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
E. Install with factory applied vapor retarder membrane facing warm side of building spaces. Lap ends and side flanges of membrane over framing members.
F. Tape seal butt ends, lapped flanges, and tears or cuts in membrane.
G. At metal framing, place vapor retarder on warm side of insulation; lap and seal sheet retarder joints over member face.
H. Tape seal tears or cuts in vapor retarder.
I. Extend vapor retarder tightly to full perimeter of adjacent window and door frames and other items interrupting the plane of the membrane. Tape seal in place.

3.06 FIELD QUALITY CONTROL
A. See Section 01 4000 - Quality Requirements, for additional requirements.
B. Coordination of Air Barrier Association of America (ABAA) Tests and Inspections:
   1. Provide testing and inspection required by ABAA Quality Assurance Program (QAP), when applicable, consult Architect.
   2. Notify in ABAA writing of schedule for air barrier work, and allow adequate time for testing and inspection.
   3. Cooperate with ABAA testing agency.
   4. Allow access to air barrier work areas and staging.
   5. Do not cover air barrier work until tested, inspected, and accepted.

3.07 PROTECTION
A. Do not permit installed insulation to be damaged prior to its concealment.

END OF SECTION
SECTION 07 2500 - WEATHER BARRIERS

PART 1  GENERAL

1.01 SECTION INCLUDES

A. Air Barriers: Materials that form a system to stop passage of air through exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls.

1.02 RELATED REQUIREMENTS

A. Section 07 2100 - Thermal Insulation: Vapor retarder installed in conjunction with batt insulation.
B. Section 07 2400 - Exterior Insulation and Finish Systems: Water-resistive barrier under exterior insulation.
C. Section 07 6200 - Sheet Metal Flashing and Trim: Metal flashings installed in conjunction with weather barriers.
D. Section 07 9200 - Joint Sealants: Sealing building expansion joints.

1.03 REFERENCE STANDARDS


PART 2  PRODUCTS

2.01 WEATHER BARRIER ASSEMBLIES

A. Air Barrier:
   1. On outside surface of sheathing of exterior walls use air barrier coating.

2.02 AIR BARRIER MATERIALS (WATER VAPOR PERMEABLE AND WATER-RESISTIVE)

2.03 AIR BARRIER MATERIALS (AIR AND VAPOR BARRIER)

A. Air and Vapor Barrier Sheet, Fluid-Applied:
   1. Air Permeance: 0.0001 cubic feet per minute per square foot (0.0005 L/s/sq m), maximum, when tested in accordance with ASTM E2178.
   2. Water Vapor Permeance: 0.1 perms (5.72 ng/(Pa s sq m)), maximum, when tested in accordance with ASTM E96/E96M Procedure A (desiccant procedure).
   4. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less (Class A), when tested in accordance with ASTM E84.
   5. Seam and Perimeter Tape: As recommended by sheet manufacturer.
   6. Manufacturers: (Note, fluid applied product must be compatible with expanded polystyrene (EPS) products, if applied to such products.)
      b. Tremco Commercial Sealants & Waterproofing; ExoAir 120: www.tremcosewalants.com/#sle.
      c. Substitutions: See Section 01 6000 - Product Requirements.

2.04 ACCESSORIES

A. Sealants, Tapes, and Accessories for Sealing Weather Barrier and Sealing Weather Barrier to Adjacent Substrates: As specified or as recommended by weather barrier manufacturer.
PART 3 EXECUTION

3.01 EXAMINATION
   A. Verify that surfaces and conditions are ready to accept the work of this section.

3.02 PREPARATION
   A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.
   B. Field test product for compatibility of product application on substrates intended to be covered. Product must be compatible.
   C. Clean and prime substrate surfaces to receive adhesives in accordance with manufacturer’s instructions.

3.03 INSTALLATION
   A. Install materials in accordance with manufacturer’s instructions.
   B. Air Barriers: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
   C. Openings and Penetrations in Exterior Weather Barriers:
      1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches (125 mm) onto weather barrier and at least 6 inches (150 mm) up jambs; mechanically fasten stretched edges.
      2. At openings to be filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches (100 mm) wide; do not seal sill flange.
      3. At openings to be filled with non-flanged frames, seal weather barrier to each side of opening framing, using flashing at least 9 inches (230 mm) wide, covering entire depth of framing.
      4. At head of openings, install flashing under weather barrier extending at least 2 inches (50 mm) beyond face of jambs; seal weather barrier to flashing.
      5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
      6. Service and Other Penetrations: Form flashing around penetrating item and seal to weather barrier surface.

3.04 FIELD QUALITY CONTROL
   A. See Section 01 4000 - Quality Requirements, for additional requirements.
   B. Coordination of ABAA Tests and Inspections:
      1. Provide testing and inspection required by ABAA QAP.
      2. Notify ABAA in writing of schedule for air barrier work, and allow adequate time for testing and inspection.
      3. Cooperate with ABAA testing agency.
      4. Allow access to air barrier work areas and staging.
      5. Do not cover air barrier work until tested, inspected, and accepted.

3.05 PROTECTION
   A. Do not leave materials exposed to weather longer than recommended by manufacturer.

END OF SECTION
PART 1 GENERAL
1.01 SECTION INCLUDES
   A. Manufactured metal panels for exterior wall panels and soffit panels, with insulation, related flasings, and accessory components.

1.02 RELATED REQUIREMENTS
   A. Section 06 1000 - Rough Carpentry: Wall panel substrate.
   B. Section 07 2100 - Thermal Insulation.
   C. Section 07 2500 - Weather Barriers: Weather barrier under wall panels.
   D. Section 09 2116 - Gypsum Board Assemblies: Wall panel substrate.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Shop Drawings: Indicate dimensions, layout, joints, construction details, and methods of anchorage.
   C. Samples: Submit two samples of wall panel and soffit panel, 12 inch by 12 inch (305 mm by 305 mm) in size illustrating finish color, sheen, and texture.
   D. Manufacturer's Qualification Statement.
   E. Installer's Qualification Statement.

1.05 QUALITY ASSURANCE
   A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
   B. Installer Qualifications: Company experienced in installing products of the type specified in this section with minimum three years of documented experience.

1.06 MOCK-UP
   A. Construct mock-up, minimum 12 feet long by 12 feet wide; include panel and soffit system, attachments to building frame, associated vapor retarder and air seal materials, weep drainage system, sealants and seals, related insulation in mock-up.
   B. Mock-up may remain as part of the Work.

1.07 DELIVERY, STORAGE, AND HANDLING
   A. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
   B. Store prefinished material off the ground and protected from weather; prevent twisting, bending, or abrasion; provide ventilation; slope metal sheets to ensure proper drainage.
   C. Prevent contact with materials that may cause discoloration or staining of products.

1.08 WARRANTY
   A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
   B. Correct defective work within a two year period after Date of Substantial Completion for degradation of panel finish, including color fading caused by exposure to weather.
C. Correct defective work within a two year period after Date of Substantial Completion, including defects in water tightness and integrity of seals.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design:
   2. Metal Soffit Panels: Vee-Panel manufactured by Berridge.

B. Other Acceptable Manufacturers - Metal Wall Panels - Concealed Fasteners:
   1. Substitutions: See Section 01 6000 - Product Requirements.

2.02 MANUFACTURED METAL PANELS

A. Wall Panel System: Factory fabricated prefinished metal panel system, site assembled.
   1. Provide exterior wall panels and soffit panels.
   2. Design and size components to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of wall.
   4. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
   5. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
   6. Fabrication: Formed true to shape, accurate in size, square, and free from distortion or defects; pieces of longest practical lengths.
   7. Corners: Factory-fabricated in one continuous piece with minimum 2 inch (51 mm) returns.
   8. Provide continuity of air barrier and vapor retarder seal at building enclosure elements in accordance with materials specified in Section 07 2500.

B. Exterior Wall Panels:
   1. Profile: Vertical; style as indicated.
   2. Side Seams: Edge lapping, sealed with continuous bead of sealant.
   3. Material: Precoated steel sheet, 22 gage, 0.0299 inch (0.76 mm) minimum thickness.
   4. Panel Width: 30 inches.
   5. Color: As selected by Architect from manufacturer's standard line.

C. Soffit Panels:
   1. Profile: Style as indicated.
   2. Material: Precoated steel sheet, 22 gage, 0.0299 inch (0.76 mm) minimum thickness.
   3. Color: As selected by Architect from manufacturer's standard line.

