

SOUTHERN UNIVERSITY AND

A&M COLLEGE

BATON ROUGE CAMPUS

HENRY THURMAN HALL ROOF

STATE BUILDING ID # S02150

FP&C Project # 19-671-22-01, F.19002599,

SITE CODE: 2-17-038

CONSTRUCTION DOCUMENTS



H/S Project No.: 24043

April 4, 2025

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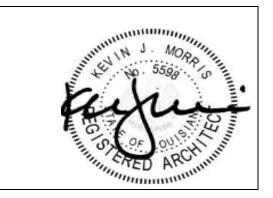
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APPENDIX A

SPECIFICATIONS FOR ASBESTOS ABATEMENT

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- 1.1 DESIGN PROFESSIONALS OF RECORD
 - A. Architect:
 - 1. Kevin J. Morris
 - 2. 5598
 - 3. Responsible for Divisions 01-33 Sections except where indicated as prepared by other design professionals of record.



END OF DOCUMENT 00 01 07

ADVERTISEMENT REQUEST FOR BID BID #50016-10336 ROOF REPLACEMENT FOR HENRY THURMAN BUILDING OWNER: SOUTHERN UNUVERSITY AND A&M COLLEGE BATON ROUGE CAMPUS STATE BUILDING ID # S02150 SITE CODE: 2-17-038 STATE PROJECT NO. 01-107-24-05 WBS PROJECT NO. F.19002599 BID DATE AND TIME: MAY 29, 2025-10:30 AM

Sealed bids will be received by Southern University, Baton Rouge, Louisiana, in the Purchasing Department, 8100 James L. Prestage Drive, PO Box 9543, J. S. Clark Administration Building Annex, South Entrance, First Floor East, Baton Rouge, LA 70813. Bids will be opened and read aloud in a public meeting in the Southern University Purchasing Department.

MAIL OR HAND-DELIVER BID TO PURCHASING DEPARTMENT NO LATER THAN 10:30 AM on MAY 29, 2025

Bidders are solely responsible for ensuring timely delivery of their bids. The Southern University Purchasing Department is not responsible for any delays caused by bidders' chosen means of delivery. Failure to meet the bid deadline submittal date and time shall result in rejection of bid.

Architect/Designer: Holly & Smith Architects

2302 Magazine Street New Orleans, LA 70130 Ph. 504-585-1315

Environmental Engineer: Ritter Consulting Engineer

2014 West Pinhook Road Lafayette, LA 70508 Ph. 337-984-8498

ALL BID SPECIFICATIONS AND ADDENDA CAN BE OBTAINED BY ACCESSING THE LA STATE PROCUREMENT WEBSITE <u>https://wwwcfprd.doa.louisiana.gov/osp/lapac/pubMain.cfm</u>. (Search by bid # 50016-10336) We highly recommend registering your company with Louisiana State Procurement/LAPAC

Mandatory Pre-Bid Conference & Site Visit: MAY 12, 2025 @ 10:30 AM Conference & Site Visit Location: Physical Plant Department (Southern University Campus) Benjamin H. Kraft Building, 515 James L. Hunt Street Baton Rouge, La 70813 Site Visit Location Telephone Number: 225-771-4741 or 225-771-6241

Participants shall be in attendance by 10:30 a.m. and sign sheet provided by the Purchasing Department.

Bidders shall visit the site and be familiarized with the local conditions under which the work is to be performed. No additional compensation will be granted because of unusual difficulties, which may be encountered in the execution of any portion of the work.

Inquiries will be accepted until May 16, 2025 by 5:00 p.m. Inquiries shall be submitted to Linda Antoine at linda_antoine@subr.edu

Responses to inquiries will be posted on LAPAC-LA State Procurement website by May 22, 2025 by 5:00 PM.

Any person requiring special accommodations should notify the Purchasing Office of the type(s) of accommodation required not less than seven (7) days before the bid opening date. Additional contact is Wilbert Rossett, Southern University Safety Department at wilbert.rossett@sus.edu or 225-771-3101.

5% Security

All bids must be accompanied by bid security equal to five (5%) percent of the sum of the base bid and all alternates, if applicable and must be in the form of a certified/official check, cashier's check or bid bond, made payable to Southern University and A & M College. Surety represents that it is listed on the current U.S. Department of the Treasury Financial Management Service list of approved bonding companies and that is listed thereon as approved for amount equal to or greater than the amount for which it obligates itself in this instrument. No bid bond indicating an obligation of less than five percent (5%) by any method is acceptable.

Performance & Payment Bond

Successful Proposer shall be required to furnish a performance (surety) bond. The amount will be determined during contract negotiations for the period the contract is in effect. The Bond should be made payable to Southern University. Any performance bond furnished shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the *Federal Register*, or by a Louisiana domiciled insurance company with at least an A-:VI rating or higher in the latest printing of the A.M. Best's Key Rating Guide or by an insurance company that is either domiciled in Louisiana or owned by Louisiana residents and is licensed to write surety bonds.

No surety or insurance company shall write a performance bond which is in excess of the amount indicated as approved by the U.S. Department of the Treasury Financial Management Service list or by a Louisiana domiciled insurance company with an A-:VI rating by A.M. Best up to a limit of 10 percent of policyholders' surplus as shown by A.M. Best; companies authorized by this Paragraph who are not on the treasury list shall not write a performance bond when the penalty exceeds 15 percent of its capital and surplus, such capital and surplus being the amount by which the company's assets

exceed its liabilities as reflected by the most recent financial statements filed by the company with the Department of Insurance.

In addition, any performance bond furnished shall be written by a surety or insurance company that is currently licensed or authorized to do business in the State of Louisiana. The bond must be received within twelve (12) working days from the date of notification.

Bidders shall include the following on envelope of choice: company's name, address, Louisiana contractor's license number, bid number, bid opening date and time.

Bids may be withdrawn by written, telegraphic fax notice or email and received at the address or email address designated in the Invitation to Bid prior to the time set for bid opening, as recorded by date stamp at the Purchasing Office. Bids received after closing time will be returned <u>unopened</u>. Evidence of authority to submit the bid shall be required in accordance with R.S. 38:2212(a)(1)(c) and/or R.S. 39:1594(c)(2)(d).

The Southern University System is a participant in the Louisiana for the Small Entrepreneurships Program (the Hudson Initiative) and the Louisiana Initiative for Veterans and Service-Connected Disabled Veterans-Owned Business Small Entrepreneurships. Bidders are encouraged to consider participation. A list of certified vendors and additional information can be obtained from website <u>http://www.ledsmallbiz.com</u>. Potential participants may also register at this website.

Any questions concerning bid documents, please contact Mary Jane Spruel, Assistant Director of Purchasing at (225) 771-2800 or email to maryjane_spruel@subr.edu

No bid may be withdrawn for a period of forty-five (45) days after receipt of bids, except under the provisions of LA. R.S. 38:2214. Bidder is required to comply with provisions and requirements of LA R.S. 38:2212(B)(5).

The University reserves the right to reject all bids and to waive any informalities incidental thereto.

Bids shall be accepted from Contractors who are licensed under LA. R.S. 37:2150-2192 for the classification of 72000000 Building & Construction, 72100000 Building Construction & Support, 72101600 Roofing & Siding, 72130000 General Building Construction, 712136000 Commercial or Industrial Construction.

SOUTHERN UNIVERSITY & A&M COLLEGE AN EQUAL OPPORTUNITY EMPLOYER Linda A. Antoine, Director of Purchasing

DATES ADVERTISED APRIL 23 & April 30, 2025 & MAY 7, 2025

INSTRUCTIONS TO BIDDERS SOUTHERN UNIVERSITY AND A&M COLLEGE BATON ROUGE CAMPUS REQUEST FOR BID PROJECT: ROOF REPLACEMENT LOCATION: HENRY THURMAN HALL-STATE BUILDING # S02150 SITE CODE: 2-17-038 BATON ROUGE CAMPUS BID DUE DATE: May 29, 2025 @ 10:30 AM BID # 50016-10336

Bids submitted are subject to provisions of but not limited to La.R.S.38 Purchasing Rules and Regulations; Executive Orders; and the General Terms and Conditions, listed in this Invitation for Bid. Southern University reserves the right to award items separately, grouped or on an all or none basis and to reject any or all bids and waive any informalities.

BIDS MAY BE SENT BY MAIL OR HAND-DELIVERED TO:

Bids should be mailed to: Southern University Purchasing Department Post Office Box 9534 Baton Rouge, Louisiana 70813 As an alternative, bids may be hand delivered to: Southern University Purchasing Department 1st Floor East-James L. Prestage Drive J. S. Clark Administration Building Baton Rouge, Louisiana 70813

<u>MANDATORY PRE-BID CONFERENCE & SITE VISIT:</u> May 12, 2025 at 10:30 AM at Conference & Site Visit Location: Physical Plant Department (Southern University Campus) Benjamin H. Kraft Building, 515 James L. Hunt Street Baton Rouge, La 70813

INQUIRIES: Inquiries will be accepted through May 16, 2025 by 5:00 PM

No negotiations, decisions, or actions will be executed by any bidder as a result or any oral discussion with any University employee or State Consultant. Only those transactions which are in writing, sent to Linda A. Antoine, Director of Purchasing, will be considered as valid.

INSTRUCTIONS TO BIDDERS

1. <u>Bid Forms</u>

All written bids, unless otherwise provided for, must be submitted on, and in accordance with forms provided and properly signed in ink. Bids submitted in the following manner will <u>not</u> be accepted:

- Bid containing no signature indicating intent to be bound
- (1) Bid filled out in pencil
- (2) Bid not submitted on University standard forms

Bids must be received at the address specified in the Invitation for Bid prior to bid opening time in order to be considered. .

2. Envelope (if mailed)

Bidders are requested to submit bid package in a sealed envelope of your choice that is clearly marked identifying the *company's name, complete address, bid number, time and date of bid opening, and license number, if applicable.* Bidder is responsible for means of delivery of bid. *Louisiana Contractors License Number shall be placed on the outside of the envelope.*

3. Standards of Quality

Any product or service bid shall conform to all applicable federal, state and local laws, regulations and the specifications contained in the IFB. Unless otherwise specified in the IFB, any manufacturer's name, trade name, brand name, or catalog numbers used in the specifications is for the purpose of describing the quality level, performance and characteristics required. Bidder must specify the brand and model number of the product offered in his/her bid. Bids not specifying brand and model numbers will be considered as offering the exact product(s) specified in the IFB.

4. Descriptive Information

Bidders proposing an equivalent brand or model should submit information with bid (such as illustrations, descriptive literature, technical data) sufficient for the University to evaluate quality, suitability and compliance with the

specifications in the IFB. Failure to submit descriptive information may cause bid to be rejected. Any change made to a manufacturer's published specification submitted for a product should be verifiable by the manufacturer. If item(s) bid do not fully comply with specifications (including brand and/or product number), bidder must state in what respect the item(s) deviate. Failure to note exceptions on the bid form will not relieve the successful bidder(s) from supplying the actual products requested.

5. Prices

Unless otherwise specified by the Purchasing Department, bid prices must be complete, including transportation, prepaid by bidder to destination. In the event of extension errors, the unit price shall prevail.

6. Payment Terms

Payment is to be made within thirty (30) days after receipt of properly executed invoice, or delivery and acceptance, whichever is later. Delinquent payment penalties are governed by L.R.S. 39:1695.

7. Deliveries

Bids may be rejected if the delivery or completion time indicated is longer than that specified.

8. Vendor Invoices

Invoices or AIA payment shall reference the Southern University purchase/release order number. AIA payment documents shall be certified and approved by the Architect or Engineer Firm and the agency. Pay applications will be paid by the State Office of Facility Planning.

9. Tax Information/State of Louisiana

Southern University is exempt from taxes. By accepting an award, resident and non-resident firms acknowledge their responsibility for the payment of all taxes duly accessed by the State of Louisiana and its political subdivisions for which they are liable, including but not limited to: franchise taxes, privilege taxes, sales taxes, use taxes, ad valorem taxes, etc. In accordance with Act Number 1029 of the 1991 Regular Session, effective September 1, 1991 state agencies will no longer be required to pay state sales tax.

10. New Products

Unless specifically called for, all products for purchases must be new (never previously used) and the current model and/or packaging. The manufacturer's standard warranty will apply unless otherwise specified.

11. Contract Cancellation

Southern University has the right to cancel any contract, in accordance with Purchasing Rules and Regulations, for cause, including but not limited to, the following: (1) failure to deliver within time specified in the contract; (2) failure of the product or service to meet specifications, conform to sample quality or to be delivered in good condition; (3) misrepresentations by the contractor; (4) fraud, collusion, conspiracy or other unlawful means of obtaining any contract with the state; (5) conflict of contract provisions with constitutional or statutory provision of state or federal law; (6) any other breach of contract.

12. AWARD AND EXECUTION OF CONTRACT:

The owner shall incur no obligation to the contractor until the contract between the owner and contractor is duly executed. If the contractor is notified of the acceptance of the bid contractor agrees to execute and deliver to owner, Performance and Payment Bond and Certificate of Insurance, a copy of which is attached to the Contract Documents, within ten (10) working days after notice from the Owner that the instrument is ready for signature.

13. Fiscal Funding Clause (Renewal Contracts Only)

In accordance with LA R.S.39:1615 (c) and (e), any contract entered into by the State of Louisiana and Southern University shall include the following Fiscal Funding Clause:

C. Termination due to unavailability of funds in succeeding years. When funds are not appropriated to support continuation of performance in a subsequent year of a multiyear contract, the contract for such subsequent year shall be terminated. When a contract is terminated under these conditions, no additional funds shall be paid to the contractor as a result of such action. **E.** With respect to all multiyear contracts, there shall be no provisions for a penalty to the state for the cancellation or early payment of the contract. The continuation of this contract is contingent upon the appropriation of funds to fulfill the requirements of the contract by the legislature. All proposers should be aware that our legislative process is such that it is often impossible to give prior notice of the non-appropriation of funds.

14. Default of Contactor

Failure to deliver within the time specified in the bid will constitute a default and may cause cancellation of the contract. Where the state had determined the contractor to be in default, the state reserves the right to purchase any or all products or services covered by the contract on the open market and to charge the contractor with cost in excess of the contract price. Until such assessed charges have been paid, no subsequent bid from the defaulting contractor will be considered.

15. Applicable Law

All contracts will be construed in accordance with and governed by the laws of State of Louisiana. Vendors shall be in compliance with applicable laws of the State of Louisiana and Federal Laws where applicable, to include licenses, fees and permits. Vendors are responsible for the cost of licenses, fees and permits.

16. Certification of No Suspension or Debarment (\$25,000 or more)

By signing and submitting this bid, bidder certifies that its company, any subcontractors, or principals thereof, are not suspended or debarred under federal or state laws or regulations. A list of parties who have been suspended or debarred by federal agencies is maintained by the General Services Administration and can be viewed on the internet at www.sam.gov.

___Federal Funded X_Non-Federal Funded

17. <u>E-VERIFY</u> (verification of employees)

Contractor acknowledges and agrees to comply with the provisions of La R.S. 38:2212.10 and federal law pertaining to E-Verify in the performance of services under this contract.

18. Prohibited Contractual Arrangements

Per Louisiana R.S. 42:1113.a, no public servant, or member of such public servant's immediate family, or legal entity in which he is a controlling interest shall bid on or enter into any contract, subcontract, or other transaction that is under the supervision or jurisdiction of the agency of such public servant. See statute for complete law, exclusions and provisions.

19. Discriminatory Boycotts of Israel

This section applies to procurements with a value of \$100,000 or more and for vendors with five (5) or more employees Prohibition of Discriminatory Boycotts of Israel

In accordance with R.S. 39:1602.1, for any contract for \$100,000 or more and for any contractor with five or more employees, the Contractor certifies that neither it nor its subcontractors are engaged in a boycott of Israel, and that the Contractor and any subcontractors shall, for the duration of this contract, refrain from a boycott of Israel. The State reserves the right to terminate this contract if the Contractor, or any Subcontractor, engages in a boycott of Israel during the term of this contract.

20. Mutual Indemnification

Each party hereto agrees to indemnify, defend and hold the other, its officers, directors, agents and employees harmless from and against any and all losses, liabilities and claims, including reasonable attorney's fees arising out of or resulting from the willful act, fault, omission, or negligence of the indemnifying party or of its employees, contractors, or agents in performing its obligations under this agreement, provided however, that neither party hereto shall be liable to the other for any consequential damages arising out of its willful act, fault, omission, or negligence.

21. Fair Labor Standards Act

Contractor shall be in compliance with the Fair Labor Standards Act 29 USC 201-6; Establishes minimum wage, overtime pay, equal pay, recordkeeping, and child labor standards for employees or in the production of goods for interstate commerce. By signing and submitting this bid, bidder certifies that its company, any subcontractors, or principals thereof is in accordance with said compliance. United States Department of Labor website: www.dol.gov/esa

22. Davis-Bacon Act (\$2,000 or more)

Contractor shall be in compliance with the **Davis-Bacon Act**, 40 USC 276A-7; ensures that laborers and mechanics employed pursuant to federally funded construction contracts, subcontracts and construction under Federal grants, will be paid wages as determined by the U.S. Secretary of Labor. <u>By signing and submitting this bid, bidder certifies that its company, any subcontractors, or principals thereof is in accordance with said compliance</u>. United States Department of Labor website: <u>www.dol.gov/esa</u>

Federal Funded

ed _____Non-Federal Funded

nded <u>NOT APPLICABLE FOR THIS PROJECT</u>

23. Small Business Entrepreneurship Programs

The Southern University System is a participant in the Louisiana for the Small Entrepreneurships Program (the Hudson Initiative) and the Louisiana Initiative for Veterans and Service-Connected Disabled Veterans-Owned Business Small Entrepreneurships. Bidders are encouraged to consider participation. A list of certified vendors and additional information can be obtained from website http://www.ledsmallbiz.com. Potential participants may also register at this website. Businesses include minority and women.

24. Public Works Projects (R.S. 38:2227)

In accordance with the provisions of R.S. 38:2227; in awarding public works projects, any public entity is authorized to reject a proposal or bid, or not award the contract, to a business in which any individual with an ownership interest of ten percent (10%) or more, has been convicted, or has entered a plea of guilty or nolo contenere to any state felony or equivalent federal felony crime.

25. Tobacco-Free Policy

The use of tobacco products on any Southern University campus is prohibited by students, staff, faculty or visitors in all campus buildings, facilities, or property owned or leased by Southern University System and outside areas of the campus where non-smokers cannot avoid exposure to smoke; on campus grounds, facilities, or vehicles that are the property of the University; and at lectures, conferences, meetings, and social and cultural events held on school property or school grounds. The sale or free distribution of tobacco products, including merchandise on campus or at school events is prohibited.

26. Equal Opportunity Employer

Southern University and A&M College Systems of the State of Louisiana is an equal opportunity employer and looks to its contractors, sub-contractors, vendors, and suppliers to take affirmative action to effect this commitment in its operations. By submitting and signing this bid, the bidder certifies that he agrees to adhere to the mandates dictated by Title VI and VII of the Civil Rights Act of 1964, as amended; the Vietnam Era Veterans' Readjustment Assistance Act of 1974; Section 303 of the Rehabilitation Act of 1973; Section 202 of Executive Orderll24b, as amended; and the Americans with Disabilities Act of 1990. Bidder agrees that he will not discriminate in the rendering of services to and/or employment of individuals because of race, color, religion, sex, age, national origin, handicap, disability, veteran status, or any other non-merit factor. Bidder further agrees to keep informed of and comply with all Federal, State, and local laws, ordinances, and regulations which affect his employees or prospective employees. Any person who is a "Qualified Individual with a Disability" as defined by 42 USC 12131 of the American with Disabilities Act who has submitted a bid on this procurement and who desires to attend the bid opening, must notify this office in writing no later than seven (7) working days prior to the bid opening date of their need for special accommodations. If the requested accommodations cannot be reasonably provided, the individual will be so informed prior to the bid opening.

27. Code of Ethics

The contractor acknowledges that Chapter 15 of Title 42 of the Louisiana Revised Statutes (R.S. 42:1101 et. seq., Code of Governmental Ethics) applies to the Contracting Party in the performance of services called for in this contract. The contractor agrees to immediately notify the state if potential violations of the Code of Governmental Ethics arise at any time during the term of this contract.

28. <u>Vendor Forms/SU Signature Authority</u>

The terms and conditions of the SU solicitation and purchase order/contract shall solely govern the purchase agreement, and shall not be amended by any vendor contract, form, etc. The University's chief procurement officer, or designee, is delegated sole authority to execute any vendor contracts, forms, etc. Departments are prohibited from signing any vendor forms.

29. Prosecution of Work

The work is to be done when Southern University is in operation. The contractor shall, therefore, plan the repairs and installation in specifications so as not to interfere with normal operations of the facility and shall exert effort to expedite completion of the work once it has started. It is intended that the work shall be done during normal working hours, however, should work require overtime (Saturday, Sunday and/or night working hours), the cost must be borne by the contractor at no extra compensation from the Owner (Southern University).

30. On-Campus Attendance (COVID-19)

The Center for Disease and Control (CDC) recommends social distancing and wearing of masks to prevent the spread of the Coronavirus (COVID19).

31. Termination for Cause

The State may terminate this Contract for cause based upon the failure of the Contractor to comply with the terms and/or conditions of the Contract; provided that the State shall give the Contractor written notice specifying the Contractor's failure. If within thirty (30) days after receipt of such notice, the Contractor shall not have either corrected such failure or thereafter proceeded diligently to complete such correction, then the State may, at its option, place the Contractor in default and the Contract shall terminate on the date specified in such notice. The Contractor may exercise any rights available to it under Louisiana law to terminate for cause upon the failure of the Owner to comply with the terms and conditions of this contract; provided that the Contractor shall give the State written notice specifying the State's failure and a reasonable opportunity for the Owner to cure the defect.

32. Auditors

It is hereby agreed that the Legislative Auditor of the State of Louisiana and/or the Office of the Governor, Division of Administration auditors shall have the option of auditing all accounts of contractor which relate to this contract.

33. Awarded Products/Unauthorized Substitutions

Only those awarded brands and numbers stated in the SU contract are approved for delivery, acceptance, and payment purposes. Any substitutions require prior approval of the Purchasing Office. Unauthorized product substitutions are subject to rejection at time of delivery, post-return at vendor's expense, and non-payment.

34. Acceptance

Upon written notice by the Owner, a Notice by Owner of Acceptance of Work will be executed and forwarded to the Contractor for recording with the Clerk of Court in the parish in which the work has been performed and shall furnish a clear Lien Certificate from the Clerk of Court (to the owner along with final invoice) forty-five (45) days after recordation of acceptance. Final payment will be made at this time.

35. Guarantee

It is the intention of the specifications to secure a first-class permanent material and construction and to this end, Contractor will be held responsible for and must correct defects discovered in the work within one (1) year from acceptance. Should any materials or methods be called for, of such nature to render this guarantee impossible, written notice to this effect should be given Owner (Southern University) before signing contract and/or beginning of work; failure to do this will be construed as agreement to the strictest terms of the guarantee.

36. <u>Clean-Up</u>

The Contractor will be directed during the progress of work to remove and properly dispose of the resultant and debris. Upon completion, Contractor shall remove all equipment, unused materials and debris and will leave the premises in a clean and first-class condition.

37. Examination of Site

Each bidder will visit the site of the proposed project and will fully acquaint himself with conditions relating to construction and labor so that he may fully understand the facilities, difficulties and restrictions attending the execution of work under this contract. No consideration or allowance will be granted the Contractor for failure to visit the site or for any alleged misunderstanding of the materials to be furnished or the work to be done.

38. Anti-Kickback Clause

The Contractor hereby agrees to adhere to the mandate dictated by The Copeland "Anti-Kickback" ACT which provides that each Contractor or Subgrantee shall be prohibited from inducing, by any means, any person employed in the completion of work, to give up any part of the compensation to which he is otherwise entitled.

39. <u>Clean Air Act</u>

The Contractor hereby agrees to adhere to the provisions which require compliance with all applicable standards, orders or requirements issued under Section 306 of the CLEAN AIR ACT which prohibits the use under non-exempt contracts, grants or loans of facilities included on the EPA list of Violating Facilities.

40. Clean Water Act

The Contractor hereby agrees to adhere to the provisions which require compliance with all applicable standards, orders or requirements issued under Section 508 of the Clean Water Act which prohibits the use under non-exempt federal contracts, grants or loans of facilities included on the EPA list of Violating Facilities.

41. Energy Policy and Conservation Act

The Contractor hereby recognizes the mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (P.L. 94-163).

42. Anti-Lobbying and Debarment Act

The Contractor will be expected to comply with federal statutes in the Anti-Lobbying Act and The Debarment Act.

43. <u>Signature Authority</u>

A CORPORATE RESOLUTION OR WRITTEN EVIDENCE OF THE AUTHORITY OF THE PERSON SIGNING THE BID

FOR THE PUBLIC WORK AS PRESCRIBED BY LOUISIANA REVISED STATUTE 38:2212 (B)(5)

<u>A copy of the applicable signature authority document/Board Resolution or LA Secretary of State Registration must be submitted</u> with bid.

44. Completion Time and Liquidated Damages

- a. Completion Time: If awarded the contract within (30) days after submission of bid, the Bidder agrees to guarantee completion of the work within <u>One Hundred Twenty (120)</u> Days starting from the execution of Notice to Proceed, subject to such extensions as may be granted under Paragraph 8.3 Delays and Extensions of Time in the General Conditions, or the Contractor will be subject to pay to the Owner liquidated damages in the amount as stated on this document.
 - i. Extensions for weather conditions shall not be given unless weather conditions prevailing are deemed by the Architect to be abnormal.
 - ii. Execution of the Notice to Proceed shall be constituted by signature of the Architect.

This document will be included with the successful vendor's contract

b. Liquidated Damages: The Bidder agrees that the Owner may retain the sum of <u>Three Hundred (\$300.00) Dollars</u> from the amount of compensation to be paid him for each consecutive calendar day that the work remains incomplete beyond the Contract Completion date stated on the "Notice to Proceed" or as amended by Change Order, Sundays and holidays included. This amount is agreed upon as the proper measure of liquidated damages which the Owner will sustain per day by the failure of the undersigned to complete the work at the stipulated time and is not to be construed in any sense as a penalty.

45. ADITIONAL REQUIREMENTS

- 1. ALL WORK SHALL BE IN ACCORDANCE WITH THE PLANS; THE PROJECT SPECIFICATIONS, AND HALL COMPLY WITH APPLICALBE LOCAL AND STATE BUILDING CODES AS WELL AS ANY AND ALL REGULATORY AGENCY REQUIREMENTS AND LAWS, INCLUDING BUT NOT LIMIOTED TO OSHA, ETC. GENERAL NOTES SHALL APPLY TO ALL DRAWINGS.
- 2. CONTRACTOR SHALL NOTIFY THE ENGINEER/ARCHITECT, IF APPLICABLE, OF ALL CONFLICTS OR DISCRENPENSIES PRESENTED IN THESE PLANS PRIOR TO THE START OF WORK.
- 3. ALL WORK WHETHER SHOWN OR IMPLIED, UNLESS SPECIFICALLY QUESTIONED SHALL BE CONSIDERED UNDERSTOOD IN ALL RESPECTS BY THE GENERAL CONTRATOR AND WHO WILL BE RESPOSIBLE FOR ANY MISINTERPRETATIONS AND CONSEQUENCES THEREOF.
- 4. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
- 5. ENGINEER/ARCHITECT SHALL BE NOTIFIED IMMEDIATELY OF ALL IDENTIFIED EXISTING UTILITIES NOT INDENTIFIED IN THE PLANS.
- 6. OWNER SHALL PROVIDE WATER FOR CLEANING OPERATIONS FROM ANY FIRE HYDRANT AT NO COST TO THE CONSULTANT.

PUBLIC AWARENESS NOTICE - 192.616

Southern University Baton Rouge owns and operates a master meter natural gas distribution system on the school campus. The gas system consists of an underground network of pipelines. The purpose of the gas system is to provide a reliable and safe economical source of energy for heating purposes. The pipeline system has the capacity to reliably deliver natural gas.

The hazards of natural gas are: it is odorless, colorless, tasteless, lighter than air and can ignite and/or explode with tremendous force when mixed with the right amount of air.

Prevention measures taken include:

- Adding odorant to the gas to give it that distinctive smell, similar to rotten eggs, to warn us of its presence.
- Testing the odorant level each calendar quarter,
- Performing annual gas leakage surveys, and
- Conducting periodic pipeline patrols.

The following are signs that may indicate a gas leak:

- A hissing or roaring sound (caused by escaping gas)
- A patch of dead or discolored vegetation in an otherwise green setting along a pipeline route
- Blowing dirt, grass or leaves near a pipeline,
- Continuous bubbling in wet, flooded areas,
- A "gas small" similar to rotten eggs.

Anyone who may smell this odor or notice any unusual conditions on or near gas mains, vents, service lines, meter sets, or especially inside of a building should call the maintenance office immediately. If you smell a strong gas odor inside a building, notify workers/occupants in the building to leave. Do not operate any switches or use the phone. Go a safe distance away upwind of the gas smell and call the maintenance office. With any gas leak protect life first, then property, then notify the maintenance office.

State and federal laws require excavators to notify LA One-Call 2 days before digging. If any excavation is planned, you must notify LA One-Call which will notify the Southern University Baton Rouge Maintenance Department to locate the gas lines.

To obtain additional information or report a gas related issue call Southern University Baton Rouge Office of Facility Services. The maintenance office phone number is (225) 771-4741. The LA One-Call Center phone number is 811.