D. Internal and External Corners: Same material, thickness, and finish as exterior sheets; profile to suit system; shop cut and factory mitered to required angles.

E. Expansion Joints: Same material, thickness and finish as exterior sheets; ___ gage, ___ inch (___ mm) thick; manufacturer's standard brake formed type, of profile to suit system.

F. Trim: Same material, thickness and finish as exterior sheets; brake formed to required profiles.

G. Anchors: Galvanized steel.

2.03 MATERIALS

A. Precoated Steel Sheet: Hot-dipped galvanized steel sheet, ASTM A653/A653M, Structural Steel (SS) or Forming Steel (FS), with G90/Z275 coating; continuous coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.
2.04 FINISHES
A. Exposed Surface Finish: Panel manufacturer's standard polyvinylidene fluoride (PVDF) coating, top coat over epoxy primer.

2.05 ACCESSORIES
A. Gaskets: Manufacturer's standard type suitable for use with system, permanently resilient; ultraviolet and ozone resistant.
B. Concealed Sealants: Non-curing butyl sealant or tape sealant.
C. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
D. Fasteners: Manufacturer's standard type to suit application; with soft neoprene washers, steel, hot dip galvanized. Fastener cap same color as exterior panel.
E. Field Touch-up Paint: As recommended by panel manufacturer.

PART 3 EXECUTION
3.01 EXAMINATION
A. Verify that building framing members are ready to receive panels.
B. Verify that weather barrier has been installed over substrate completely and correctly.

3.02 INSTALLATION
A. Install panels on walls and soffits in accordance with manufacturer's instructions.
B. Protect surfaces in contact with cementitious materials and dissimilar metals with bituminous paint. Allow to dry prior to installation.
C. Fasten panels to structural supports; aligned, level, and plumb.
D. Locate joints over supports.
E. Lap panel ends minimum 2 inches (51 mm).
F. Use concealed fasteners unless otherwise approved by Architect.
G. Seal and place gaskets to prevent weather penetration. Maintain neat appearance.

3.03 TOLERANCES
A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch (1.6 mm).

3.04 CLEANING
A. Remove site cuttings from finish surfaces.
B. Remove protective material from wall panel surfaces.
C. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.
D. Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.

END OF SECTION
SECTION 07 5419 - PVC THERMOPLASTIC SINGLE-PLY ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Adhered system with PVC thermoplastic roofing membrane.
   B. Insulation, flat and tapered.

1.02 RELATED REQUIREMENTS
   A. Section 06 1000 - Rough Carpentry: Wood nailers and curbs.
   B. Section 07 6200 - Sheet Metal Flashing and Trim: Counterflashings, reglets and scuppers.
   C. Section 07 7100 - Roof Specialties: Prefabricated coping.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS
   A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
   B. Product Data: Provide manufacturer's written information listed below.
      1. Product data indicating membrane materials, flashing materials, insulation, fasteners, and Membrane.
      2. Preparation instructions and recommendations.
      3. Storage and handling requirements.
   C. Manufacturer's Qualification Statement.
   D. Installer's Qualification Statement.
   E. Specimen Warranty: For approval.
   F. Shop Drawings: Indicate joint or termination detail conditions, setting plan for tapered insulation, mechanical fastener layout, paver layout, and project roof details.
   G. Warranty:
      1. Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
      2. Submit installer's certification that installation complies with all warranty conditions for the waterproof membrane.

1.05 QUALITY ASSURANCE
   A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum twenty (20) years of documented experience.
   B. Installer Qualifications: Company specializing in performing the work of this section:
      1. With minimum five (5) years documented experience.
      2. Approved by membrane manufacturer.
   C. Single Source Responsibility: Provide and install products from single source.

1.06 DELIVERY, STORAGE, AND HANDLING
   A. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
   B. Protect products in weather protected environment, clear of ground and moisture.
C. Protect foam insulation from direct exposure to sunlight.

1.07 FIELD CONDITIONS
A. Do not apply roofing membrane during unsuitable weather.
B. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
C. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

1.08 WARRANTY
A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
B. System Warranty: Provide manufacturer's system warranty agreeing to repair or replace roofing that leaks or is damaged due to wind or other natural causes.
   1. Warranty Term: 20 years.
   2. For repair and replacement include costs of both material and labor in warranty.
   3. 90 MPH wind speed coverage
   4. Up to 1.5" hail coverage
C. Installer's Warranty: Submit Installer's Warranty, signed by Installer, covering the Work of this section, including all components of the membrane roof system such as membrane roofing, base flashing, roof insulation, fasteners, cover boards, and walkway products, for the following warranty period:
   1. Warranty Period: Five years from date of Substantial Completion.

PART 2 PRODUCTS
2.01 MANUFACTURER
A. Basis-of-Design Product: Sika Sarnafil Inc. - Sarnafil G410-18EL.
B. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into work include but are not limited to the following:
   1. Sika Sarnafil.
   2. Other manufacturers as approved by Architect, through Division 1 Submittal process.
C. Substitutions: See Section 01 6000 - Product Requirements.

2.02 ROOF TYPES: FROM ROOF DECK UP.
A. RF-1
   1. Structurally sloped existing Twin-Tee concrete deck.
   2. 2 1/2" rigid insulation. Fully adhered with 2 part foam adhesive.
   3. 2 1/2" rigid insulation. Fully adhered with 2 part foam adhesive.
   4. 1/2" gypsum cover board. Fully adhered with 2 part foam adhesive.
   5. PVC membrane. Fully adhered with manufacturers membrane adhesive.
   6. Tapered insulation where indicated on drawings

2.03 ROOFING APPLICATIONS
A. PVC Membrane Roofing: One ply membrane, fully adhered, over insulation.
B. Roofing Assembly Performance Requirements and Design Criteria:
   1. Roof Covering External Fire Resistance Classification: Class A when tested per UL 790.
   2. Wind Uplift:
      a. Designed to withstand wind uplift forces calculated with ASCE 7.
   4. Drainage: No standing water within 48 hours after precipitation.

2.04 ROOFING MEMBRANE AND ASSOCIATED MATERIALS
A. Membrane:
   1. Material: Polyvinyl chloride (PVC) complying with ASTM D4434/D4434M.
a. Manufacturer to guarantee that the membrane thickness meets or exceed the specified thickness when tested according to ASTMD751

3. Thickness: 72 mils (0.072 inch) (1.88 mm), minimum.
4. Sheet Width: Factory fabricated into largest sheets possible.
6. Product:
   a. Sarnefil G410

B. Seaming Materials: Hot Air Welded.
C. Membrane Fasteners: As recommended and approved by membrane manufacturer.
D. Base Flashing: Sarnefil G410 Membrane
   1. Provide waterproof, fully adhered base flashing system at all penetrations, plane transitions, and terminations.
E. Membrane Adhesive: Sarnefil 2170
   1. Solvant-based reactivating-type adhesive

2.05 COVER BOARDS
A. Cover Board: Glass mat faced gypsum panels, ASTM C1177/C1177M, fire resistant type, 1/2 inch thick.
   1. Product: GP Dens-Deck Prime
      a. All board stock shall be 4'-0" x 4'-0"

2.06 INSULATION
A. Polyisocyanurate Board Insulation: ASTM C1289, Type II, Class 1, fiber reinforced cellulosic felt both faces; Grade 2 and with the following characteristics:
   1. Grade and Compressive Strength: Grade 2, 20 psi (Grade 2, 138 kPa), minimum.
   2. Tapered Board: Slope as indicated; minimum thickness 1/2 inch (12.7 mm); fabricate of fewest layers possible.
   3. Product: As provided by membrane manufacturer
      a. All board stock shall be 4'-0" x 4'-0"

2.07 ACCESSORIES
A. Prefabricated Flashing Accessories:
   1. Sarnacorners-inside
   2. Sarnacorners-outside
   3. Penetrations:
      a. Sarnastack Universal
   4. Walkway Protection: Sarnatred-V
      a. 0.096 inch
      b. Weldable membrane with surface embossment, chevron pattern
      c. 39 inches wide
   5. Miscellaneous Flashing: Non-reinforced PVC membrane; 80 mils (0.080 inch) (2 mm) thick, in manufacturer's standard lengths and widths.