Page 1 of 2

SOUTHERN UNIVERSITY AND A&M COLLEGE BATON ROUGE CAMPUS REQUEST FOR BID (BID # 50016-10336) <u>ROOF REPLACEMENT</u> HENRY THURMAN HALL-STATE BUILDING ID # S02150 FP&C Project # 19-671-22-01, F.19002599, SITE CODE: 2-17-038 BID DUE DATE: MAY 29, 2025 at 10:30 AM Architecture Firm: Holly & Smith Architects, APAC 2302 Magazine Street, New Orleans, LA 70130 Contacts: Rohit Sood @ rohit@hollyandsmith.com or

Ray Kleykamp @ ray@hollyandsmith.com Phone: 504-585-1315

ADVERTISEMENT DATES: MANDATORY PRE-BID CONFERENCE <u>April 23rd, April 30th and May 7th</u> May 12, 2025 at 10:30 AM

AND SITE VISIT:

Physical Plant Department Benjamin H. Kraft Building 515 James L. Hunt Street Southern University Baton Rouge Campus Site Telephone No. 225-771-4741

DEADLINE TO SUBMIT INQUIRIES:

May 16, 2025 by 5:00 PM

SUBMIT INQUIRIES TO:

Linda Antoine Email: linda_antoine@subr.edu or by the online link

DEADLINE TO RESPOND TO INQUIRIES: May

<u>May 22, 2025, by 5:00 PM</u>

Note: Responses to inquiries/Addenda are pasted on LaPAC (LA Procurement Website) LA State Procurement website: <u>https://wwwcfprd.doa.louisiana.gov/osp/lapac/pubMain.cfm</u>

It is the responsibility of the vendor to check LAPAC for addenda. We highly recommend registering with LA State Procurement and LAPAC

Cover Pages 1 @ 2

Page 2 of 2

DEADLINE TO SUBMIT BID:

SUBMIT BID TO:

May 29, 2025 by 10:30 AM

Linda Antoine, Director Southern University Purchasing Department-P. O. Box 9534 or James L. Prestage Drive J. S. Clark Adm. Bldg. Annex, 1stFloor Baton Rouge, LA 70813 **Telephone No. 225-771-2804 or 771-4587**

Or online link to submit inquiries or bids:

Electronic system to submit bid: <u>http://www.sus.edu/bidcertification</u>

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: Southern University and A&M College <u>Post Office Box 9534</u> James J. Prestage Dr-J.S. Clark Adm. Bldg. Annex Baton Rouge, LA 70813 BID FOR: 50016-10336 <u>Roof Replacement</u> <u>Henry Thurman Hall</u> <u>Southern University and A&M College</u> <u>Baton Rouge Campus</u>

The undersigned bidder hereby declares and represents that she/he: a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: <u>Holly and Smith Architects, APAC and dated April 04, 2025</u>.

(Owner to provide name of entity preparing bidding documents.)

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) ______.

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

_____Dollars (\$______)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description, *not applicable*

Dallana (¢

Alternate No. 1 (Add: Remove existing roof and replace with a new one.) for the lump sum of:

		Donais (\$	
Alternate No. 2 (Owner to provide descriptio	n of alternate and state whether add or de	educt) for the lump sum of:	
	N/A	Dollars (\$	N/A
Alternate No. 3 (Owner to provide descriptio	n of alternate and state whether add or de	educt) for the lump sum of:	
	N/A	Dollars (\$	N/A
NAME OF COMPANY:			
ADDRESS OF BIDDER:			
EMAIL			
PHONE			
LOUISIANA CONTRACTOR'S LIC			
PRINT NAME OF AUTHORIZED S	SIGNATORY OF BIDDER:		
TITLE OF AUTHORIZED SIGNAT	ORY OF BIDDER:		
SIGNATURE OF AUTHORIZED SI	GNATORY OF BIDDER:		
DATE:			
Completion Time: consecutive Liquidated Damages	•	that may be extended as stipu	lated in the contract.
5% Bid Security: <u>XX YES</u> (shall be in (check here) Bid Security inclu		of 5% for base bid and alter	mates.
СС.1. [.] 1.1			C (

Successful bidder will be notified by letter to secure Performance and Payment Bond up to 100% of cost. (check here) _____ Board Resolution included or Secretary of State Registration

A CORPORATE RESOLUTION OR WRITTEN EVIDENCE of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5) or Secretary of State verification.

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA RS 38:2218. A is attached to and made a part of this bid.

The <u>Unit Price Form</u> shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the bid. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

LOUISIANA UNIFORM PUBLIC WORK BID FORM UNIT PRICE FORM

BID FOR: <u>50016-10336</u>

TO: Southern University and A&M College <u>Post Office Box 9534</u> <u>James J. Prestage Dr-J. S. Clark Administration Bldg. Annex</u> <u>Baton Rouge, LA 70813</u>

ROOF REPLACEMENT-HENRY THURMAN HALL

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

	ionin shan oc used i	of any and an work required	by the Didding Documents and described as and prices. A	mounts shall be stated in figures and only in figures.
DESCRIPTION:	□ Base Bid or ■ A	lt.#		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Unit Price No. 1: LWIC Patch and Repair	1	SF		
DESCRIPTION:	\Box Base Bid or \blacksquare A	.lt.#		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Unit Price No. 2: LWIC Replacement	1	CF		
DESCRIPTION:	■ Base Bid or □ Alt.#			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
<u>Unit Price No. 3</u> : Installation of loose existing wire inside 1" diameter galvanized metallic conduit	1	LF		
DESCRIPTION:	■ Base Bid or □ A	.lt.#		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
<u>Unit Price No. 4</u> : Additional Ponding Roof Plies	1	SF		
DESCRIPTION:	□ Base Bid or ■ Alt.#			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Unit Price No. 4: Additional Ponding Roof Plies	1	SF		
		· · ·		

DESCRIPTION:	\Box Base Bid or \Box A	Alt.#		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)

DESCRIPTION:	\Box Base Bid or \Box A	Alt.#		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)

DESCRIPTION:	Base Bid or	□ Base Bid or □ Alt.#			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)	

Wording for "DESCRIPTION" is to be provided by the Owner. All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.

JOB SITE VISIT NAME OF PROJECT: ROOF REPLACEMENT - HENRY THURMAN HALL SOUTHERN UNIVERSITY AND A & M COLLEGE BATON ROUGE, LOUISIANA MANDATORY SITE VISIT DATE: MAY 12, 2025 @ 10:30 AM Bid # 50016-10336 LATE ARRIVALS CANNOT PARTICIPATE IN THE BID PROCESS

It is the responsibility of the bidder to inspect job site, verify any measurements and/or supplies needed prior to submitting a bid price on this project. Each bidder shall fully acquaint himself with conditions relating to construction and labor so that he may fully understand the facilities, difficulties and restrictions attending the execution of work under this contract. If vendor finds conditions that disagree with the physical layout as described in the bid, or any other features of the specifications that appear to be in error, same shall be noted on proposal. Failure to do so will be interpreted that bid is as specified. No consideration or allowance will be granted the Contractor for failure to visit the site or for any alleged misunderstanding of the materials to be furnished or the work to be done.

JOB SITE VISIT LOCATION:

Physical Plant Building/Benjamin H. Kraft Building

515 James L. Hunt Street

Southern University-Baton Rouge Campus 70813

Site Telephone No. 225-771-4741, 225-235-4969

The signed statement certifies the vendor's name listed below has visited the proposed site and is familiar with all conditions surrounding fulfillment of the specifications for this project. СОМРАЛУ _____

ВУ

DATE

Note: Questions not answered at Site Visit or any additional questions shall be submitted in writing to the Director of Purchasing, Linda A. Antoine at linda_antoine@subr.edu.

Note: Responses to inquiries/Addenda are pasted on LaPAC (LA Procurement Website) LA State Procurement website: https://www.cfprd.doa.louisiana.gov/OSP/LaPAC/Agency/outMain.cfm It is the responsibility of the vendor to check LAPAC for addenda.

JOB SITE VERIFIED BY DESIGNATED SOUTHERN UNIVERSITY EMPLOYEE:

SIGNATURE

EXHIBIT D

INSURANCE REQUIREMENTS FOR NEW CONSTRUCTION, ADDITIONS AND LARGE RENOVATIONS

The Contractor shall purchase and maintain without interruption for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, its agents, representatives, employees or subcontractors, or anyone employed directly or indirectly by any of them. The duration of the contract shall be from the inception of the contract until the date of final payment.

A. MINIMUM SCOPE AND LIMITS OF INSURANCE

1. Workers Compensation

Workers Compensation insurance shall be in compliance with the Workers Compensation law of the State of the Contractor's headquarters. Employers Liability is included with a minimum limit of \$1,000,000 per accident/per disease/per employee. If work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act, or other maritime law coverage shall be included. A.M. Best's insurance company rating requirement may be waived for workers compensation coverage only.

2. Commercial General Liability

- a. Commercial General Liability insurance, including Personal and Advertising Injury Liability and Products and Completed Operations Liability, shall have a minimum limit per occurrence based on the project value. The Insurance Services Office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. Claims-made form is unacceptable.
- b. The aggregate loss limit must apply to <u>each project</u>. ISO form CG 25 03 (current form approved for use in Louisiana), or equivalent, shall also be submitted. The State project number, including part number, and project name shall be included on this endorsement.
- c. COMBINED SINGLE LIMIT (CSL) PER OCCURRENCE

Type of <u>Construction</u>	Projects up to \$1,000,000	Projects over \$1,000,000 up to <u>\$10,000,000</u>	Projects over <u>\$10,000,000</u>	
New Buildings: Each Occurrence Minimum Limit	\$1,000,000	\$2,000,000	\$4,000,000	
Per Project Aggregate	\$2,000,000	\$4,000,000	\$8,000,000	
Renovations: Each Occurrence	The building(s) value for the Project is \$4,352,994. **			
Minimum Limit	\$1,000,000 **	\$2,000,000 **	\$4,000,000 **	
Per Project Aggregate	2 times per occur limit **	2 times per occur limit **	2 times per occur limit **	

** While the minimum Combined Single Limit of \$1,000,000 is required for any renovation, the limit is calculated by taking 10% of the building value and rounding it to the nearest \$1,000,000 to get

the insurance limit. Example: Renovation on a 33,000,000 building would have a calculated 3,000,000 combined single limit of coverage (33,000,000 times .10 = 3,300,000 and then rounding down to 3,000,000). If the calculated limit is less than the minimum limit listed in the above chart, then the amount needed is the minimum listed in the chart. Maximum per occurrence limit required is 10,000,000 regardless of building value. The per project aggregate limit is then calculated as twice the per occurrence limit.

3. Automobile Liability

Automobile Liability Insurance shall have a minimum combined single limit per accident of \$1,000,000. ISO form number CA 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include third-party bodily injury and property damage liability for owned, hired and non-owned automobiles.

4. Excess Umbrella

Excess Umbrella insurance may be used to meet the minimum requirements for Commercial General Liability and Automobile Liability only.

5. Builder's Risk

- a. Builder's Risk Insurance shall be in an amount equal to the amount of the construction contract including any amendments and shall be upon the entire work included in the contract. The policy shall provide coverage equivalent to the ISO form number CP 10 20, Broad Form Causes of Loss (extended, if necessary, to include the perils of wind, earthquake, collapse, vandalism/malicious mischief, and theft, including theft of materials whether or not attached to any structure). The policy must include architects' and engineers' fees necessary to provide plans, specifications and supervision of work for the repair and/or replacement of property damage caused by a covered peril, not to exceed 10% of the cost of the repair and/or replacement.
- b. Flood coverage shall be provided by the Contractor on the first floor and below for all projects, except as otherwise noted. The builder's risk insurance policy, sub-limit for flood coverage shall not be less than ten percent (10%) of the total contract cost per occurrence. If flood is purchased as a separate policy, the limit shall be ten percent (10%) of the total contract cost per occurrence (with a max of \$500,000 if NFIP). Coverage for roofing projects shall not require flood coverage.
- c. A Specialty Contractor may provide an installation floater in lieu of a Builders Risk policy, with the similar coverage as the Builder's Risk policy, upon the system to be installed in an amount equal to the amount of the contract including any amendments. Flood coverage is not required.
- d. The policy must include coverage for the Owner, Contractor and any subcontractors as their interests may appear.

6. <u>Pollution Liability</u> (required when asbestos or other hazardous material abatement is included in the contract)

Pollution Liability insurance, including gradual release as well as sudden and accidental, shall have a minimum limit of not less than \$1,000,000 per claim. A claims-made form will be acceptable. A policy period inception date of no later than the first day of anticipated work under this contract and an expiration date of no earlier than 30 days after anticipated completion of all work under the contract shall be provided. There shall be an extended reporting period of at least 24 months, with full reinstatement of limits, from the expiration date of the policy if policy is not renewed. The policy shall not be cancelled for any reason, except non-payment of premium.

B. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retentions must be declared to and accepted by the Agency. The Contractor shall be responsible for all deductibles and self-insured retentions.

C. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain, the following provisions:

1. Workers Compensation and Employers Liability Coverage

To the fullest extent allowed by law, the insurer shall agree to waive all rights of subrogation against the Agency, its officers, agents, employees and volunteers for losses arising from work performed by the Contractor for the Agency.

- 2. Commercial General Liability Coverage
 - a. The Owner, its officers, agents, employees and volunteers are to be added as additional insureds as respects liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor, premises owned, occupied or used by the Contractor. ISO Forms CG 20 10 (for ongoing work) AND CG 20 37 (for completed work) (current forms approved for use in Louisiana), or equivalent, are to be used.
 - b. The Contractor's insurance shall be primary as respects the Agency, its officers, agents, employees and volunteers for any and all losses that occur under the contract. The coverage shall contain no special limitations on the scope of protection afforded to the Agency, its officers, officials, employees or volunteers. Any insurance or self-insurance maintained by the Agency shall be excess and non-contributory of the Contractor's insurance.
- 3. Builder's Risk

The policy must include an endorsement providing the following:

In the event of a disagreement regarding a loss covered by this policy which may also be covered by a State of Louisiana self-insurance or commercial property policy through the Office of Risk Management (ORM), Contractor and its insurer agree to follow the following procedure to establish coverage and/or the amount of loss:

Any party to a loss may make written demand for an appraisal of the matter in disagreement. Within 20 days of receipt of written demand, the Contractor's insurer and either ORM or its commercial insurance company shall each select a competent and impartial appraiser and notify the other of the appraiser selected. The two appraisers will select a competent and impartial umpire. The appraisers will then identify the policy or policies under which the loss is insured and, if necessary, state separately the value of the property and the amount of the loss that must be borne by each policy. If the two appraisers fail to agree, they shall submit their differences to the umpire. A written decision by any two shall determine the policy or policies and the amount of the loss. Each insurance company agree that the decision of the appraisers and the umpire if involved will be binding and final and that neither party will resort to litigation. Each of the two parties shall pay its chosen appraiser and bear the cost of the umpire equally.

- 4. All Coverages
 - a. All policies must be endorsed to require 30 days written notice of cancellation to the Agency. Ten-day written notice of cancellation is acceptable for non-payment of premium. Notifications shall comply with the standard cancellation provisions in the Contractor's policy. In addition, Contractor is required to notify Agency of policy cancellations or reductions in limits.

- b. Neither the acceptance of the completed work nor the payment thereof shall release the Contractor from the obligations of the insurance requirements or indemnification agreement.
- c. The insurance companies issuing the policies shall have no recourse against the Agency for payment of premiums or for assessments under any form of the policies.
- d. Any failure of the Contractor to comply with reporting provisions of the policy shall not affect coverage provided to the Agency, its officers, agents, employees and volunteers.

D. ACCEPTABILITY OF INSURERS

- 1. All required insurance shall be provided by a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located. Insurance shall be placed with insurers with an A.M. Best's rating of **A-:VI or higher**. This rating requirement may be waived for workers compensation coverage only.
- 2. If at any time an insurer issuing any such policy does not meet the minimum A.M. Best rating, the Contractor shall obtain a policy with an insurer that meets the A.M. Best rating and shall submit another Certificate of Insurance within 30 days.

E. <u>VERIFICATION OF COVERAGE</u>

- 1. Contractor shall furnish the Agency with Certificates of Insurance reflecting proof of required coverage. The Certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Certificates are to be received and approved by the Agency before work commences and upon any contract renewal or insurance policy renewal thereafter.
- 2. The Certificate Holder Shall be listed as follows:

State of Louisiana Agency Name, Its Officers, Agents, Employees and Volunteers Address, City, State, Zip Project or Contract #:

- 3. In addition to the Certificates, Contractor shall submit the declarations page and the cancellation provision for each insurance policy. The Agency reserves the right to request complete certified copies of all required insurance policies at any time.
- 4. If the Contractor does not meet the insurance requirements at policy renewal, at the option of the Agency, payment to the Contractor may be withheld until the requirements have been met, OR the Agency may pay the renewal premium and withhold such payment from any monies due the Contractor, OR the contract may be suspended or terminated for cause. Failure of the Contractor to purchase and/or maintain any required insurance shall not relieve the Contractor from any liability or indemnification under the contract.

F. SUBCONTRACTORS

- Contractor shall include all subcontractors as insureds under its policies <u>OR</u> shall be responsible for verifying and maintaining the Certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Agency reserves the right to request copies of subcontractor's Certificates at any time.
- 2. If Contractor does not verify subcontractors' insurance as described above, Agency has the right to withhold payments to the Contractor until the requirements have been met.

G. WORKERS COMPENSATION INDEMNITY

In the event Contractor is not required to provide or elects not to provide workers compensation coverage, the parties hereby agree that Contractor, its owners, agents and employees will have no cause of action against, and will not assert a claim against, the State of Louisiana, its departments, agencies, agents and employees as an employer, whether pursuant to the Louisiana Workers Compensation Act or otherwise, under any circumstance. The parties also hereby agree that the State of Louisiana, its departments, agencies, agents and employees shall in no circumstance be, or considered as, the employer or statutory employer of Contractor, its owners, agents and employees. The parties further agree that Contractor is a wholly independent Contractor and is exclusively responsible for its employees, owners, and agents. Contractor hereby agrees to protect, defend, indemnify and hold the State of Louisiana, its departments, agencies, agencies, agents and employees harmless from any such assertion or claim that may arise from the performance of this contract.

H. INDEMNIFICATION/HOLD HARMLESS AGREEMENT

- 1. Contractor agrees to protect, defend, indemnify, save, and hold harmless, the State of Louisiana, all State Departments, Agencies, Boards and Commissions, its officers, agents, servants, employees, and volunteers, from and against any and all claims, damages, expenses, and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur, or in any way grow out of, any act or omission of Contractor, its agents, servants, and employees, or any and all costs, expenses and/or attorney fees incurred by Contractor as a result of any claims, demands, suits or causes of action, except those claims, demands, suits, or causes of action arising out of the negligence of the State of Louisiana, all State Departments, Agencies, Boards, Commissions, its officers, agents, servants, employees and volunteers.
- 2. Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits, or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent. The State of Louisiana may, but is not required to, consult with the Contractor in the defense of claims, but this shall not affect the Contractor's responsibility for the handling of and expenses for all claims.

BID BOND FOR SOUTHERN UNIVERSITY AND A&M COLLEGE PROJECTS

Date:

KNOW ALL MEN BY THESE PRESENTS:

That______of_____, as Principal, and_______, as Surety, are held and firmly bound unto Southern University and A&M College, in the full and just sum of <u>five (5%) percent</u> <u>of the total amount of this proposal, including all alternates,</u> lawful money of the United States, for payment of which sum, well and truly be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

Surety represents that it is listed on the current U. S. Department of the Treasury Financial Management Service list of approved bonding companies as approved for an amount equal to or greater that the amount for which it obligates itself in this instrument or that it is a Louisiana domiciled insurance company with at least an A - rating in the latest printing of the A. M. Best's Key Rating Guide. If surety qualifies by virtue of its Best's listing, the Bond amount may not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide.

Surety further represents that it is licensed to do business in the State of Louisiana and that this Bond is signed by surety's agent or attorney-in-fact. This Bid Bond is accompanied by appropriate power of attorney.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas said Principal is herewith submitting its proposal to the Obligee on a Contract for:

NOW, THEREFORE, if the said Contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the Contract in writing and give a good and sufficient bond to secure the performance of the terms and conditions of the Contract with surety acceptable to the Obligee, then this obligation shall be void; otherwise this obligation shall become due and payable.

PRINCIPAL (BIDDER)

SURETY

BY: ______ AUTHORIZED OFFICER-OWNER-PARTNER

BY: AGENT OR ATTORNEY-IN-FACT(SEAL)

July 2021

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions modify, change, delete from or add to the General Conditions of the Contract for Construction, AIA Document A201, 2017 Edition. Where any Article of the General Conditions is modified or any Section, Paragraph, Subparagraph or Clause thereof is modified or deleted by these supplements, the unaltered provisions of that Section, Article, Paragraph, Subparagraph or Clause shall remain in effect.

Articles, Sections, Paragraphs, Subparagraphs or Clauses modified or deleted have the same numerical designation as those occurring in the General Conditions.

ARTICLE 1

GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1. The Contract Documents

In Section 1.1.1 delete the third sentence, and add the following sentence: The Contract Documents shall include the Bid Documents as listed in the Instructions to Bidders and any modifications made thereto by addenda.

1.1.8 Initial Decision Maker

Delete all after the words, "shall not show partiality to the Owner or Contractor".

1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE [REFER TO *La R.S. 38:2317*]

- 1.5.1 Delete the first sentence of the paragraph.
- 1.5.1 In the third sentence: delete the remainder after the word "publication".

1.7 DIGITAL DATA USE AND TRANSMISSION

In the first sentence after the words, "in digital form" delete ". The parties will use AIA Document E203 2013, Building Information Modeling and Digital Data Exhibit".

1.8 BUILDING INFORMATION MODELS USE AND RELIANCE

Delete Section 1.8.

ARTICLE 2

OWNER

2.2 EVIDENCE OF THE OWNER'S FINANCIAL ARRANGEMENTS

Delete Section 2.2.

2.3 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.3.1 In the first sentence, delete: all before "the Owner shall secure..."

Delete Section 2.3.2 and substitute the following:

- 2.3.2 The term Architect, when used in the Contract Documents, shall mean the prime Designer (Architect, Engineer, or Landscape Architect), or his authorized representative, lawfully licensed to practice architecture, engineering, or landscape architecture in the State of Louisiana, identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number.
- 2.3.3 Delete the words: "to whom the Contractor has no reasonable objection and".

ARTICLE 3

CONTRACTOR

3.4 LABOR AND MATERIALS

3.4.2 Delete Section 3.4.2.

Delete Section 3.4.3 and substitute with the following:

3.4.3 Contractor and its employees, officers, agents, representatives, and Subcontractors shall conduct themselves in an appropriate and professional manner, in accordance with the Owner's requirements, at all times while working on the Project. Any such individual who behaves in an inappropriate manner or who engages in the use of inappropriate language or conduct while on Owner's property, as determined by the Owner, shall be removed from the Project at the Owner's request. Such individual shall not be permitted to return without the written permission of the Owner. The Owner shall not be responsible or liable to Contractor or any Subcontractor for any additional costs, expenses, losses, claims or damages incurred by Contractor or its Subcontractor as a result of the removal of an individual from the Owner's property pursuant to this Section. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

3.5 WARRANTY

3.5.2 Replace reference to "Section 9.8.4" with "Section 9.8.6".

3.7 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS (La R.S. 40:1724[A])

- 3.7.1 Delete Section 3.7.1.
- 3.7.2 In Section 3.7.2, replace the word "public" with the word "State".

Delete Section 3.7.5 and substitute the following:

3.7.5 If, during the course of the Work, the Contractor discovers human remains, unmarked burial or archaeological sites, burial artifacts, or wetlands, which are not indicated in the Contract Documents, the Contractor shall follow all procedures mandated by State and Federal law, including but not limited to La R.S. 8:671 et seq., the Office of Coastal Protection and Restoration, and Sections 401 & 404 of the Federal Clean Water Act. Request for adjustment of the Contract Sum and Contract Time arising from the existence of such remains or features shall be submitted in writing to the Owner pursuant to the Contract Documents.

3.8 ALLOWANCES

Delete Sections 3.8.1, 3.8.2, and 3.8.3 in their entirety and add the following new Section 3.8.1:

3.8.1 Allowances shall not be made on any of the Work.

3.9 SUPERINTENDENT

3.9.1 Add the following to the end of the paragraph: Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

3.10 CONTRACTOR'S CONSTRUCTION AND SUBMITTAL SCHEDULES

- 3.10.1 Add the following: For projects with a contract sum greater than \$1,000,000.00, the Contractor shall include with the schedule, for the Owner's and Architect's information, a network analysis to identify those tasks which are on the critical path, i.e., where any delay in the completion of these tasks will lengthen the project timescale, unless action is taken. A revised schedule shall be submitted with each Application and Certificate for Payment. No payment shall be made until this schedule is received.
- 3.10.3 In the first sentence, delete the word "general".

After the first sentence, add the following:

If the Work is not on schedule, as determined by the Architect, and the Contractor fails to take action to bring the Work on schedule, then the Contractor shall be deemed in default under this Contract and the progress of the Work shall be deemed unsatisfactory. Such default may be considered grounds for termination by the Owner for cause in accordance with Section 14.2.

Add the following Sections:

- 3.10.4 Add the following: Submittal by the contractor of a schedule or other documentation showing a completion date for his Work prior to the completion date stated in the contract shall not impose any obligation or responsibility on the Owner or Architect for the earlier completion date.
- 3.10.5 In the event the Owner employs a commissioning consultant, the Contractor shall cooperate fully in the commissioning process and shall require all subcontractors and

others under his control to cooperate. The purpose of such services shall be to ensure that all systems perform correctly and interactively according to the provisions of the Contract Documents.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following: This requirement is of the essence of the contract. The Architect shall determine the value of these documents and this amount shall not be approved for payment to the Contractor until all of the listed documents are delivered to the Architect in good order, completely marked with field changes and otherwise complete in all aspects.

ARTICLE 4

ARCHITECT

4.2 ADMINISTRATION OF THE CONTRACT

- 4.2.1 In the first sentence, delete the phrase: "the date the Architect issues the final Certificate for Payment" and replace with the phrase "final payment is due, and with the Owner's concurrence, from time to time during the one year period for correction of Work described in Section 12.2."
- 4.2.2 In the first sentence, after the phrase: "become generally familiar with"; insert the following: "and to keep the Owner informed about".

In the first sentence, after the phrase "portion of the Work completed", insert the following: "to endeavor to guard the Owner against defects and deficiencies in the Work,"

- 4.2.4 In the first sentence, delete all after "The Owner and Contractor", and add the following "may communicate directly with each other, when deemed necessary by the Owner, and the Owner will notify the Architect of any decision."
- 4.2.10 Add the following sentence to the end of Section 4.2.10: There shall be no restriction on the Owner having a Representative.
- 4.2.11 Add the following sentence to the end of Section 4.2.11:

If no agreement is made concerning the time within which interpretation required of the Architect shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretation until 15 days after written request is made for them.

4.2.14 Insert the following sentence between the second and third sentences of Section 4.2.14:

If no agreement is made concerning the time within which interpretation required of the Architect shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretation until 15 days after written request is made for them.

ARTICLE 5

SUBCONTRACTORS

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

Delete Section 5.2.1, and substitute the following:

5.2.1 Unless otherwise required by the Contract Documents, the Contractor shall furnish at the Pre-Construction Conference, to the Owner and the Architect, in writing, the names of the persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work. No Contractor payments shall be made until this information is received.

Delete Section 5.2.2, and substitute the following:

5.2.2 The Contractor shall be solely responsible for selection and performance of all subcontractors. The Contractor shall not be entitled to claims for additional time and/or an increase in the contract sum due to a problem with performance or nonperformance of a subcontractor.

Delete Sections 5.2.3 and 5.2.4 and substitute the following:

5.2.3 The Contractor shall notify the Architect and the Owner when a subcontractor is to be changed and substituted with another subcontractor.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

Delete Sections 5.4, 5.4.1, 5.4.2 and 5.4.3

ARTICLE 7

CHANGES IN THE WORK

7.1 GENERAL

Add the following Sections:

- 7.1.4 As part of the pre-construction conference submittals, the Contractor shall submit the following prior to the Contractor's initial request for payment:
 - 7.1.4.1 Fixed job site overhead cost itemized with documentation to support daily rates.
 - 7.1.4.2 Bond Premium Rate with supporting information from the General Contractor's carrier.

- 7.1.4.3 Labor Burden by trade for both Subcontractors and General Contractor. The Labor Burden shall be supported by the Worker's Compensation and Employer's Liability Insurance Policy Information Page. Provide for all trades.
- 7.1.4.4 Internal Rate Charges for all significant company owned equipment.
- 7.1.5 If the General Contractor fails to submit the aforementioned documentation as part of the pre-construction submittals, then pay applications shall not be processed until such time as the Owner receives this information.

7.2 CHANGE ORDERS

Delete Section 7.2.1, and substitute the following Sections:

- 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, the Architect, and the Contractor issued after execution of the Contract, authorizing a change in the Work and/or an adjustment in the Contract Sum and/or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contract Sum or the Contract Time. Any reservation of rights, stipulation, or other modification made on the change order by the contractor shall have no effect.
- 7.2.2 "Cost of the Work" for the purpose of Change Orders shall be the eligible costs required to be incurred in performance of the Work and paid by the Contractor and Subcontractors which eligible costs shall be limited to:
 - 7.2.2.1 Actual wages paid directly to labor personnel, with a labor burden markup exclusively limited to applicable payroll taxes, worker's compensation insurance, unemployment compensation, and social security taxes for those labor personnel performing the Work. Wages shall be the basic hourly labor rate paid an employee exclusive of fringe benefits or other employee costs. The labor burden percentage for the "Cost of the Work" is limited to categories listed herein. Employer-provided health insurance, fringe benefits, employee training (whether a requirement of employment or not), vacation pay, etc., are examples of ineligible labor burden costs which *shall not* be included, as these costs are already compensated by the Overhead and Profit markup.

Supervision shall not be included as a line item in the "Cost of the Work", except when the change results in a documented delay in the critical path, as described in Section 7.2.7.

- 7.2.2.2 Cost of all materials and supplies necessary and required to perform the Work, identifying each item and its individual cost, including taxes. Incidental consumables are not eligible costs and shall not be included.
- 7.2.2.3 Cost of each necessary piece of machinery and equipment required to perform the Work, identifying each item and its individual cost, including taxes. Incidental small tools of a specific trade (i.e., shovels, saws, hammers, air compressors, etc.,) and general use vehicles, such as pickup trucks even for

moving items around the site, fuel for these general use vehicles, travel, lodging, and/or meals are not eligible and shall not be included.

- 7.2.2.4 Eligible Insurance costs shall be limited to documented increases in "Builder's Risk" insurance premium / costs only. Commercial General Liability, Automobile Liability, and all other required insurances, where referenced in the Contract shall be considered part of normal overhead. These costs are already compensated by the Overhead and Profit markup.
- 7.2.2.5 Cost for the General Contractor Performance and Payment Bond premium, where the documented cost of the premiums have been increased due to the Change Order.
- 7.2.3 Overhead and Profit The Contractor and Subcontractor shall be due home office fixed overhead and profits on the Cost of the Work, but shall not exceed a total of 16% of the direct cost of any portion of Work.

The credit to the Owner resulting from a change in the Work shall be the sum of those items above, including overhead and profit. Where a change results in both credits to the Owner and extras to the Contractor for related items, overhead and profit shall be computed for credits to the Owner and extras to the Contractor. The Owner shall receive full credit for the computed overhead and profit on credit change order items.