B. Insulation Adhesive: Sarncol 2163
   1. Two part foamable polyurethane board adhesive
   2. No temperature restrictions
   3. Manufacturer's standard expanding foam adhesive

C. Membrane Adhesive: Sarncol 2170
   1. Solvent-based reactivating-type adhesive

D. Surface Conditioner for Adhesives: Compatible with membrane and adhesives.
E. Sealants: As recommended by membrane manufacturer.
F. Cleaner: Manufacturer's standard, clear, solvent-based cleaner.
G. Edgings and Terminations: Manufacturer's standard edge and termination accessories.
   1. Coping:
      a. Refer to Section 07 7100 Roof Specialties
   2. PVC Coated Sheet Metal.
   3. Termination Bar:
      a. Extruded aluminium (6063 T6 alloy) with mill finish.
      b. 3/4 inch (19 mm) wide.
      c. 0.090 inch (2.3 mm) thick.
      d. 3/16 inch (4.8 mm) lip formed at a 45 degree angle.
      e. Pre punched 1/4'' x 3/8'' (6.4 mm x 9.5 mm) oval hole spaced 6 inch (152mm) on center.

H. Fastners:
   1. Sikaplan Fastener #15
      a. Carbon stea, steated with a corrosion-resistant coating to meet the criteria for corrosion resistance.
      b. Thread Diameter: 0.245 inch (6.2 mm).
      c. Shank Diameter: 0.203 inch (5.2 mm).
      d. Head Diameter: 0.435 inch (11 mm).
      e. Length: As required.
   2. Concrete Drive Pin Anchor
      a. Diameter: 1/4 inch (6.35 mm).
      b. Head Diameter: 7/16 inch (11.11 mm).
      c. Length: 1 1/4 inch (31.75 mm).

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL
   A. Perform work in accordance with manufacturer's instructions.
   B. Do not apply roofing membrane during unsuitable weather.
   C. Do not apply roofing membrane when ambient temperature is outside the temperature range recommended by manufacturer.
   D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
   E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.
   F. Coordinate the work with installation of associated counterflashings installed by other sections as the work of this section proceeds.

3.02 EXAMINATION
   A. Verify that surfaces and site conditions are ready to receive work.
   B. Verify deck surfaces are dry and free of snow or ice.
   C. Verify that roof openings, curbs, and penetrations through roof are solidly set, and nailing strips are in place.

3.03 PREPARATION, GENERAL
   A. Clean substrate thoroughly prior to roof application.

3.04 CONCRETE DECK PREPARATION
   A. Strip in all Twin Tee joints with High Temp Ice and Water Shield
      1. Product: Grace Ice and Water Shield HT

3.05 INSTALLATION - GENERAL
   A. Perform work in accordance with manufacturer's instructions.
   B. Do not apply roofing membrane during unsuitable weather.
C. Do not apply roofing membrane when ambient temperature is outside the temperature range recommended by manufacturer.
D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

3.06 INSULATION
A. Attachment of Insulation: Embed each layer of insulation in adhesive in full contact, in accordance with roofing and insulation manufacturers' instructions.
B. Do not install wet, damaged, or warped insulation boards.
C. Apply board adhesive directly to substrate, using ribbon pattern. Apply adhesive in 1/4-1/2 inch beads Ribbon will depend on wind uplift rating.
D. As adhesive is applied, immediately place board into wet adhesive. Walk boards in, ballast to achieve proper contact with substrate.
E. Lay subsequent layers of insulation with joints staggered minimum 6 inch (150 mm) from joints of preceding layer.
F. Place tapered insulation to the required slope pattern in accordance with manufacturer's instructions.
G. Lay boards with edges in moderate contact without forcing, and gap between boards no greater than 1/4 inch (6.3 mm). Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.
H. At roof drains, use factory-tapered boards to slope down to roof drains over a distance of 48 inches (1200 mm).
I. Do not apply more insulation than can be completely waterproofed in the same day.

3.07 MEMBRANE APPLICATION
A. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching.
B. Shingle joints on sloped substrate in direction of drainage.
C. Fully Adhered Application: Apply adhesive to substrate at rate of 1 gal/square (6.2 L/sq m). Fully embed membrane in adhesive except in areas directly over or within 3 inches (75 mm) of expansion joints. Fully adhere one roll before proceeding to adjacent rolls.
D. Over the properly installed and prepared substrate surface, adhesive shall be applied using solvent-resistant 3/4 inch (19 mm) nap paint rollers. The adhesive shall be applied to the substrate at a rate according to Sika Corporation requirements. The adhesive shall be applied in smooth, even coating with no gaps, globs, puddles or similar inconsistencies. Only an area which can be completely covered in the same day's operations shall be coated with adhesive. The first layer of adhesive shall be allowed to dry completely prior to installing the membrane.
E. When the adhesive on the substrate is dry, the Sarnafil roof membrane is unrolled. Adjacent sheets shall be overlapped 3 inches (75 mm). Once in place, one-half of the sheet's length shall be turned back and the underside shall be coated with adhesive at a rate of 1/2 gallon per 100 square feet (0.2 liters per m²). DO NOT apply adhesive to seam area. When the membrane adhesive has dried slightly to produce strings when touched with a dry finger, the coated membrane shall be rolled onto the previously-coated substrate being careful to avoid wrinkles. Do not allow adhesive on the underside of the Sarnafil membrane to dry completely. The amount of membrane that can be coated with adhesive before rolling into substrate will be determined by ambient temperature, humidity and crew. The bonded sheet shall be pressed firmly in place with a minimum 100 lb (45 kg) steel, membrane roller, by rolling in two directions.
F. Seam Welding General:
   1. All seams shall be hot-air welded. All membrane to be welded shall be clean and dry.
2. All mechanics intending to use hot-air welding equipment shall have successfully completed a training course provided by a Sika Corporation Technical Service Representative prior to welding.

3. Hot-air welding equipment shall be allowed to warm up for at least one minute prior to welding.

4. Seam overlaps should be 3 inches (76 mm) wide when automatic machine-welding and 4 inches (100 mm) wide when hand-welding, except for certain details.

G. Hand-Welding
   1. The back edge of the seam shall be welded with a narrow but continuous weld to prevent loss of hot air during the final welding.
   2. The nozzle shall be inserted into the seam at a 45 degree angle to the edge of the membrane. Once the proper welding temperature has been reached and the membrane begins to "flow", the hand roller is positioned perpendicular to the nozzle and rolled lightly. For straight seams, the 1-1/2 inch (40 mm) wide nozzle is recommended for use. For corners and compound connections, the 3/4 inch (20 mm) wide nozzle shall be used.

H. Machine Welding
   1. Machine welded seams are achieved by the use of approved automatic welding equipment. When using this equipment, all instructions shall be followed and local codes for electric supply, grounding and over current protection observed. Dedicated circuit house power or a dedicated portable generator is recommended. No other equipment shall be operated simultaneously off the generator.
   2. Metal tracks may be used over the deck membrane and under the machine welder to minimize or eliminate wrinkles.

I. Quality Control of Welded Seams
   1. The Applicator shall check all welded seams for continuity using a rounded screwdriver. Visible evidence that welding is proceeding correctly is smoke during the welding operation, shiny membrane surfaces, and an uninterrupted flow of dark gray material from the underside of the top membrane. On-site evaluation of welded seams shall be made daily by the Applicator at locations as directed by the Owner's Representative or Sika Corporation's representative. One inch (25 mm) wide cross-section samples of welded seams shall be taken at least three times a day. Correct welds display failure from shearing of the membrane prior to separation of the weld. Each test cut shall be patched by the Applicator at no extra cost to the Owner.

J. At intersections with vertical surfaces:
   1. Extend membrane up a minimum of 4 inches (100 mm) onto vertical surfaces.
   2. Fully adhere wall flashing over membrane, up wall, over the top of wood nailer and down the face of wall covering wood nailer and extending over concrete wall 1"

K. Coordinate installation of roof drains and sumps and related flashings.

L. Install walkway pads. Space pad joints to permit drainage.

M. Daily Seal: Install daily seal per manufacturers instructions at the end of each work day. Prevent infiltration of water at incomplete flashings, terminations, and at unfinished membrane edges.

3.08 FIELD QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements, for general requirements for field quality control and inspection.

B. Require site attendance of roofing and insulation material manufacturers Three times during installation of the Work.
   1. Start of project.
   2. Mid way through project.
   3. Final inspection.
3.09 CLEANING
   A. In areas where finished surfaces are soiled by work of this section, consult manufacturer of
      surfaces for cleaning advice and conform to their documented instructions.
   B. Repair or replace defaced or damaged finishes caused by work of this section.

3.10 PROTECTION
   A. Protect installed roofing and flashings from construction operations.
   B. Where traffic must continue over finished roof membrane, protect surfaces using durable
      materials.

END OF SECTION
SECTION 07 6200 - SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fabricated sheet metal items, including flashings, counterflashings, gutters, and downspouts.
B. Sealants for joints within sheet metal fabrications.
C. Precast concrete splash pads.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Wood nailers for sheet metal work.
B. Section 07 7100 - Roof Specialties: Manufactured copings, flashings, and expansion joint covers.
C. Section 07 9200 - Joint Sealants: Sealing non-lap joints between sheet metal fabrications and adjacent construction.

1.03 REFERENCE STANDARDS


1.04 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene one week before starting work of this section.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

1.06 QUALITY ASSURANCE

A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.
B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with ____ years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
B. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

A. Pre-Finished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage, (0.0239) inch (0.61 mm) thick base metal, shop pre-coated with PVDF coating.
   1. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
   2. Color: As selected by Architect from manufacturer's standard colors.

2.02 FABRICATION

A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
B. Form pieces in longest possible lengths.
C. Hem exposed edges on underside 1/2 inch (13 mm); miter and seam corners.
D. Form material with standing seams, except where otherwise indicated; at moving joints, use
   sealed lapped, bayonet-type or interlocking hooked seams.
E. Fabricate corners from one piece with minimum 18 inch (450 mm) long legs; seam for rigidity,
   seal with sealant.
F. Fabricate vertical faces with bottom edge formed outward 3/4 inch (19.05 mm) and hemmed to
   form drip.

2.03 GUTTER AND DOWNSPOUT FABRICATION
A. Downspouts: Profile as indicated.
B. Gutters and Downspouts: Size for rainfall intensity determined by a storm occurrence of 1 in 10
   years in accordance with SMACNA (ASMM).
C. Splash Pads: Precast concrete type, of size and profiles indicated; minimum 3000 psi (21 MPa)
   at 28 days, with minimum 5 percent air entrainment.
D. Downspout Extenders: Same material and finish as downspouts.
E. Seal metal joints.

2.04 ACCESSORIES
A. Fasteners: Galvanized steel, with soft neoprene washers.
B. Primer: Zinc chromate type.
C. Concealed Sealants: Non-curing butyl sealant.
D. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as
   recommended by manufacturer for substrates to be sealed; color to match adjacent material.
E. Reglets: Surface mounted type, galvanized steel; face and ends covered with plastic tape.

PART 3 EXECUTION
3.01 EXAMINATION
A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets
   in place, and nailing strips located.
B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 PREPARATION
A. Install starter and edge strips, and cleats before starting installation.
B. Install surface mounted reglets true to lines and levels, and seal top of reglets with sealant.
C. Back paint concealed metal surfaces with protective backing paint to a minimum dry film
   thickness of 15 mil (0.4 mm).

3.03 INSTALLATION
A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where
   permitted.
B. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines
   accurate to profiles.
C. Seal metal joints watertight.
D. Secure gutters and downspouts in place with concealed fasteners.
E. Set splash pads under downspouts.

3.04 FIELD QUALITY CONTROL
A. See Section 01 4000 - Quality Requirements, for field inspection requirements.
B. Inspection will involve surveillance of work during installation to ascertain compliance with specified requirements.

END OF SECTION
SECTION 07 7200 - ROOF ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Roof hatches.
B. Non-penetrating pedestals.

1.02 REFERENCE STANDARDS

1.03 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Warranty Documentation:
   1. Submit manufacturer warranty.
   2. Ensure that forms have been completed in Owner's name and registered with manufacturer.

1.04 DELIVERY, STORAGE, AND HANDLING
A. Store products in manufacturer's unopened packaging until ready for installation.
B. Store products under cover and elevated above grade.

1.05 WARRANTY
A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
B. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 ROOF HATCHES AND VENTS
A. Safety Railing System: Manufacturer's standard accessory safety rail system mounted directly to curb.
   3. Gate: Same material as railing; automatic closing with latch.
   4. Finish: Manufacturer's standard, factory applied finish.
   5. Gate Hinges and Post Guides: ASTM B221 (ASTM B221M), 6063 alloy, T5 temper aluminum.
   6. Mounting Brackets: Hot dipped galvanized steel, 1/4 inch (6.4 mm) thick, minimum.
   7. Manufacturers:
      a. BILCO Company; Bil-Guard 2.0: www.bilco.com/#sle.

2.02 NON-PENETRATING ROOFTOP SUPPORTS/ASSEMBLIES
A. Non-Penetrating Rooftop Support/Assemblies: Manufacturer-engineered and factory-fabricated, with pedestal bases that rest on top of roofing membrane, and not requiring any attachment to roof structure and not penetrating roofing assembly.
   1. Design Loadings and Configurations: As required by applicable codes.
   2. Height: Provide minimum clearance of 4 inches (106 mm) under supported items to top of roofing.
3. Support Spacing and Base Sizes: As required to distribute load sufficiently to prevent indentation of roofing assembly.

<table>
<thead>
<tr>
<th>Pipe Type</th>
<th>Pipe Size</th>
<th>Maximum Spacing</th>
<th>Minimum Rod Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel Pipe</td>
<td>1/2&quot;</td>
<td>6' - 9&quot;</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td></td>
<td>3/4&quot; Thru 1-1/4&quot;</td>
<td>8' - 0&quot;</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td></td>
<td>1-1/2 Thru 2&quot;</td>
<td>10' - 0&quot;</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td></td>
<td>2-1/2&quot; Thru 4&quot;</td>
<td>10' - 0&quot;</td>
<td>1/2&quot;</td>
</tr>
</tbody>
</table>

4. Steel Components: Stainless steel, or carbon steel hot-dip galvanized after fabrication in accordance with ASTM A123/A123M.

5. Hardware, Bolts, Nuts, and Washers: Stainless steel, or carbon steel hot-dip galvanized after fabrication in accordance with ASTM A153/A153M.

6. Manufacturers:
   a. C-Port.
      1) Rubber support base
      2) 14 gauge galvanized channel (13/16" high)
      3) 4 7/8" high x 6" wide x 9.6: length
      4) 100% recycled rubber, UV resistant
      5) Strut clamps
      6) Provide slip sheet under each support base, slip sheet shall be the same material as the new roof system.
   b. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION
   A. Do not begin installation until substrates have been properly prepared.
   B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION
   A. Clean surfaces thoroughly prior to installation.
   B. Prepare surfaces using methods recommended by manufacturer for achieving acceptable results for applicable substrate under project conditions.

3.03 INSTALLATION
   A. Install in accordance with manufacturer's instructions, in manner that maintains roofing system weather-tight integrity.
   B. Pipe supports shall be installed after gas has been painted and is completely dry.

3.04 CLEANING
   A. Clean installed work to like-new condition.

3.05 PROTECTION
   A. Protect installed products until completion of project.
   B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION
SECTION 07 9200 - JOINT SEALANTS

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 sealants for the following applications, including those specified by reference to this Section:
B. This Section includes sealants for the following applications:
   1. Exterior joints in the following vertical surfaces and nontraffic horizontal surfaces:
      a. Joints in sheet metal and flashing.
      b. Other joints as indicated.
C. Related Sections include the following:
   1. Division 7 Section "PVC Thermoplastic Single-Ply Roofing" for materials and construction requirements for new roofing system.

1.03 PERFORMANCE REQUIREMENTS
A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

1.04 SUBMITTALS
A. Product Data: For each joint-sealant product indicated.
B. Samples for Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
C. Compatibility and Adhesion Test Reports: From sealant manufacturer indicating the following:
   1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
   2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

1.05 QUALITY ASSURANCE
A. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING
A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multi component materials.
B. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.07 PROJECT CONDITIONS
A. Environmental Limitations: Do not proceed with installation of joint sealants under the following conditions:
   1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer.
   2. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 40 deg F (4.4 deg C).
   3. When joint substrates are wet.
B. Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.

C. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

1.08 WARRANTY

A. General Warranty: Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Special Installer's Warranty: Written warranty, signed by Installer agreeing to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
   1. Warranty Period: Five year from date of Substantial Completion.

PART 2 PRODUCTS

2.01 PRODUCTS AND MANUFACTURERS

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.

2.02 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

B. Colors of Exposed Joint Sealants: Match existing color.

2.03 ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealant Standard: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant.