- 7.2.4 The cost to the Owner resulting from a change in the Work shall be the sum of: Cost of the Work (as defined at Section 7.2.2) and Overhead and Profit (as defined at Section 7.2.3), and shall be computed as follows:
 - 7.2.4.1 When all of the Work is General Contractor Work; 8% markup on the Cost of the Work.
 - 7.2.4.2 When the Work is all Subcontract Work; 8% markup on the Cost of the Work for Subcontractor's Overhead and Profit, plus 8% markup on the Cost of the Work, not including the Subcontractor's Overhead and Profit markup, for General Contractor's Overhead and Profit.
 - 7.2.4.3 When the Work is a combination of General Contractor Work and Subcontract Work; that portion of the direct cost that is General Contract Work shall be computed per Section 7.2.4.1 and that portion of the direct cost that is Subcontract Work shall be computed per Section 7.2.4.2.

Premiums for the General Contractor's bond may be included, but after the markup is added to the Cost of the Work. Premiums for the Subcontractor's Bond shall not be included.

- 7.2.4.4 Subcontract cost shall consist of the items in Section 7.2.2 above plus Overhead and Profit as defined in Section 7.2.3.
- 7.2.5 Before a Change Order is prepared, the Contractor shall prepare and deliver to the Architect the following information concerning the Cost of the Work, not subject to waiver, within a reasonable time after being notified to prepare said Change Order:

A detailed, itemized list of labor, material and equipment costs for the General Contractor's Work including quantities and unit costs for each item of labor, material and equipment.

An itemized list of labor, material and equipment costs for each Subcontractor's and/or Sub-Subcontractor's Work including quantities and unit costs for each item of labor, material and equipment.

- 7.2.6 After a Change Order has been approved, no future requests for extensions of time or additional cost shall be considered for that Change Order.
- 7.2.7 Extended fixed job-site costs are indirect costs that are necessary to support the work in the field. Examples of fixed job-site costs are field office rental, salaries of field office staff, field office utilities, and telephone.

Extended fixed job-site costs or equitable adjustment may be included in a Change Order due to a delay in the critical path, with the exception of weather related delays. In the event of a delay in the critical path, the Contractor shall submit all changes or adjustments to the Contract Time within twenty-one (21) days of the event giving rise to the delay. The Contractor shall submit documentation and justification for the adjustment by performing a critical path analysis of its most recent schedule in use prior to the change, which shows an extension in critical path activities.

The Contractor shall notify the Architect in writing that the Contractor is making a claim for extended fixed job-site overhead as required by Section 15.1.2. The Contractor shall provide proof that the Contractor is unable to mitigate financial damages through Alternate Work within this Contract or replacement work. "Replacement Work" is that work which the Contractor is obligated to perform under any construction contract separate from this Contract. Reasonable proof shall be required by the Architect that the delays affected the Completion Date.

- 7.2.8 "Cost of the Work" whether General Contractor cost or Subcontractor cost shall not apply to the following:
 - 7.2.8.1 Salaries or other compensation of the Contractor's personnel at the Contractor's principal office and branch offices.
 - 7.2.8.2 Any part of the Contractor's capital expenses, including interest on the Contractor's capital employed for the Work.
 - 7.2.8.3 Overhead and general expenses of any kind or the cost of any item not specifically and expressly included above in Cost of the Work.
 - 7.2.8.4 Cost of supervision refer to section 7.2.2.1, with exception as provided in Section 7.2.7.
- 7.2.9 When applicable as provided by the Contract, the cost to Owner for Change Orders shall be determined by quantities and unit prices. The quantity of any item shall be as

submitted by the Contractor and approved by the Architect. Unit prices shall cover cost of Material, Labor, Equipment, Overhead and Profit.

7.3 CONSTRUCTION CHANGE DIRECTIVES

- 7.3.3 In the first sentence after "following methods" insert: ", but not to exceed a specified amount".
- 7.3.4 From .1 of the list, delete all after "Costs of labor, including" and substitute the following "social security, old age and employment insurance, applicable payroll taxes, and workers' compensation insurance;"

Delete the following from .4 of the list: "permit fees,"

Delete Section 7.3.9 and substitute the following:

7.3.9 Pending final determination of the total costs of a Construction Change Directive to the Owner, amounts not in dispute for such changes in the Work shall be included in Applications for Payment accompanied by a Change Order indicating the parties' agreement with part or all of such costs.

ARTICLE 8

TIME

8.1 **DEFINITIONS**

Add the following:

8.1.5 The Contract Time shall not be changed by the submission of a schedule that shows an early completion date unless specifically authorized by change order.

8.2 **PROGRESS AND COMPLETION**

Add to Section 8.2.1 the following:

Completion of the Work must be within the Time for Completion stated in the Agreement, subject to such extensions as may be granted under Section 8.3. The Contractor agrees to commence Work not later than fourteen (14) days after the transmittal date of Written Notice to Proceed from the Owner and to substantially complete the project within the time stated in the Contract. The Owner will suffer financial loss if the project is not substantially complete in the time set forth in the Contract Documents. The Contractor and the Contractor's Surety shall be liable for and shall pay to the Owner the sum stated in the Contract Documents as fixed, agreed and liquidated damages for each consecutive calendar day (Saturdays, Sundays and holidays included) of delay until the Work is substantially complete. The Owner shall be entitled to the sum stated in the Contract Documents. Such Liquidated Damages shall be withheld by the Owner from the amounts due the Contractor for progress payments.

Delete Section 8.2.2.

8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 In the first sentence after the words "Owner pending" delete the words "mediation and binding dispute resolution" and add the word "litigation", and delete the last word "determine" and add the following: "recommend, subject to Owner's approval of Change Order. If the claim is not made within the limits of Article 15, all rights for future claims for that month are waived."

ARTICLE 9

PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

Delete Section 9.1.2.

Delete Section 9.2 and substitute the following:

9.2 SCHEDULE OF VALUES

At the Pre-Construction Conference, the Contractor shall submit to the Owner and the Architect a Schedule of Values prepared as follows:

- 9.2.1 The attached Schedule of Values Format shall be used. If applicable, the cost of Work for each section listed under each division, shall be given. The cost for each section shall include Labor, Materials, Overhead and Profit.
- 9.2.2 The Total of all items shall equal the Total Contract Sum. This schedule, when approved by the Architect, shall be used as a basis for the Contractor's Applications for Payment and it may be used for determining the cost of the Work in deductive change orders, when a specific item of Work listed on the Schedule of Values is to be removed. Once the Schedule of Values is submitted at the Pre-Construction Conference, the schedule shall not be modified without approval from the Owner and Architect.

9.3 APPLICATIONS FOR PAYMENT

Delete Sections 9.3.1, 9.3.1.1, and 9.3.1.2 and substitute the following:

9.3.1 Monthly, the Contractor shall submit to the Architect a Facility Planning and Control – Application and Certification for Payment form, supported by any additional data substantiating the Contractor's right to payment as the Owner or the Architect may require. Application for Payment shall be submitted on or about the first of each month for the value of labor and materials incorporated into the Work and of materials, suitably stored, at the site as of the twenty-fifth day of the preceding month, less normal retainage as follows, per La R.S. 38:2248:

9.3.1.1 Projects with Contract price up to 500,000.00 - 10% of the Contract price.

9.3.1.2 Projects with Contract price of 500,000.00, or more -5% of the Contract price.

- 9.3.1.3 No payment shall be made until the revised schedule required by Section 3.10.1 is received.
- 9.3.1.4 The normal retainage shall not be due the Contractor until after substantial completion and expiration of the forty-five day lien period and submission to the Architect of a clear lien certificate, consent of surety, and invoice for retainage.

Delete Section 9.3.2 and substitute the following:

9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. Payments for materials or equipment stored on the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, including applicable insurance.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

Section 9.5.1.7: Delete the word "repeated".

Delete Section 9.5.4.

9.6 **PROGRESS PAYMENTS**

Delete Section 9.6.1 and substitute the following:

- 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment within twenty days except for projects funded fully or in part by a Federal reimbursement program. For such projects the Owner will make payment in a timely manner consistent with reimbursement.
- 9.6.2 Delete the phrase: "no later than seven days" from the first sentence.

After the end of the second sentence, add the following:

La R.S. 9:2784 (A) and (C) require a Contractor or Subcontractor to make payment due to each Subcontractor and supplier within fourteen (14) consecutive days of the receipt of payment from the Owner. If not paid, a penalty in the amount of $\frac{1}{2}$ of 1% per day is due, up to a maximum of 15% from the expiration date until paid. The contractor or subcontractor, whichever is applicable, is solely responsible for payment of a penalty.

9.6.4 Delete the first two sentences of Section 9.6.4 and add the following to the end of the Section:

Pursuant to La. R.S. 38:2242 and La. R.S. 38:2242.2, when the Owner receives any claim of nonpayment arising out of the Contract, the Owner shall deduct 125% of such claim from the Contract Sum. The Contractor, or any interested party, may deposit security, in accordance with La. R.S. 38:2242.2, guaranteeing payment of the claim with the recorder

of mortgages of the parish where the Work has been done. When the Owner receives original proof of such guarantee from the recorder of mortgages, the claim deduction will be added back to the Contract Sum.

Delete Section 9.7 FAILURE OF PAYMENT.

Delete Section 9.8 and substitute the following:

9.8 SUBSTANTIAL COMPLETION

- 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The Architect shall determine if the project is substantially complete in accordance with this Section.
- 9.8.2 When the Contractor considers that the Work is Substantially Complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.
- 9.8.3 Upon receipt of the Contractor's list, the Architect shall make an inspection to determine whether the Work is substantially complete. A prerequisite to the Work being considered as substantially complete is the Owner's receipt of the executed Roofing Contractor's and Roofing Manufacturer's guarantees, where roofing Work is part of the Contract. Prior to inspection by the Architect, the Contractor shall notify the Architect that the project is ready for inspection by the State Fire Marshal's office. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use, the Contractor shall, before the Work can be considered as Substantially Complete, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.
- 9.8.4 When the Architect determines that the project is Substantially Complete, he shall prepare a punch list of exceptions and the dollar value related thereto. The monetary value assigned to this list will be the sum of the cost estimate for each particular item of Work the Architect develops based on the mobilization, labor, material and equipment costs of correcting the item and shall be retained from the monies owed the contractor, above and beyond the standard lien retainage. The cost of these items shall be prepared in the same format as the schedule of values. At the end of the forty-five day lien period payment shall be approved for all punch list items completed up to that time. After that payment, none of the remaining funds shall be due the contractor until all punch list items are completed and are accepted by the Architect. If the dollar value of the punch list exceeds the amount of funds, less the retainage amount, in the remaining balance of the Contract, then the Project shall not be considered as substantially complete. If funds remaining are less than that required to complete the Work, the Contractor shall pay the difference.

- 9.8.5 When the preparation of the punch list is complete the Architect shall prepare a Recommendation of Acceptance incorporating the punch list and submit it to the Owner. Upon approval of the Recommendation of Acceptance, the Owner may issue a Notice of Acceptance of Building Contract which shall establish the Date of Substantial Completion. The Contractor shall record the Notice of Acceptance with the Clerk of Court in the Parish in which the Work has been performed. If the Notice of Acceptance has not been recorded seven (7) days after issuance, the Owner may record the Acceptance at the Contractor's expense. All additive change orders must be processed before issuance of the Recommendation of Acceptance. The Owner shall not be responsible for payment for any Work associated with change orders that is not incorporated into the contract at the time of the Recommendation of Acceptance.
- 9.8.6 Warranties required by the Contract Documents shall commence on the date of Acceptance of the Work unless otherwise agreed to in writing by the Owner and Contractor. Unless otherwise agreed to in writing by the Owner and Contractor, security, maintenance, heat, utilities, damage to the Work not covered by the punch list and insurance shall become the Owner's responsibility on the Date of Substantial Completion.
- 9.8.7 If all punch list items have not been completed by the end of the forty-five (45) day lien period, through no fault of the Architect or Owner, the Owner may hold the Contractor in default. If the Owner finds the Contractor is in default, the Surety shall be notified. If within forty-five (45) days after notification, the Surety has not completed the punch list, through no fault of the Architect or Owner, the Owner may, at his option, contract to have the balance of the Work completed and pay for such Work with the unpaid funds remaining in the Contract sum. Finding the Contractor in default shall constitute a reason for disqualification of the Contractor from bidding on future state contracts. If the surety fails to complete the punch list within the stipulated time period, the Owner may not accept bonds submitted, in the future, by the surety.

9.9 PARTIAL OCCUPANCY OR USE

Delete Section 9.9.1 and substitute the following:

9.9.1 Partial Occupancy is that stage in the progress of the Work when a designated portion of the Work is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the designated portion of the Work for its intended use. The Owner may occupy or use any substantially completed portion of the Work so designated by separate agreement with the Contractor and authorized by public authorities having jurisdiction over the Work. Such occupancy or use may commence provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers the designated portion substantially complete the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld.

9.10 FINAL COMPLETION AND FINAL PAYMENT

Delete Section 9.10.4 and replace with the following:

- 9.10.4 The making of final payment shall <u>not</u> constitute a waiver of Claims by the Owner for the following:
 - 9.10.4.1 Claims, security interests, or encumbrances arising out of the Contract and unsettled;
 - 9.10.4.2 failure of the Work to comply with the requirements of the Contract Documents irrespective of when such failure is discovered;
 - 9.10.4.3 terms of special warranties required by the Contract Documents; or
 - 9.10.4.4 audits performed by the Owner, after final payment.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.2 In the first sentence, between the words: "bearing on" and "safety", add the words: "the health and,"

10.3 HAZARDOUS MATERIALS

- 10.3.1 In the second sentence after (PCB) add: "or lead".
- 10.3.2 After the first sentence, delete all remaining sentences.

Add at the end: "The Contract time shall be extended appropriately."

Delete Section 10.4 and substitute the following:

10.4 EMERGENCIES

In an emergency affecting the safety of persons or property, the Contractor shall notify the Owner and Architect immediately of the emergency, simultaneously acting at his discretion to prevent damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency Work shall be determined as provided in Article 15 and Article 7.

ARTICLE 11

INSURANCE AND BONDS

AIA A101 – 2017 Exhibit A is not a part of these documents. Delete all of Sections 11.1, 11.2, 11.3, 11.4, and 11.5, and substitute the following:

INSURANCE REQUIREMENTS FOR NEW CONSTRUCTION, ADDITIONS AND RENOVATIONS

11.1 CONTRACTOR'S LIABILITY INSURANCE

The Contractor shall purchase and maintain without interruption for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by the Contractor, its agents, representatives, employees or subcontractors. The duration of the contract shall be from the inception of the contract until the date of final payment.

11.2 MINIMUM SCOPE AND LIMITS OF INSURANCE

11.2.1 Worker's Compensation

Worker's Compensation insurance shall be in compliance with the Worker's Compensation law of the Contractor's headquarters. Employers Liability is included with a minimum limit of \$1,000,000 per accident/per disease/per employee. If Work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act or other maritime law coverage shall be included. A.M. Best's insurance company rating requirement may be waived for Worker's compensation coverage only.

11.2.2 Commercial General Liability

Commercial General Liability insurance, including Personal and Advertising Injury Liability and Products and Completed Operations Liability, shall have a minimum limit per occurrence based on the project value. The Insurance Services Office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. Claims-made form is unacceptable.