B. Single-Component Nonsag Urethane Sealant.
   1. Products:
      b. Sika Corporation, Inc.; Sikaflex - 15LM.
      c. Sonneborn, Division of ChemRex Inc.; Ultra.
      d. Sonneborn, Division of ChemRex Inc.; NP 1.
      e. Type and Grade: S (single component) and NS (nonsag).
      f. Class: 25.
      g. Uses Related to Exposure: NT (nontraffic).
      h. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.

2.04 SOLVENT-RELEASE JOINT SEALANTS

A. Butyl-Rubber-Based Solvent-Release Joint Sealant: Comply with ASTM C 1085.
   1. Products:
      a. Bostik Findley; Bostik 300.
      b. Fuller, H. B. Company; SC-0296.
      c. Fuller, H. B. Company; SC-0298.
      d. Pecora Corporation; BC-158.
      e. Polymeric Systems Inc.; PSI-301
      f. Sonneborn, Division of ChemRex Inc.; Sonneborn Multi-Purpose Sealant.
      g. Tremco; Tremco Butyl Sealant.
B. Pigmented Narrow-Joint Sealant: Manufacturer's standard, solvent-release-curing, pigmented, synthetic-rubber sealant complying with AAMA 803.3 and formulated for sealing joints 3/16 inch (5 mm) or smaller in width.
   1. Products:
      a. Fuller, H. B. Company; SC-0289.

2.05 JOINT SEALANT BACKING
A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
B. Cylindrical Sealant Backings: ASTM C 1330, of type indicated below and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
   1. Type C: Closed-cell material with a surface skin.
C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.06 MISCELLANEOUS MATERIALS
A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
B. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 EXECUTION
3.01 EXAMINATION
A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION
A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint sealant manufacturer's written instructions and the following requirements:
   1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
   2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air. Porous joint surfaces include the following:
      a. Concrete.
      b. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
      1) Metal.
B. Joint Priming: Prime joint substrates where recommended in writing by joint sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.03 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
   1. Do not leave gaps between ends of sealant backings.
   2. Do not stretch, twist, puncture, or tear sealant backings.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and back of joints.

E. Install sealants by proven techniques to comply with the following and at the same time backings are installed:
   1. Place sealants so they directly contact and fully wet joint substrates.
   2. Completely fill recesses provided for each joint configuration.
   3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
   1. Remove excess sealants from surfaces adjacent to joint.
   2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
   3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
      a. Use masking tape to protect adjacent surfaces of recessed tooled joints.

3.04 CLEANING

A. Clean off excess sealants or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.05 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original work.

END OF SECTION
SECTION 08 4313 - ALUMINUM-FRAMED STOREFRONTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Aluminum-framed storefront, with vision glass.
B. Infill panels of metal and glass.
C. Aluminum doors and frames.
D. Weatherstripping.
E. Storefront window units.
F. Door hardware.

1.02 RELATED REQUIREMENTS

A. Section 07 2500 - Weather Barriers: Sealing framing to weather barrier installed on adjacent construction.
B. Section 07 9200 - Joint Sealants: Sealing joints between frames and adjacent construction.
C. Section 08 4229 - Automatic Entrances.
D. Section 08 8000 - Glazing: Glass and glazing accessories.

1.03 REFERENCE STANDARDS

A. AAMA CW-10 - Care and Handling of Architectural Aluminum From Shop to Site; 2015.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate with installation of other components that comprise the exterior enclosure.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware, and internal drainage details.
C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related work, expansion and contraction joint location and details, and field welding required.
D. Samples: Submit two samples in size illustrating finished aluminum surface, glass, infill panels, glazing materials.
E. Hardware Schedule: Complete itemization of each item of hardware to be provided for each door, cross-referenced to door identification numbers in Contract Documents.
F. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner’s name and registered with manufacturer.

1.06 QUALITY ASSURANCE
A. Installer Qualifications: Company experienced in performing work of type specified and with at least five years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING
A. Handle products of this section in accordance with AAMA CW-10.
B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

1.08 FIELD CONDITIONS
A. Do not install sealants when ambient temperature is less than 40 degrees F (5 degrees C). Maintain this minimum temperature during and 48 hours after installation.

1.09 WARRANTY
A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
B. Correct defective Work within a one year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 BASIS OF DESIGN -- SWINGING DOORS

2.02 MANUFACTURERS
A. Aluminum-Framed Storefront Windows and Doors:
   2. Substitutions: See Section 01 6000 - Product Requirements.

2.03 STOREFRONT
A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
   1. Description: 2 inch x 4-1/2 inch center set glazed storefront.
      a. Face Width: 2 inches.
      b. System Depth: 4-1/2 inches.
   2. Glazing Rabbet: For 1 inch (25 mm) insulating glazing (tempered).
      a. Factory finish all surfaces that will be exposed in completed assemblies.
      b. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.
      c. Coat concealed metal surfaces that will be in contact with cementitious materials or dissimilar metals with bituminous paint.
   5. Finish Color: As selected by Architect from manufacturer’s standard line.
   6. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors and hardware; fasteners and attachments concealed from view; reinforced as required for imposed loads.
   8. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
   9. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F (95 degrees C) over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.
10. Movement: Allow for movement between storefront and adjacent construction, without damage to components or deterioration of seals.

11. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.

B. Performance Requirements:
   1. Wind Loads: Design and size components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E330/E330M, using loads 1.5 times the design wind loads and 10 second duration of maximum load.
      a. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
   2. Water Penetration Resistance on Manufactured Assembly: No uncontrolled water on interior face, when tested in accordance with ASTM E331 at pressure differential of 8 psf (390 Pa).
   3. Air Leakage Laboratory Test: Maximum of 0.06 cu ft/min sq ft (0.3 L/sec sq m) of wall area, when tested in accordance with ASTM E283 at 6.27 psf (300 Pa) pressure differential across assembly.

2.04 WALL WINDOWS

A. Wall Windows:
   2. Substitutions: See Section 01 6000 - Product Requirements.

B. Aluminum-Framed Window Units: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
   1. Description: 2 inch x 4-1/2 inch center set glazed storefront.
      a. Face Width: 2 inches.
      b. System Depth: 4-1/2 inches.
   2. Glazing Rabbet: For glazing.

2.05 COMPONENTS

A. Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.

B. Glazing:
   1. For Exterior Framing, Windows and Doors: Type 1 inch, insulating, tempered.

C. Infill Panels at Wall Windows: Mapes Architectural Panels, Insulated, steel sheet face and back, with edges formed to fit glazing channel and sealed. See Drawings for details.
   1. Face Sheet: Steel, smooth.
   2. Core: Isocyanurate insulation core with R-value of 27.79.

D. Swing Doors: Glazed aluminum.
   1. Thickness: 1-3/4 inches (43 mm).
   2. Top Rail: 4 inches (100 mm) wide.
   3. Vertical Stiles: 4-1/2 inches (115 mm) wide.
   4. Bottom Rail: 10 inches (254 mm) wide.
   5. Glazing Stops: Square.
   6. Finish: Same as storefront.

2.06 MATERIALS


B. Fasteners: Stainless steel.
C. Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.

2.07 FINISHES
A. High Performance Organic Coating: AAMA 2604; multiple coats, thermally cured fluoropolymer system.
B. Color: As selected by Architect from manufacturer's standard range.

2.08 HARDWARE
A. For each door, include weatherstripping, sill sweep strip, and threshold.
B. Other Door Hardware: Storefront manufacturer's standard type to suit application.
   1. Finish on Hand-Contacted Items: 626.
   2. For each door, include the following hardware:
C. Weatherstripping: Wool pile, continuous and replaceable; provide on all doors.
D. Sill Sweep Strips: Resilient seal type, retracting, of neoprene; provide on all doors.
E. Threshold: Extruded aluminum, one piece per door opening, ribbed surface; provide on all doors.
F. Hinges: Butt type, swing clear; top and bottom.
   1. Provide continuous hinge; Ives 157XY.
G. Push/Pull Set: Standard configuration push/pull handles.
H. Exit Devices: Panic type.
   1. Provide Von Duprin Model 99, with no parallel rods.
I. Door Closers: ADA.
J. Handle Latch: Provide manufacturer's Standard.
K. Locks: Provide Shlage ND-Series Lever 626 Finish; keyed cylinder outside. Provide Shlage interchangeable core; proprietary keyway.
L. Automatic Door Operators and Actuators: As specified above for door closers, and as salvaged from existing doors.

PART 3 EXECUTION
3.01 EXAMINATION
A. Verify dimensions, tolerances, and method of attachment with other work.
B. Verify that wall openings and adjoining air and vapor seal materials are ready to receive work of this section.

3.02 INSTALLATION
A. Install wall system in accordance with manufacturer's instructions.
B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
C. Provide alignment attachments and shims to permanently fasten system to building structure.
D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
E. Provide thermal isolation where components penetrate or disrupt building insulation.
F. Install sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam.
G. Where fasteners penetrate sill flashings, make watertight by seating and sealing fastener heads to sill flashing.
H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
I. Set thresholds in bed of sealant and secure.
J. Install hardware using templates provided by hardware manufacturer.
K. Install glass and infill panels in accordance with product manufacturer's requirements, using glazing method required to achieve performance criteria.
L. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

3.03 FIELD QUALITY CONTROL
A. Provide services of storefront manufacturer's field representative to observe for proper installation of system and submit report.
B. Repair or replace storefront components that have failed designated field testing, and retest to verify performance conforms to specified requirements.

3.04 ADJUSTING
A. Adjust operating hardware for smooth operation.

3.05 CLEANING
A. Remove protective material from pre-finished aluminum surfaces.
B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths, and take care to remove dirt from corners and to wipe surfaces clean.
C. Upon completion of installation, thoroughly clean aluminum surfaces in accordance with AAMA 609 & 610.

3.06 PROTECTION
A. Protect installed products from damage until Date of Substantial Completion.

END OF SECTION
SECTION 08 8000 - GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Insulating glass units.
B. Glazing compounds and accessories.

1.02 RELATED REQUIREMENTS
A. Section 08 1113 - Hollow Metal Doors and Frames: Glazed borrowed lites.
B. Section 08 4313 - Aluminum-Framed Storefronts: Glazing furnished as part of storefront assembly.
C. Section 10 2800 - Toilet, Bath, and Laundry Accessories: Mirrors.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data on Insulating Glass Unit and Spandrel Glazing Unit Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements. Samples shall be provided to architect to match spandrel glazing with vision units. Minimum of 4 varying samples of spandrel glass each with a different color ceramic frit as selected by Architect.
C. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.
D. Samples: Submit two samples 12 inch by 12 inch in size of glass units, showing coloration and design.
E. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
1.05 QUALITY ASSURANCE
   A. Perform Work in accordance with GANA (GM), GANA (SM), GANA (LGRM), and IGMA
      TM-3000 for glazing installation methods.
   B. Installer Qualifications: Company specializing in performing the work of this section with
      minimum five years experience.

1.06 FIELD CONDITIONS
   A. Do not install glazing when ambient temperature is less than 40 degrees F (4 degrees C).
   B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing
      compounds.

1.07 WARRANTY
   A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
   B. Insulating Glass Units: Provide a five (5) year manufacturer warranty to include coverage for
      seal failure, interpane dusting or misting, including replacement of failed units.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES
   A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and
      to withstand live loads caused by positive and negative wind pressure acting normal to plane of
      glass.
      1. Basic Wind Speed: 90 mph
      2. Risk Category: III
      3. Exposure Category: C
      4. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions,
         and maximum lateral deflection of supported glass.
      5. Provide glass edge support system sufficiently stiff to limit the lateral deflection of
         supported glass edges to less than 1/175 of their lengths under specified design load.
      6. Glass thicknesses listed are minimum.
   B. Vapor Retarder and Air Barrier Seals: Provide completed assemblies that maintain continuity of
      building enclosure vapor retarder and air barrier.
      1. In conjunction with vapor retarder and joint sealer materials described in other sections.

2.02 GLASS MATERIALS
   A. Float Glass: Provide float glass based glazing unless otherwise indicated.
      1. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for
         safety glazing used in hazardous locations.
      2. Impact Resistant Safety Glass: Complies with ANSI Z97.1 - Class B, or 16 CFR 1201 -
         Category I criteria.
   B. Insulating Glass Units: Types as indicated.
      1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
      2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or
         magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision
         glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
      3. Metal Edge Spacers: Aluminum, bent and soldered corners.
      5. Edge Seal:
a. Dual-Sealed System: Provide polyisobutylene sealant as primary seal applied between spacer and glass panes, and silicone or polysulfide sealant as secondary seal applied around perimeter.


7. Purge interpane space with dry air, hermetically sealed.

8. Capillary Tubes: Provide tubes from air space for insulating glass units without inert type gas that have a change of altitude greater than 2500 feet (762 m) between point of fabrication and point of installation to permit pressure equalization of air space.
   a. Capillary Tubes: Tubes to remain open and be of length and material type in accordance with insulating glass fabricator's requirements.

C. Insulating Glass Units: General use vision glass, double glazed.
   1. Applications: Exterior glazing unless otherwise indicated.
   2. Space between lites filled with air.
   3. Outboard Lite: Annealed float glass, 1/4 inch (6.4 mm) thick, minimum.
      a. Tint: to be selected by architect.
   4. Inboard Lite: Annealed float glass, 1/4 inch (6.4 mm) thick, minimum.
      a. Tint: Clear.
      b. Coating: Low-E, on #3 surface. Solarban 60
   5. Total Thickness: 1 inch (25.4 mm).
   6. Thermal Transmittance (U-Value), Summer - Center of Glass: 0.32, nominal.
   10. Solar Heat Gain Coefficient (SHGC): 0.35, nominal.
   11. Visible Light Reflectance, Outside: 8 percent, nominal.

D. Insulating Glass Units: Spandrel glazing.
   1. Applications: Exterior spandrel glazing unless otherwise indicated. It is the intent for the spandrel glass to match the vision glass as closely as possible.
   2. Space between lites filled with air.
   3. Outboard Lite: Heat-strengthened float glass, 1/4 inch (6.4 mm) thick, minimum.
      a. Tint: Clear.
      b. Coating: Same as on vision units.
   4. Inboard Lite: Heat-strengthened float glass, 1/4 inch (6.4 mm) thick.
      a. Tint: Clear.
      b. Opacifier: Ceramic frit, on #4 surface.
      c. Opacifier Color: To be selected by Architect.
   5. Total Thickness: 1 inch (25.4 mm).
   6. Thermal Transmittance (U-Value), Summer - Center of Glass: 0.32, nominal.

2.04 GLAZING UNITS

2.05 ACCESSORIES

A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot (25 mm for each square meter) of glazing or minimum 4 inch (100 mm) by width of glazing rabbet space minus 1/16 inch (1.5 mm) by height to suit glazing method and pane weight and area.

B. Spacer Shims: Silicone, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Minimum 3 inch (75 mm) long x one half the height of the glazing stop x thickness to suit application, self adhesive on one face.
C. Glazing Tape: Closed cell polyvinyl chloride (PVC) foam, coiled on release paper over adhesive on two sides, maximum water absorption by volume of 2 percent, designed for compression of 25 percent to effect an air barrier and vapor retarder seal; overall inch (____x____ mm) size to fit glazing channel.

D. Glazing Splines: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; color black.

E. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; black color.

F. Glazing Clips: Manufacturer's standard type.

G.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.

B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

3.02 PREPARATION

A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.03 INSTALLATION, GENERAL

A. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.

B. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.

C. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.

3.04 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)

A. Application - Exterior and/or Interior Glazed: Set glazing infills from either the exterior or the interior of the building.

B. Place setting blocks at 1/8 points with edge block no more than 6 inch (152 mm) from corners.

C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.

D. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

E. Pull gaskets 1 inch in each direction at corner miters and apply butyl sealant along joint in both directions to complete moisture and air seal. Reinstall gaskets and remove displaced excess sealant. Do this at exterior and interior gaskets.

3.05 INSTALLATION - WET/DRY GLAZING METHOD (SEALED TAPE AND GASKET SPLINE GLAZING)

A. Application - Interior Glazed: Set glazing infills from the interior of the building.

B. Cut glazing tape to length; install on interior face of exterior window sash glazing leg. Seal corners by butting tape and sealing junctions with butyl sealant.

C. Place setting blocks at 1/8 points with edge block no more than 6 inch (152 mm) from corners. Do not cover weep holes.
D. Rest glazing on setting blocks and push against fixed stop with sufficient pressure to attain full contact.
E. Install removable stops without displacing glazing spline. Exert pressure for full continuous contact.
F. Carefully trim protruding tape with knife.
G. Complete glazing seal by adding bead of silicone sealant around exterior over edge of tape and frame. Wipe and remove excess sealant.