The aggregate loss limit must apply to <u>each project</u>. ISO form CG 25 03 (current form approved for use in Louisiana), or equivalent, shall also be submitted. The State project number, including part number, and project name shall be included on this endorsement.

COMBINED SINGLE LIMIT (CSL) PER OCCURRENCE

Type of <u>Construction</u>	Projects <u>up to \$1,000,000</u>	Projects over \$1,000,000 up to \$10,000,000	Projects over <u>\$10,000,000</u>
New Buildings: Each Occurrence Minimum Limit	\$1,000,000	\$2,000,000	\$4,000,000
Per Project Aggregate	\$2,000,000	\$4,000,000	\$8,000,000
Renovations:	The building(s) value for the Project is \$4,352,994.		
Each Occurrence Minimum Limit	\$1,000,000**	\$2,000,000**	\$4,000,000**

Per Project Aggregate	2 tin
	0001

2 times per occur limit** 2 times per occur limit** 2 times per occur limit**

**While the minimum Combined Single Limit of \$1,000,000 is required for any renovation, the limit is calculated by taking 10% of the building value and rounding it to the nearest \$1,000,000 to get the insurance limit. Example: Renovation on a \$33,000,000 building would have a calculated \$3,000,000 combined single limit of coverage (33,000,000 times .10 = 3,300,000 and then rounding down to \$3,000,000). If the calculated limit is less than the minimum limit listed in the above chart, then the amount needed is the minimum listed in the chart. Maximum per occurrence limit required is \$10,000,000 regardless of building value. The per project aggregate limit is then calculated as twice the per occurrence limit.

11.2.3 Automobile Liability

Automobile Liability Insurance shall have a minimum combined single limit per occurrence of \$1,000,000. ISO form number CA 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include third-party bodily injury and property damage liability for owned, hired and non-owned automobiles.

11.2.4 Excess Umbrella

Excess Umbrella Insurance may be used to meet the minimum requirements for General Liability and Automobile Liability only.

- 11.2.5 Builder's Risk
 - 11.2.5.1 Builder's Risk Insurance shall be in an amount equal to the amount of the construction contract including any amendments and shall be upon the entire Work included in the contract. The policy shall provide coverage equivalent to the ISO form number CP 10 20, Broad Form Causes of Loss (extended, if necessary, to include the perils of wind, earthquake, collapse, vandalism/malicious mischief, and theft, including theft of materials whether or not attached to any structure). The policy must include architects' and engineers' fees necessary to provide plans, specifications and supervision of Work for the repair and/or replacement of property damage caused by a covered peril, not to exceed 10% of the cost of the repair and/or replacement.
 - 11.2.5.2 Flood coverage shall be provided by the Contractor on the first floor and below for all projects, except as otherwise noted. The builder's risk insurance policy, sub-limit for flood coverage shall not be less than ten percent (10%) of the total contract cost per occurrence. If flood is purchased as a separate policy, the limit shall be ten percent (10%) of the total contract cost per occurrence (with a max of \$500,000 if NFIP). Coverage for roofing projects shall **not** require flood coverage.
 - 11.2.5.3 A Specialty Contractor may provide an installation floater in lieu of a Builder's Risk policy, with the similar coverage as the Builder's Risk policy, upon the

system to be installed in an amount equal to the amount of the contract including any amendments. Flood coverage is not required.

- 11.2.5.4 The policy must include coverage for the Owner, Contractor and any subcontractors as their interests may appear.
- 11.2.6 Pollution Liability (required when asbestos or other hazardous material abatement is included in the contract)

Pollution Liability insurance, including gradual release as well as sudden and accidental, shall have a minimum limit of not less than \$1,000,000 per claim. A claims-made form will be acceptable. A policy period inception date of no later than the first day of anticipated Work under this contract and an expiration date of no earlier than 30 days after anticipated completion of all Work under the contract shall be provided. There shall be an extended reporting period of at least 24 months, with full reinstatement of limits, from the expiration date of the policy if the policy is not renewed. The policy shall not be cancelled for any reason, except non-payment of premium.

11.2.7 Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and accepted by the Owner. The Contractor shall be responsible for all deductibles and self-insured retentions.

11.3 OTHER INSURANCE PROVISIONS

- 11.3.1 The policies are to contain, or be endorsed to contain, the following provisions:
 - 11.3.1.1 Worker's Compensation and Employers Liability Coverage
 - 11.3.1.1.1 To the fullest allowed by law, the insurer shall agree to waive all rights of subrogation against the Owner, its officers, agents, employees and volunteers for losses arising from Work performed by the Contractor for the Owner.
 - 11.3.1.2 Commercial General Liability Coverage
 - 11.3.1.2.1 The Owner, its officers, agents, employees and volunteers are to be added as additional insureds as respects liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor, premises owned, occupied or used by the Contractor. ISO Form CG 20 10 (for ongoing work) AND CG 20 37 (for completed work) (current forms approved for use in Louisiana), or equivalent, are to be used.
 - 11.3.1.2.2 The Contractor's insurance shall be primary as respects the Owner, its officers, agents, employees and volunteers for any and all losses that occur under the contract. The coverage shall contain no special limitations on the scope of protection afforded to the Owner, its officers, officials, employees or volunteers. Any insurance or self-

insurance maintained by the Owner shall be excess and noncontributory of the Contractor's insurance.

11.3.1.3 Builder's Risk

The policy must include an endorsement providing the following:

In the event of a disagreement regarding a loss covered by this policy, which may also be covered by a State of Louisiana self-insurance or commercial property policy through the Office of Risk Management (ORM), Contractor and its insurer agree to follow the following procedure to establish coverage and/or the amount of loss:

Any party to a loss may make written demand for an appraisal of the matter in disagreement. Within 20 days of receipt of written demand, the Contractor's insurer and either ORM or its commercial insurance company shall <u>each</u> select a competent and impartial appraiser and notify the other of the appraiser selected. The two appraisers shall select a competent and impartial umpire. The appraisers shall then identify the policy or policies under which the loss is insured and, if necessary, state separately the value of the property and the amount of the loss that must be borne by each policy. If the two appraisers fail to agree, they shall submit their differences to the umpire. A written decision by any two shall determine the policy or policies and the amount of the loss. Each insurance company agrees that the decision of the appraisers and the umpire if involved shall be binding and final and that neither party will resort to litigation. Each of the two parties shall pay its chosen appraiser and bear the cost of the umpire equally.

11.3.1.4 All Coverages

- 11.3.1.4.1 All policies must be endorsed to require 30 days written notice of cancellation to the Agency. Ten-day written notice of cancellation is acceptable for non-payment of premium. Notifications shall comply with the standard cancellation provisions in the Contractor's policy. In addition, Contractor is required to notify Agency of policy cancellations or reductions in limits.
- 11.3.1.4.2 Neither the acceptance of the completed Work nor the payment thereof shall release the Contractor from the obligations of the insurance requirements or indemnification agreement.
- 11.3.1.4.3 The insurance companies issuing the policies shall have no recourse against the Owner for payment of premiums or for assessments under any form of the policies.
- 11.3.1.4.4 Any failure of the Contractor to comply with reporting provisions of the policy shall not affect coverage provided to the Owner, its officers, agents, employees and volunteers.

11.3.2 Acceptability of Insurers

All required insurance shall be provided by a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located. Insurance shall be placed with insurers with an A.M. Best's rating of **A-: VI or higher**. This rating requirement may be waived for Worker's compensation coverage only.

If at any time an insurer issuing any such policy does not meet the minimum A.M. Best rating, the Contractor shall obtain a policy with an insurer that meets the A.M. Best rating and shall submit another certificate of insurance within 30 days.

11.3.3 Verification of Coverage

Contractor shall furnish the Owner with Certificates of Insurance reflecting proof of required coverage. The Certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Certificates are to be received and approved by the Owner before Work commences and upon any contract renewal or insurance policy renewal thereafter. The Certificate Holder must be listed as follows:

State of Louisiana Name of Owner Owner Address City, State, Zip Attn: Project #_____

The Owner reserves the right to request complete certified copies of all required insurance policies at any time.

Upon failure of the Contractor to furnish, deliver and maintain required insurance, this contract, at the election of the Agency, may be suspended, discontinued, or terminated. Failure of the Contractor to purchase and/or maintain any required insurance shall not relieve the Contractor from any liability or indemnification under the contract.

If the Contractor does not meet the insurance requirements at policy renewal, at the option of the Owner, payment to the Contractor may be withheld until the requirements have been met, OR the Owner may pay the renewal premium and withhold such payment from any monies due the Contractor, OR the contract may be suspended or terminated for cause.

11.3.4 Subcontractors

Contractor shall include all subcontractors as insureds under its policies <u>OR</u> shall be responsible for verifying and maintaining the certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Owner reserves the right to request copies of subcontractor's certificates at any time.

If Contractor does not verify subcontractors' insurance as described above, Owner has the right to withhold payments to the Contractor until the requirements have been met.

11.3.5 Worker's Compensation Indemnity

In the event Contractor is not required to provide or elects not to provide Worker's compensation coverage, the parties hereby agree the Contractor, its Owners, agents and employees shall have no cause of action against, and shall not assert a claim against, the State of Louisiana, its departments, agencies, agents and employees as an employer, whether pursuant to the Louisiana Worker's Compensation Act or otherwise, under any circumstance. The parties also hereby agree that the State of Louisiana, its departments, agencies, agents and employees shall in no circumstance be, or considered as, the employer or statutory employer of Contractor, its Owners, agents and employees. The parties further agree that Contractor is a wholly independent Contractor and is exclusively responsible for its employees, Owners, and agents. Contractor hereby agrees to protect, defend, indemnify and hold the State of Louisiana, its departments, agencies, agents and employees harmless from any such assertion or claim that may arise from the performance of this contract.

11.3.6 Indemnification/Hold Harmless Agreement

Contractor agrees to protect, defend, indemnify, save, and hold harmless, the State of Louisiana, all State Departments, Agencies, Boards and Commissions, its officers, agents, servants, employees and volunteers, from and against any and all claims, damages, expenses and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur, or in any way grow out of, any act or omission of Contractor, its agents, servants and employees, or any and all costs, expenses and/or attorney fees incurred by Contractor as a result of any claims, demands, suits or causes of action, except those claims, demands, suits or causes of action arising out of the negligence of the State of Louisiana, all State Departments, Agencies, Boards, Commissions, its officers, agents, servants, employees and volunteers.

Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent. The State of Louisiana may, but is not required to, consult with the Contractor in the defense of claims, but this shall not affect the Contractor's responsibility for the handling and expenses of all claims.

11.4 PERFORMANCE AND PAYMENT BOND

- 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.
- 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.
- 11.4.3 Recordation of Contract and Bond [La R.S. 38:2241 thru 38:2241.1]

The Owner shall record within thirty (30) days the Contract Between Owner and Contractor and Performance and Payment Bond with the Clerk of Court in the Parish in which the Work is to be performed.

ARTICLE 12

UNCOVERING AND CORRECTION OF WORK

12.2 CORRECTION OF WORK

12.2.1 Before Substantial Completion

At the end of the paragraph, add the following sentences: "If the Contractor fails to correct Work identified as defective within a thirty (30) day period, through no fault of the Designer, the Owner may hold the Contractor in default. If the Owner finds the Contractor in default, the Surety shall be notified. If within thirty (30) days after notification, the Surety has not corrected the nonconforming Work, through no fault of the Architect or Owner, the Owner may contract to have nonconforming Work corrected and hold the Surety and Contractor responsible for the cost, including architectural fees and other indirect costs. If the Surety fails to correct the Work within the stipulated time period and fails to meet its obligation to pay the costs, the Owner may elect not to accept bonds submitted in the future by the Surety. Finding the Contractor in default shall constitute a reason for disqualification of the Contractor from bidding on future state contracts.

12.2.2 After Substantial Completion

12.2.2.1 At the end of the paragraph delete the last sentence and add the following sentences:

"If the Contractor fails to correct nonconforming Work, or Work covered by warranties, within a thirty (30) day period, through no fault of the Architect or Owner, the Owner may hold the Contractor in default. If the Owner finds the Contractor is in default, the Surety shall be notified. If within thirty (30) days after notification, the Surety has not corrected the non-conforming or warranty Work, through no fault of the Architect or Owner, the Owner may contract to have the nonconforming or warranty Work corrected and hold the Surety responsible for the cost including architects fees and other indirect costs. Corrections by the Owner shall be in accordance with Section 2.4. If the Surety fails to correct the nonconforming or warranty Work within the stipulated time period and fails to meet its obligation to pay the costs, the Owner may not accept bonds submitted, in the future, by the Surety."

ARTICLE 13

MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

Delete all after the word "located".

13.2 SUCCESSORS AND ASSIGNS

13.2.1 In the second sentence, delete "Except as ... 13.2.2"

Delete Section 13.2.2.

13.3 RIGHTS AND REMEDIES

Add the following Section 13.3.3:

13.3.3 The Nineteenth Judicial Court in and for the Parish of East Baton Rouge, State of Louisiana shall have sole jurisdiction and venue in any action brought under this contract.

13.4 TESTS AND INSPECTIONS

In Section 13.4.1, delete the second sentence and substitute the following:

The Contractor shall make arrangements for such tests, inspections and approvals with the Testing Laboratory provided by the Owner, and the Owner shall bear all related costs of tests, inspections and approvals.

Delete the last two sentences of Section 13.4.1.

13.5 INTEREST

Delete Section 13.5.

ARTICLE 14

TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

Delete Section 14.1.1.4.

In Section 14.1.3, after the word "profit," delete the words "on Work not executed" and substitute the following: "for Work completed prior to stoppage".

14.2 TERMINATION BY THE OWNER FOR CAUSE

Add the following Section:

14.2.1.5 failure to complete the punch list within the lien period as provided in 9.8.7.

14.2.3 Add the following sentence:

"Termination by the Owner shall not suspend assessment of liquidated damages against the Surety."

Add the following Section:

14.2.5 If an agreed sum of liquidated damages has been established, termination by the Owner under this Article shall not relieve the Contractor and/or Surety of his obligations under the liquidated damages provisions and the Contractor and/or Surety shall be liable to the Owner for per diem liquidated damages.

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

In Section 14.4.3, delete all after "incurred by reason of the termination," and add "along with reasonable profit on the Work not executed."

ARTICLE 15

CLAIMS AND DISPUTES

15.1 CLAIMS

Delete Section 15.1.2, Time Limit on Claims, (See La R.S. 38:2189, and 38:2189.1).

- 15.1.3.1 Add the following to the end of the paragraph:"A Reservation of Rights and similar stipulations shall not be recognized under this contract as having any effect. A party must make a claim as defined herein within the time limits provided."
- 15.1.4.2 In the first sentence of the Section, delete "Initial Decision Maker's" and replace with "Architect's". In the second sentence of the Section, delete "the decision of the Initial Decision Maker" and replace with: "his/her decision".

Delete Section 15.1.6.2 and substitute the following:

15.1.6.2 If adverse weather conditions are the basis for a claim for additional time, the Contractor shall document that weather conditions had an adverse effect on the scheduled construction. An increase in the contract time due to weather shall not be cause for an increase in the contract sum. At the end of each month, the Contractor shall make one Claim for any adverse weather days occurring within the month. The Claim must be accompanied by sufficient documentation evidencing the adverse days and the impact on construction. Failure to make such Claim within twenty-one (21) days from the last day of the month shall prohibit any future claims for adverse days for that month. No additional adverse weather days shall be granted after the original or extended contract completion date, except those adverse weather days associated with a National Weather Service named storm or federally declared weather related disaster directly affecting the project site.