3.06 CLEANING
A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.
B. Remove non-permanent labels immediately after glazing installation is complete.
C. Clean glass and adjacent surfaces after sealants are fully cured.
D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

END OF SECTION
PART 1 GENERAL

1.01 SECTION INCLUDES
A. Metal stud wall framing.
B. Gypsum sheathing.
C. Gypsum wallboard.
D. Joint treatment and accessories.
E. Textured finish system.

1.02 RELATED REQUIREMENTS
A. Section 06 1000 - Rough Carpentry: Building framing and sheathing.
B. Section 06 1000 - Rough Carpentry: Wood blocking product and execution requirements.
C. Section 07 2500 - Weather Barriers: Water-resistive barrier over sheathing.
D. Section 07 9200 - Joint Sealants: Sealing acoustical gaps in construction other than gypsum board or plaster work.

1.03 REFERENCE STANDARDS
E. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2015.
F. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2016.

1.04 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.

1.05 QUALITY ASSURANCE
A. Installer Qualifications: Company experienced in performing gypsum board installation and finishing, with minimum five years of experience.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES
A. Provide completed assemblies complying with ASTM C840 and GA-216.
2.02 METAL FRAMING MATERIALS
   A. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf (L/120 at 240 Pa).
      1. Studs: “C” shaped with flat or formed webs with knurled faces.
      2. Runners: U shaped, sized to match studs.

2.03 BOARD MATERIALS
   A. Manufacturers - Gypsum-Based Board:
      4. USG Corporation; www.usg.com/#sle.
      5. Substitutions: See Section 01 6000 - Product Requirements.

   B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
      1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
      2. Thickness:
         a. Vertical Surfaces: 5/8 inch (16 mm).
         b. Ceilings: 5/8 inch (16 mm).

   C. Exterior Sheathing Board: Sizes to minimize joints in place; ends square cut.
      1. Application: Exterior sheathing, unless otherwise indicated.
      2. Edges: Square.

2.04 GYPSUM WALLBOARD ACCESSORIES
   A. Water-Resistive Barrier: As specified in Section 07 2500.
   B. Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.
      1. Types: As detailed or required for finished appearance.
      2. Products:
         a. Same manufacturer as framing materials.
         b. Substitutions: See Section 01 6000 - Product Requirements.
   C. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
      1. Fiberglass Tape: 2 inch (50 mm) wide, coated glass fiber tape for joints and corners, except as otherwise indicated.
      2. Joint Compound: Setting type, field-mixed.
   D. Finishing Compound: Surface coat and primer, takes the place of skim coating.
      1. Products:
         b. Substitutions: See Section 01 6000 - Product Requirements.
   F. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inch (0.84 mm) in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion resistant.
   G. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch (0.84 to 2.84 mm) in Thickness: ASTM C954; steel drill screws, corrosion resistant.

PART 3 EXECUTION
3.01 EXAMINATION
   A. Verify that project conditions are appropriate for work of this section to commence.
3.02 FRAMING INSTALLATION
   A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
   B. Studs: Space studs at 16 inches on center (at 406 mm on center).
      1. Extend partition framing to structure where indicated and to ceiling in other locations.
      2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
   C. Blocking: Install wood blocking (when necessary) for support of:
      1. Framed openings.

3.03 BOARD INSTALLATION
   A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
   B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
   C. Exterior Sheathing: Comply with ASTM C1280. Install sheathing vertically, with edges butted tight and ends occurring over firm bearing.
      1. Seal joints, cut edges, and holes with water-resistant sealant.
      2. Paper-Faced Sheathing: Immediately after installation, protect from weather by application of water-resistive barrier.
   D. Installation on Metal Framing: Use screws for attachment of gypsum board.

3.04 INSTALLATION OF TRIM AND ACCESSORIES
   A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
   B. Corner Beads: Install at external corners, using longest practical lengths.
   C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

3.05 JOINT TREATMENT
   A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
      1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
      2. Level 1: Fire rated wall areas above finished ceilings, whether or not accessible in the completed construction.
   B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
      1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).

3.06 TEXTURE FINISH
   A. Apply finish texture coating by means of spraying apparatus in accordance with manufacturer's instructions and to match approved sample. Match existing area texture. Provide Architect with sample finish.

3.07 TOLERANCES
   A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

END OF SECTION
SECTION 09 9113 - EXTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.
B. Field application of paints.
C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
D. Do Not Paint or Finish the Following Items:
   1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
   2. Items indicated to receive other finishes.
   3. Items indicated to remain unfinished.
   4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
   5. Floors, unless specifically indicated.
   7. Concealed pipes, ducts, and conduits.

1.02 REFERENCE STANDARDS


1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Provide complete list of products to be used, with the following information for each:
   1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
   2. MPI product number (e.g. MPI #47).
   3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
   1. Where sheen is specified, submit samples in only that sheen.
   2. Where sheen is not specified, submit each color in each sheen available.
D. Samples: Submit two paper chip samples, 6 by 6 inch (____ by____ mm) in size illustrating range of colors and textures available for each surface finishing product scheduled.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.

1.05 MOCK-UP

A. See Section 01 4000 - Quality Requirements, for general requirements for mock-up.
B. Locate where directed by Architect.
C. Mock-up may remain as part of the work.

1.06 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
C. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS
A. Paints:

2.02 PAINTS AND FINISHES - GENERAL
A. Paints and Finishes: Ready mixed, unless required to be a field-catalyzed paint.
   1. Provide paints and finishes of a soft paste consistency, capable of being readily and
      uniformly dispersed to a homogeneous coating, with good flow and brushing properties,
      and capable of drying or curing free of streaks or sags.
   2. Supply each paint material in quantity required to complete entire project's work from a
      single production run.
   3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is
      specifically described in manufacturer's product instructions.
B. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected
   later by Architect from the manufacturer's full line.
C. Colors: To be selected from manufacturer's full range of available colors.
   1. Selection to be made by Architect after award of contract.

2.03 PAINT SYSTEMS - EXTERIOR
A. Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including concrete and primed
   metal.
   1. Two top coats and one coat primer.
   2. Top Coat(s): Exterior High Build Latex; MPI #40.
   3. Top Coat Sheen:
      a. Eggshell: MPI gloss level 3; use this sheen at all locations.
   4. Primer: As recommended by top coat manufacturer for specific substrate.

PART 3 EXECUTION

3.01 EXAMINATION
A. Do not begin application of paints and finishes until substrates have been properly prepared.
B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
C. Examine surfaces scheduled to be finished prior to commencement of work. Report any
   condition that may potentially effect proper application.
D. Test shop-applied primer for compatibility with subsequent cover materials.
E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes
   unless moisture content of surfaces are below the following maximums:
   1. Exterior Plaster and Stucco: 12 percent.

3.02 PREPARATION
A. Clean surfaces thoroughly and correct defects prior to application.
B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best
   result for the substrate under the project conditions.
C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim,
   escutcheons, and fittings, prior to preparing surfaces for finishing.
D. Seal surfaces that might cause bleed through or staining of topcoat.
E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate
   and bleach. Rinse with clean water and allow surface to dry.
F. Concrete:
G. Exterior Stucco: Fill hairline cracks, small holes, and imperfections with exterior patching material suitable for use on cement stucco. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.

3.03 APPLICATION

A. Apply products in accordance with manufacturer’s written instructions and recommendations in "MPI Architectural Painting Specification Manual".

B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

C. Apply each coat to uniform appearance.

D. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

END OF SECTION
SECTION 09 9123 - INTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.
B. Field application of paints.
C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
D. Do Not Paint or Finish the Following Items:
   1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
   2. Items indicated to receive other finishes.
   3. Items indicated to remain unfinished.
   4. Glass.
   5. Concealed pipes, ducts, and conduits.

1.02 REFERENCE STANDARDS


1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Product Data: Provide complete list of products to be used, with the following information for each:
   1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
   2. MPI product number (e.g. MPI #47).
   3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum __________ years experience and approved by manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.06 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
PART 2 PRODUCTS

2.01 MANUFACTURERS
A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
B. Paints:

2.02 PAINTS AND FINISHES - GENERAL
A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
   1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
   2. Supply each paint material in quantity required to complete entire project's work from a single production run.
   3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
B. Colors: To be selected from manufacturer's full range of available colors.
   1. Selection to be made by Architect after award of contract.

2.03 PAINT SYSTEMS - INTERIOR
A. Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board.
   1. Two top coats and one coat primer.
   2. Top Coat(s): Institutional Low Odor/VOC Interior Latex; MPI #143, 144, 145, 146, 147, or 148.
     a. Products:
        1) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, Match existing Sheen.
           (MPI #144)

PART 3 EXECUTION

3.01 PREPARATION
A. Clean surfaces thoroughly and correct defects prior to application.
B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
D. Seal surfaces that might cause bleed through or staining of topcoat.
E. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

3.02 APPLICATION
A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
D. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
E. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

END OF SECTION
Exhibit C to IFB-19211/ CSI Division Work Assignment Schedule

Complete the information requested below per the applicable CSI Division required for this Bid. Any portion of the form not filled in will be considered non-conforming and an irregularity, and may affect the award of this Bid. EXCEPTION: Any Division not applicable to this Bid may be left void or blank.

**PROJECT:** Business Building Exterior Renovation  
**DATE:** May 23, 2019  
**ARCHITECT/ENGINEER:** Tobin & Associates Architecture & Planning  
**CONTRACTOR NAME:** _______________________________________________________

Do not combine categories of work; list separately per respective Construction Specification Institute (CSI) Division.

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<tr>
<th>WORK DESCRIPTION CSI Division</th>
<th>PRIME, SUBCONTRACTOR, SUPPLIER Name, City and State</th>
<th><strong>WORK LEVEL SP or Tier 1</strong></th>
<th>% of BID VALUE</th>
<th>BID AMOUNT</th>
<th>TRADES Performed by Division</th>
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**Totals of: % of Bid Value and Bid Amount** (% must add up to 100 and Bid must equal RFB-16045 Bid Value)

$ 

1. Fill in information for each Division of work to be completed under this Bid, even if, the work is self-performed by the General Contractor.
2. ** Work Level Descriptions: **SP - Self performed by Prime/General Contractor; Tier 1 - Subcontractor to Prime/GC;
EXHIBIT A

INSURANCE REQUIREMENTS

CERTIFICATE OF LIABILITY INSURANCE

A. Insurance Coverage/Limits:

Contractor and each of its subcontractors hereunder, if any, shall at its own expense, obtain insurance as provided below from reliable insurance companies acceptable to Laramie County Community College (LCCC) and authorized to do business in the State of Wyoming, in which the Work is to be performed, with limits as specified in U.S. currency or equivalent. Such insurance shall be in force at the time the Work is commenced and shall remain in force for the duration of this Contract/Agreement, unless a later date is specified below.

a. **Workers’ Compensation and Employer’s Liability Insurance:** Workers’ Compensation insurance or its’ equivalent (including Occupational Disease coverage) as required by law for all employees, agents, and subcontractors. Employer’s Liability Insurance (including Occupational Disease coverage) in the amount of **$1,000,000.00 per accident.** Such insurance shall provide coverage in the location in which the work is performed and the location in which the Contractor is domiciled. The Contractor expressly agrees to comply with all provisions of the Workers’ Compensation Laws of the state(s) or country wherein said work is being performed. Out of state contractors: Contact Wyoming Workforce at 307-235-3227 to provide the State of Wyoming proof required and they will contact LCCC with approval.

b. **General Liability Insurance:** Commercial General Liability insurance covering all operations by or on behalf of Contractor against claims for bodily injury (including mental injury, mental anguish, and death) and property damage (including loss of use). The Commercial General Liability policy will include limits as follows:

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<th>Coverage</th>
<th>Limit</th>
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<td>i. General Aggregate</td>
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<tr>
<td>ii. Products and Completed Operations</td>
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<tr>
<td>iii. Personal Injury and Advertising Injury</td>
<td>$1,000,000.00</td>
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<tr>
<td>iv. Each Occurrence</td>
<td>$1,000,000.00</td>
</tr>
<tr>
<td>v. Damage to Premises Rented</td>
<td>$100,000.00</td>
</tr>
<tr>
<td>vi. Medical Expense</td>
<td>$5,000.00</td>
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</table>

If the policy is written on a claims-made basis, the Contractor will include an automatic extended reporting period of at least five (5) years past the expiration date of the policy.
c. **Automobile Liability Insurance**: Automobile Liability insurance against claims of bodily injury (including death) and property damage (including loss of use) covering all owned, rented, leased, non-owned, and hired vehicles used in the performance of the Work, with a **minimum limit of $1,000,000.00 per accident** for bodily injury and property damage combined and containing appropriate uninsured motorist and No-Fault insurance provision wherever applicable.

d. **Excess Insurance**: Excess (or Umbrella) Liability insurance with a **minimum limit of $2,000,000.00 per occurrence/$2,000,000.00 annual aggregate**. This insurance shall provide coverage in excess of the underlying primary liability limits, terms, and conditions for each category of liability insurance in the foregoing subsections a, b, and c. This insurance shall be written on a following form basis of underlying coverage, and the aggregate limits, if any, shall apply separately to each annual policy period. If this insurance is written on a claims-made policy form, then the policy shall be endorsed to include an automatic extended period of at least five (5) years.

e. **Professional Liability**: This Agreement requires independent rendering and/or independent implementation of specific professional services, consequently the Consultant and their sub-consultants shall provide professional liability insurance coverage with a minimum limit of $1,000,000.00 per claim with an aggregate limit of $2,000,000.00.

**B. Policy Requirements**

a. **Certificate Proof**: Prior to the commencement of the respective Contract and/or Agreement, the successful Contractor shall deliver certificates of insurance evidencing such policy or polices to the LCCC Director of Procurement and Contracting specific “Certification” proofs shall include:

   i. Certificate of Liability insurance form.

   ii. State of Wyoming, Department of Employment “Unemployment Insurance Certificate of Good Standing”.

   iii. State of Wyoming, Department of Employment “Workers’ Compensation Certificate of Good Standing”.

   “Certification” may be mailed, faxed or emailed to:

   - E-mail: jspezzano@lccc.wy.edu
   - Fax: 307-778-4300 (Attn: Director, Procurement and Contracting)
   - Mail: 1400 East College Drive, Cheyenne, WY 82007 (Attn: Director, Procurement and Contracting)

b. **Additional Insured Clause**: LCCC shall be listed as the “Additional Insured” on all policies, but only with respect to operations of successful firm under the respective Contract.
c. **Notice of Cancellation**: Each insurance policy required by the insurance provisions of this Contract shall provide the required coverage and shall not be canceled or non-renewed except after thirty (30) days prior written notice has been given to LCCC, except when cancellation is for non-payment of premium, then ten (10) days prior notice may be given. Such notice shall be sent directly to **LCCC, Director of Procurement and Contracting.**

Updated on April 14, 2015
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<th>Code No.</th>
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<th>Method</th>
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</table>

**Notes:**

Methods:

1. Majority. If 50% of workers or more within a labor group earn the same wage/fringe benefit, this becomes the prevailing wage/fringe benefit for the occupation in the respective district. If two different wages/benefits each account for 50% of a labor group within a district, a weighted average is performed.

2. Significant Minority. If 30% of workers or more within a labor group earn the same wage, this becomes the prevailing wage for the labor group in the respective district. If two different wages each account for 30% of a labor group within a district, a weighted average is performed. This method is not used for benefits computations.

3. Weighted Average. If no significant minority exists for a wage/fringe benefit, the prevailing wage/fringe benefit is calculated as [(Total Hourly Wage or Fringe Benefit x Number of Workers) + (Total Wages Or Benefits Paid/Hours Worked)]/2.

4. Moving Average Wage. If no data is received for a particular classification an inflation adjustment is applied based on the previous year wage and benefit according to rules and regulations of the Department or Workforce Services. If 50% or more of workers or hours reported include benefits, Method 3 is used for the benefits computation if 50% or more of workers and hours were reported party to a CBA, current CBA wage and benefits are used (incl. only benefits levels for health, pension, vacation and apprenticeship). Highlighted sections indicate trades where skill adjustment may be necessary to ensure higher skilled positions pay any less equal to lower skilled occupations.

Contact with questions or to receive a copy: Kelly Roseberry, Workforce Standards & Compliance Program Manager, Labor Standards, (307) 777-7264. Objections to the rates must be filed with the Director of the Department of Workforce Services, John Cox, Director, 1510 E. Pershing Blvd., West Wing, Room 150, Cheyenne, WY 82002, and received within 15 days of this publication. The objection must be in writing and include the specific grounds for objection.

**Published:** January 27, 2019

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