Add the following Section:

15.1.6.3 The following are considered reasonably anticipated days of adverse weather on a monthly basis:

January	<u>11</u> days	July	<u>6</u> days
February	<u>10</u> days	August	<u>5</u> days
March	<u>8</u> days	September	<u>4</u> days
April	<u> 7</u> days	October	<u>3</u> days
May	<u> 5</u> days	November	<u>5</u> days
June	<u>6</u> days	December	<u>8</u> days

The Contractor shall ask for total adverse weather days. The Contractor's request shall be considered only for days over the allowable number of days stated above.

Note: Contract is on a calendar day basis.

15.2 INITIAL DECISION

15.2.1 In the second sentence, delete the word "will" and replace with: "shall always".

In the second sentence, delete the phrase: ", unless otherwise indicated in the Agreement."

In the third sentence, delete the word "mediation" and replace with: "litigation".

At the end of the third sentence, add: "arising prior to the date final payment is due".

Delete the fourth sentence.

15.2.5 In the middle of the first sentence, delete all after the phrase: "rejecting the Claim".

In the second sentence, delete the phrase: "and the Architect, if the Architect is not serving as the Initial Decision Maker,".

In the third sentence, delete all after: "binding on the parties" and add the following: "except that the Owner may reject the decision or suggest a compromise or both".

Delete Section 15.2.6.

Delete Section 15.2.6.1.

15.3 MEDIATION

Delete Section 15.3.

15.4 ARBITRATION

Delete Section 15.4.

FOR INFORMATION ONLY

This document will be prepared by Southern University and A&M College in the form appropriate for the project.

STATE OF LOUISIANA PARISH OF <u>«PARISH OF PROJECT»</u>

<u>CONTRACT BETWEEN OWNER AND CONTRACTOR</u> <u>AND PERFORMANCE AND PAYMENT BOND</u>

This agreement entered into this _____ day of _____, 2025, by <u>«Contractor»</u> hereinafter called the "Contractor", whose business address is <u>«Contractor Address»</u>, <u>«Contractor City»</u>, <u>«Contractor State»</u> «<u>Contractor Zip</u>», and Southern University and A&M College, herein represented by the contracting officer executing this contract, hereinafter called the "Owner".

Witnesseth that the Contractor and the Owner, in consideration of premises and the mutual covenants; consideration and agreement herein contained, agree as follows:

<u>Statement of Work</u>: The contractor shall furnish all labor and materials and perform all of the work required to build, construct and complete in a thorough and workmanlike manner:

in strict accordance with Contract Documents prepared by:

«Designer» «Designer_Address» «Designer City», «Designer State» «Designer Zip»

It is recognized by the parties herein that said Contract Documents including by way of example and not of limitation, the Drawings and Specifications dated <u>«Drawings and Specs Date»</u>, Addenda number(s) <u>«Addenda No»</u>, the Instruction to Bidders, Bid Form, General Conditions, Supplementary Conditions, any Addenda thereto, impose duties and obligations upon the parties herein, and said parties thereby agree that they shall be bound by said duties and obligations. For these purposes, all of the provisions contained in the aforementioned Construction Documents are incorporated herein by reference with the same force and effect as though said Construction Documents were herein set out in full.

<u>Time for Completion</u>: The work shall be commenced on a date to be specified in a written order of the Owner and shall be completed within <u>«Time Completion Days»</u> («Time Completion Days») consecutive calendar days from and after the said date.

<u>Liquidated Damages</u>: Contractor shall be assessed Liquidated Damages in the amount of <u>«Liquidated Damages Cost Per Day»</u> per day for each consecutive calendar day which work is not complete beginning with the first day beyond the completion time.

<u>Compensation to be paid to the Contractor</u>: The Owner will pay and the Contractor will accept in full consideration for the performance of the contract the sum of <u>«Contract Amount Words» and No/100 Dollars</u> (<u>«Contract Amount Numeral»</u>) which sum represents the <u>«Base_Bid_Only_or_Plus_Alternates»</u>

<u>Taxes</u>: Contractor hereby agrees that the responsibility for payment of taxes from the funds thus received under this Contract and/or legislative appropriation shall be contractor's obligation and identified under Federal tax identification number ______.

<u>Performance and Payment Bond</u>: To these presents personally came and intervened ______, herein acting for ______, a corporation organized and existing under the laws of the State of ______, and duly authorized to transact business in the State of Louisiana, as surety, who declared that having taken cognizance of this contract and of the Construction Documents mentioned herein, he hereby in his capacity as its Attorney in Fact obligates his said company, as Surety for the said Contractor, unto the said Owner, up to the sum of <u>«Contract Amount Words» and No/100 Dollars</u> («Contract Amount Numeral»). By issuance of this bond, the surety acknowledges they are in compliance with R.S. 38:2219.

The condition of this performance and payment bond shall be that should the Contractor herein not perform the contract in accordance with the terms and conditions hereof, or should said Contractor not fully indemnify and save harmless the Owner, from all cost and damages which he may suffer by said Contractor's non-performance or should said Contractor not pay all persons who have and fulfill obligations to perform labor and/or furnish materials in the prosecution of the work provided for herein, including by way of example workmen, laborers, mechanics, and furnishers of materials, machinery, equipment and fixtures, then said Surety agrees and is bound to so perform the contract and make said payment(s).

Provided, that any alterations which may be made in the terms of the contract or in the work to be done under it, or the giving by the Owner of any extensions of time for the performance of the contract, or any other forbearance on the part of either the Owner or the Contractor to the other shall not in any way release the Contractor or the Surety from their liability hereunder, notice to the Surety of any such alterations, extensions or other forbearance being hereby waived.

Contractor acknowledges and agrees to comply with the provisions of La. R.S. 38:2212.10 and federal law pertaining to E-Verify in the performance of services under this Contract.

It is hereby agreed that the Legislative Auditor of the State of Louisiana and/or the Office of the Governor, Division of Administration auditors shall have the option of auditing all accounts of contractor which relate to this contract.

The continuation of this contract is contingent upon the appropriation of funds to fulfill the requirements of the contract by the legislature. If the legislature fails to appropriate sufficient monies to provide for the continuation of the contract, or if such appropriation is reduced by the veto of the Governor or by any means provided in the appropriations act to prevent the total appropriation for the year from exceeding revenues for that year, or for any other lawful purpose, and the effect of such reduction is to provide insufficient monies for the continuation of the contract, the contract shall terminate on the date of the beginning of the first fiscal year for which funds are not appropriated.

The contractor agrees to abide by the requirements of the following as applicable: Title VI of the Civil Rights Act of 1964 and Title VII of the Civil Rights Act of 1964, as amended by the Equal Employment Opportunity Act of 1972, Federal Executive Order 11246 as amended, the Rehabilitation Act of 1973, as amended, the Vietnam Era Veteran's Readjustment Assistance Act of 1974, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, the Fair Housing Act of 1968 as amended, and contractor agrees to abide by the requirements of the Americans with Disabilities Act of 1990.

Contractor agrees not to discriminate in its employment practices, and will render services under this contract without regard to race, color, religion, sex, sexual orientation, national origin, veteran status, political affiliation, disability, or age in any matter relating to employment. Any act of discrimination committed by

Contractor, or failure to comply with these statutory obligations when applicable shall be grounds for termination of this contract.

In accordance with R.S. 39:1602.1, effective May 22, 2018, for any contract for \$100,000 or more and for any contractor with five or more employees, Contractor, or any Subcontractor, shall certify it is not engaging in a boycott of Israel, and shall, for the duration of this contract, refrain from a boycott of Israel. The State reserves the right to terminate this contract if the Contractor, or any Subcontractor, engages in a boycott of Israel during the term of the contract.

In accordance with La. R.S. 39:1602.2, the following applies to any competitive sealed bids, competitive sealed proposals, or contract(s) with a value of \$100,000 or more involving a for-profit company with at least fifty full-time employees:

Unless otherwise exempted by law, by submitting a response to this solicitation or entering into this contract, the Bidder, Proposer or Contractor certifies the following:

- 1. The company does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association based solely on the entity's or association's status as a firearm entity or firearm trade association;
- 2. The company will not discriminate against a firearm entity or firearm trade association during the term of the contract based solely on the entity's or association's status as a firearm entity or firearm trade association.

The State reserves the right to reject the response of the Bidder, Proposer or Contractor if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response or if the certification is no longer true.

Contractor has a continuing obligation to disclose any suspensions or debarment by any government entity, including but not limited to General Services Administration (GSA). Failure to disclosed may constitute grounds for suspension and/or termination of the Contract and debarment from future Contracts.

Contractor, and each tier of Subcontractors, shall certify that it is not on the List of Parties Excluded from Federal Procurement or Nonprocurement Programs promulgated in accordance with E.O.s 12549 and 12689, "Debarment and Suspension," as set forth at 24 CFR part 24.

In Witness whereof, the parties hereto on the day and year first above written have executed this agreement in $\underline{\text{six (6)}}$ counterparts, each of which shall, without proof or accountancy for the other counterparts, be deemed an original thereof.

THUS DONE AND SIGNED at Baton Rouge, Louisiana, on the day, month, and year first written above.

WITNESSES:

SOUTHERN UNIVERSITY AND A&M COLLEGE

University Witness #1 Sign Here

BY: _

LINDA A. ANTOINE, DIRECTOR OF PURCHASING

University Witness #2 Sign Here

BY:

«CONTRACTOR»

Contractor Witness #1 Sign Here

Contractor Witness #2 Sign Here

SURETY:

Surety Witness #1 Sign Here

Surety Witness #2 Sign Here

BY: _____

ATTORNEY IN FACT

ADDRESS

TELEPHONE NUMBER

STATE OF LOUISIANA PARISH OF «PARISH OF CONTRACTOR»

PROJECT NO .: «ProjectNo», «Part No» «WBS»;		
«Supplement Project No», Part		
«Supplement Part No» («Supplement WBS»)(Supplement)		
NAME: «Project Reference 1»		
«Project Reference 2»		
«Project Reference 3»		
LOCATION: «Project_City»		

NON-COLLUSION AFFIDAVIT

Before me, the undersigned authority, duly commissioned and qualified within and for the State and Parish aforesaid, personally came and appeared representing «Contractor» who, being by me first duly sworn deposed and said that he has read this affidavit and does hereby agree under oath to comply with all provisions herein as follows:

PART I.

Section 2224 of Part II of Chapter 10 of Title 38 of the Louisiana Revised Statutes, as

amended.

(1) That affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for affiant; and

(2) That no part of the Contract price received by affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the Contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for affiant.

PART II.

Section 2190 of Part I of Chapter 10 of Title 38 of the Louisiana Revised Statutes, as

amended.

That affiant, if an architect or engineer, or representative thereof, does not own a substantial financial interest, either directly or indirectly, in any corporation, firm, partnership, or other organization which supplies materials for the construction of a public work when the architect or engineer has performed architectural or engineering services, either directly or indirectly, in connection with the public work for which the materials are being supplied.

For the purposes of this Section, a "substantial financial interest" shall exclude any interest in stock being traded on the American Stock Exchange or the New York Stock Exchange.

That affiant, if subject to the provisions of this section, does hereby agree to be subject to the penalties involved for the violation of this section.

SWORN TO AND SUBSCRIBED BEFORE ME THIS _____ DAY OF _____, 2025.

NOTARY

AIA Document A201° – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Roof Replacement, Henry Thurman Building Southern University and A&M College 515 James L. Hunt St. Baton Rouge, LA 70813

THE OWNER:

(Name, legal status and address)

Southern University System 8100 James L. Prestage Dr. Baton Rouge, LA 70813

THE ARCHITECT: (Name, legal status and address)

Holly and Smith Architects, APAC 2302 Magazine Street New Orleans, LA 70130

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ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503[™], Guide for Supplementary Conditions

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- 14 **TERMINATION OR SUSPENSION OF THE CONTRACT**
- CLAIMS AND DISPUTES 15

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ARTICLE 1 **GENERAL PROVISIONS**

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

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

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

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

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§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

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

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

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§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203TM–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203TM–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document

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G202TM–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

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§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

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

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

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§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

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

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

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§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all .1 required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and

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delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

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

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

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

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will

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specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

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§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

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§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

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ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

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

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

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§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- assignment is effective only after termination of the Contract by the Owner for cause pursuant to .1 Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

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When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

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

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

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§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

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- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others:
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

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

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

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

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

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

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§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

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

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- third party claims filed or reasonable evidence indicating probable filing of such claims, unless security .2 acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;

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- reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum; .4
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

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§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

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§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

PROTECTION OF PERSONS AND PROPERTY **ARTICLE 10**

§ 10.1 Safety Precautions and Programs

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

§ 10.2 Safety of Persons and Property

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

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

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

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

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

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

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§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will

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promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

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In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

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

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act

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or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

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The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

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

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

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§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

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

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

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

ARTICLE 13 **MISCELLANEOUS PROVISIONS**

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

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

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and

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approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

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Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

TERMINATION OR SUSPENSION OF THE CONTRACT ARTICLE 14 § 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be .1 stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2. .4

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

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§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
 - .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
 - .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
 - .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

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

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

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

§ 14.4 Termination by the Owner for Convenience

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§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

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§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

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§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

Init. 1

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§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

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SUPPLEMENTARY CONDITIONS

These Supplementary Conditions modify, change, delete from or add to the General Conditions of the Contract for Construction, AIA Document A201, 2017 Edition. Where any Article of the General Conditions is modified or any Section, Paragraph, Subparagraph or Clause thereof is modified or deleted by these supplements, the unaltered provisions of that Section, Article, Paragraph, Subparagraph or Clause shall remain in effect.

Articles, Sections, Paragraphs, Subparagraphs or Clauses modified or deleted have the same numerical designation as those occurring in the General Conditions.

ARTICLE 1

GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1. The Contract Documents

In Section 1.1.1 delete the third sentence, and add the following sentence: The Contract Documents shall include the Bid Documents as listed in the Instructions to Bidders and any modifications made thereto by addenda.

1.1.8 Initial Decision Maker

Delete all after the words, "shall not show partiality to the Owner or Contractor".

1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE [REFER TO *La R.S. 38:2317*]

- 1.5.1 Delete the first sentence of the paragraph.
- 1.5.1 In the third sentence: delete the remainder after the word "publication".

1.7 DIGITAL DATA USE AND TRANSMISSION

In the first sentence after the words, "in digital form" delete ". The parties will use AIA Document E203 2013, Building Information Modeling and Digital Data Exhibit".

1.8 BUILDING INFORMATION MODELS USE AND RELIANCE

Delete Section 1.8.

ARTICLE 2

OWNER

2.2 EVIDENCE OF THE OWNER'S FINANCIAL ARRANGEMENTS

Delete Section 2.2.

2.3 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.3.1 In the first sentence, delete: all before "the Owner shall secure..."

Delete Section 2.3.2 and substitute the following:

- 2.3.2 The term Architect, when used in the Contract Documents, shall mean the prime Designer (Architect, Engineer, or Landscape Architect), or his authorized representative, lawfully licensed to practice architecture, engineering, or landscape architecture in the State of Louisiana, identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number.
- 2.3.3 Delete the words: "to whom the Contractor has no reasonable objection and".

ARTICLE 3

CONTRACTOR

3.4 LABOR AND MATERIALS

3.4.2 Delete Section 3.4.2.

Delete Section 3.4.3 and substitute with the following:

3.4.3 Contractor and its employees, officers, agents, representatives, and Subcontractors shall conduct themselves in an appropriate and professional manner, in accordance with the Owner's requirements, at all times while working on the Project. Any such individual who behaves in an inappropriate manner or who engages in the use of inappropriate language or conduct while on Owner's property, as determined by the Owner, shall be removed from the Project at the Owner's request. Such individual shall not be permitted to return without the written permission of the Owner. The Owner shall not be responsible or liable to Contractor or any Subcontractor for any additional costs, expenses, losses, claims or damages incurred by Contractor or its Subcontractor as a result of the removal of an individual from the Owner's property pursuant to this Section. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

3.5 WARRANTY

3.5.2 Replace reference to "Section 9.8.4" with "Section 9.8.6".

3.7 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS (La R.S. 40:1724[A])

- 3.7.1 Delete Section 3.7.1.
- 3.7.2 In Section 3.7.2, replace the word "public" with the word "State".

Delete Section 3.7.5 and substitute the following:

3.7.5 If, during the course of the Work, the Contractor discovers human remains, unmarked burial or archaeological sites, burial artifacts, or wetlands, which are not indicated in the Contract Documents, the Contractor shall follow all procedures mandated by State and Federal law, including but not limited to La R.S. 8:671 et seq., the Office of Coastal Protection and Restoration, and Sections 401 & 404 of the Federal Clean Water Act. Request for adjustment of the Contract Sum and Contract Time arising from the existence of such remains or features shall be submitted in writing to the Owner pursuant to the Contract Documents.

3.8 ALLOWANCES

Delete Sections 3.8.1, 3.8.2, and 3.8.3 in their entirety and add the following new Section 3.8.1:

3.8.1 Allowances shall not be made on any of the Work.

3.9 SUPERINTENDENT

3.9.1 Add the following to the end of the paragraph: Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

3.10 CONTRACTOR'S CONSTRUCTION AND SUBMITTAL SCHEDULES

- 3.10.1 Add the following: For projects with a contract sum greater than \$1,000,000.00, the Contractor shall include with the schedule, for the Owner's and Architect's information, a network analysis to identify those tasks which are on the critical path, i.e., where any delay in the completion of these tasks will lengthen the project timescale, unless action is taken. A revised schedule shall be submitted with each Application and Certificate for Payment. No payment shall be made until this schedule is received.
- 3.10.3 In the first sentence, delete the word "general".

After the first sentence, add the following:

If the Work is not on schedule, as determined by the Architect, and the Contractor fails to take action to bring the Work on schedule, then the Contractor shall be deemed in default under this Contract and the progress of the Work shall be deemed unsatisfactory. Such default may be considered grounds for termination by the Owner for cause in accordance with Section 14.2.

Add the following Sections:

- 3.10.4 Add the following: Submittal by the contractor of a schedule or other documentation showing a completion date for his Work prior to the completion date stated in the contract shall not impose any obligation or responsibility on the Owner or Architect for the earlier completion date.
- 3.10.5 In the event the Owner employs a commissioning consultant, the Contractor shall cooperate fully in the commissioning process and shall require all subcontractors and

others under his control to cooperate. The purpose of such services shall be to ensure that all systems perform correctly and interactively according to the provisions of the Contract Documents.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following: This requirement is of the essence of the contract. The Architect shall determine the value of these documents and this amount shall not be approved for payment to the Contractor until all of the listed documents are delivered to the Architect in good order, completely marked with field changes and otherwise complete in all aspects.

ARTICLE 4

ARCHITECT

4.2 ADMINISTRATION OF THE CONTRACT

- 4.2.1 In the first sentence, delete the phrase: "the date the Architect issues the final Certificate for Payment" and replace with the phrase "final payment is due, and with the Owner's concurrence, from time to time during the one year period for correction of Work described in Section 12.2."
- 4.2.2 In the first sentence, after the phrase: "become generally familiar with"; insert the following: "and to keep the Owner informed about".

In the first sentence, after the phrase "portion of the Work completed", insert the following: "to endeavor to guard the Owner against defects and deficiencies in the Work,"

- 4.2.4 In the first sentence, delete all after "The Owner and Contractor", and add the following "may communicate directly with each other, when deemed necessary by the Owner, and the Owner will notify the Architect of any decision."
- 4.2.10 Add the following sentence to the end of Section 4.2.10: There shall be no restriction on the Owner having a Representative.
- 4.2.11 Add the following sentence to the end of Section 4.2.11:

If no agreement is made concerning the time within which interpretation required of the Architect shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretation until 15 days after written request is made for them.

4.2.14 Insert the following sentence between the second and third sentences of Section 4.2.14:

If no agreement is made concerning the time within which interpretation required of the Architect shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretation until 15 days after written request is made for them.

ARTICLE 5

SUBCONTRACTORS

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

Delete Section 5.2.1, and substitute the following:

5.2.1 Unless otherwise required by the Contract Documents, the Contractor shall furnish at the Pre-Construction Conference, to the Owner and the Architect, in writing, the names of the persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work. No Contractor payments shall be made until this information is received.

Delete Section 5.2.2, and substitute the following:

5.2.2 The Contractor shall be solely responsible for selection and performance of all subcontractors. The Contractor shall not be entitled to claims for additional time and/or an increase in the contract sum due to a problem with performance or nonperformance of a subcontractor.

Delete Sections 5.2.3 and 5.2.4 and substitute the following:

5.2.3 The Contractor shall notify the Architect and the Owner when a subcontractor is to be changed and substituted with another subcontractor.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

Delete Sections 5.4, 5.4.1, 5.4.2 and 5.4.3

ARTICLE 7

CHANGES IN THE WORK

7.1 GENERAL

Add the following Sections:

- 7.1.4 As part of the pre-construction conference submittals, the Contractor shall submit the following prior to the Contractor's initial request for payment:
 - 7.1.4.1 Fixed job site overhead cost itemized with documentation to support daily rates.
 - 7.1.4.2 Bond Premium Rate with supporting information from the General Contractor's carrier.

- 7.1.4.3 Labor Burden by trade for both Subcontractors and General Contractor. The Labor Burden shall be supported by the Worker's Compensation and Employer's Liability Insurance Policy Information Page. Provide for all trades.
- 7.1.4.4 Internal Rate Charges for all significant company owned equipment.
- 7.1.5 If the General Contractor fails to submit the aforementioned documentation as part of the pre-construction submittals, then pay applications shall not be processed until such time as the Owner receives this information.

7.2 CHANGE ORDERS

Delete Section 7.2.1, and substitute the following Sections:

- 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, the Architect, and the Contractor issued after execution of the Contract, authorizing a change in the Work and/or an adjustment in the Contract Sum and/or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contract Sum or the Contract Time. Any reservation of rights, stipulation, or other modification made on the change order by the contractor shall have no effect.
- 7.2.2 "Cost of the Work" for the purpose of Change Orders shall be the eligible costs required to be incurred in performance of the Work and paid by the Contractor and Subcontractors which eligible costs shall be limited to:
 - 7.2.2.1 Actual wages paid directly to labor personnel, with a labor burden markup exclusively limited to applicable payroll taxes, worker's compensation insurance, unemployment compensation, and social security taxes for those labor personnel performing the Work. Wages shall be the basic hourly labor rate paid an employee exclusive of fringe benefits or other employee costs. The labor burden percentage for the "Cost of the Work" is limited to categories listed herein. Employer-provided health insurance, fringe benefits, employee training (whether a requirement of employment or not), vacation pay, etc., are examples of ineligible labor burden costs which *shall not* be included, as these costs are already compensated by the Overhead and Profit markup.

Supervision shall not be included as a line item in the "Cost of the Work", except when the change results in a documented delay in the critical path, as described in Section 7.2.7.

- 7.2.2.2 Cost of all materials and supplies necessary and required to perform the Work, identifying each item and its individual cost, including taxes. Incidental consumables are not eligible costs and shall not be included.
- 7.2.2.3 Cost of each necessary piece of machinery and equipment required to perform the Work, identifying each item and its individual cost, including taxes. Incidental small tools of a specific trade (i.e., shovels, saws, hammers, air compressors, etc.,) and general use vehicles, such as pickup trucks even for

moving items around the site, fuel for these general use vehicles, travel, lodging, and/or meals are not eligible and shall not be included.

- 7.2.2.4 Eligible Insurance costs shall be limited to documented increases in "Builder's Risk" insurance premium / costs only. Commercial General Liability, Automobile Liability, and all other required insurances, where referenced in the Contract shall be considered part of normal overhead. These costs are already compensated by the Overhead and Profit markup.
- 7.2.2.5 Cost for the General Contractor Performance and Payment Bond premium, where the documented cost of the premiums have been increased due to the Change Order.
- 7.2.3 Overhead and Profit The Contractor and Subcontractor shall be due home office fixed overhead and profits on the Cost of the Work, but shall not exceed a total of 16% of the direct cost of any portion of Work.

The credit to the Owner resulting from a change in the Work shall be the sum of those items above, including overhead and profit. Where a change results in both credits to the Owner and extras to the Contractor for related items, overhead and profit shall be computed for credits to the Owner and extras to the Contractor. The Owner shall receive full credit for the computed overhead and profit on credit change order items.

- 7.2.4 The cost to the Owner resulting from a change in the Work shall be the sum of: Cost of the Work (as defined at Section 7.2.2) and Overhead and Profit (as defined at Section 7.2.3), and shall be computed as follows:
 - 7.2.4.1 When all of the Work is General Contractor Work; 8% markup on the Cost of the Work.
 - 7.2.4.2 When the Work is all Subcontract Work; 8% markup on the Cost of the Work for Subcontractor's Overhead and Profit, plus 8% markup on the Cost of the Work, not including the Subcontractor's Overhead and Profit markup, for General Contractor's Overhead and Profit.
 - 7.2.4.3 When the Work is a combination of General Contractor Work and Subcontract Work; that portion of the direct cost that is General Contract Work shall be computed per Section 7.2.4.1 and that portion of the direct cost that is Subcontract Work shall be computed per Section 7.2.4.2.

Premiums for the General Contractor's bond may be included, but after the markup is added to the Cost of the Work. Premiums for the Subcontractor's Bond shall not be included.

- 7.2.4.4 Subcontract cost shall consist of the items in Section 7.2.2 above plus Overhead and Profit as defined in Section 7.2.3.
- 7.2.5 Before a Change Order is prepared, the Contractor shall prepare and deliver to the Architect the following information concerning the Cost of the Work, not subject to waiver, within a reasonable time after being notified to prepare said Change Order:

A detailed, itemized list of labor, material and equipment costs for the General Contractor's Work including quantities and unit costs for each item of labor, material and equipment.

An itemized list of labor, material and equipment costs for each Subcontractor's and/or Sub-Subcontractor's Work including quantities and unit costs for each item of labor, material and equipment.

- 7.2.6 After a Change Order has been approved, no future requests for extensions of time or additional cost shall be considered for that Change Order.
- 7.2.7 Extended fixed job-site costs are indirect costs that are necessary to support the work in the field. Examples of fixed job-site costs are field office rental, salaries of field office staff, field office utilities, and telephone.

Extended fixed job-site costs or equitable adjustment may be included in a Change Order due to a delay in the critical path, with the exception of weather related delays. In the event of a delay in the critical path, the Contractor shall submit all changes or adjustments to the Contract Time within twenty-one (21) days of the event giving rise to the delay. The Contractor shall submit documentation and justification for the adjustment by performing a critical path analysis of its most recent schedule in use prior to the change, which shows an extension in critical path activities.

The Contractor shall notify the Architect in writing that the Contractor is making a claim for extended fixed job-site overhead as required by Section 15.1.2. The Contractor shall provide proof that the Contractor is unable to mitigate financial damages through Alternate Work within this Contract or replacement work. "Replacement Work" is that work which the Contractor is obligated to perform under any construction contract separate from this Contract. Reasonable proof shall be required by the Architect that the delays affected the Completion Date.

- 7.2.8 "Cost of the Work" whether General Contractor cost or Subcontractor cost shall not apply to the following:
 - 7.2.8.1 Salaries or other compensation of the Contractor's personnel at the Contractor's principal office and branch offices.
 - 7.2.8.2 Any part of the Contractor's capital expenses, including interest on the Contractor's capital employed for the Work.
 - 7.2.8.3 Overhead and general expenses of any kind or the cost of any item not specifically and expressly included above in Cost of the Work.
 - 7.2.8.4 Cost of supervision refer to section 7.2.2.1, with exception as provided in Section 7.2.7.
- 7.2.9 When applicable as provided by the Contract, the cost to Owner for Change Orders shall be determined by quantities and unit prices. The quantity of any item shall be as

submitted by the Contractor and approved by the Architect. Unit prices shall cover cost of Material, Labor, Equipment, Overhead and Profit.

7.3 CONSTRUCTION CHANGE DIRECTIVES

- 7.3.3 In the first sentence after "following methods" insert: ", but not to exceed a specified amount".
- 7.3.4 From .1 of the list, delete all after "Costs of labor, including" and substitute the following "social security, old age and employment insurance, applicable payroll taxes, and workers' compensation insurance;"

Delete the following from .4 of the list: "permit fees,"

Delete Section 7.3.9 and substitute the following:

7.3.9 Pending final determination of the total costs of a Construction Change Directive to the Owner, amounts not in dispute for such changes in the Work shall be included in Applications for Payment accompanied by a Change Order indicating the parties' agreement with part or all of such costs.

ARTICLE 8

TIME

8.1 **DEFINITIONS**

Add the following:

8.1.5 The Contract Time shall not be changed by the submission of a schedule that shows an early completion date unless specifically authorized by change order.

8.2 **PROGRESS AND COMPLETION**

Add to Section 8.2.1 the following:

Completion of the Work must be within the Time for Completion stated in the Agreement, subject to such extensions as may be granted under Section 8.3. The Contractor agrees to commence Work not later than fourteen (14) days after the transmittal date of Written Notice to Proceed from the Owner and to substantially complete the project within the time stated in the Contract. The Owner will suffer financial loss if the project is not substantially complete in the time set forth in the Contract Documents. The Contractor and the Contractor's Surety shall be liable for and shall pay to the Owner the sum stated in the Contract Documents as fixed, agreed and liquidated damages for each consecutive calendar day (Saturdays, Sundays and holidays included) of delay until the Work is substantially complete. The Owner shall be entitled to the sum stated in the Contract Documents. Such Liquidated Damages shall be withheld by the Owner from the amounts due the Contractor for progress payments.

Delete Section 8.2.2.

8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 In the first sentence after the words "Owner pending" delete the words "mediation and binding dispute resolution" and add the word "litigation", and delete the last word "determine" and add the following: "recommend, subject to Owner's approval of Change Order. If the claim is not made within the limits of Article 15, all rights for future claims for that month are waived."

ARTICLE 9

PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

Delete Section 9.1.2.

Delete Section 9.2 and substitute the following:

9.2 SCHEDULE OF VALUES

At the Pre-Construction Conference, the Contractor shall submit to the Owner and the Architect a Schedule of Values prepared as follows:

- 9.2.1 The attached Schedule of Values Format shall be used. If applicable, the cost of Work for each section listed under each division, shall be given. The cost for each section shall include Labor, Materials, Overhead and Profit.
- 9.2.2 The Total of all items shall equal the Total Contract Sum. This schedule, when approved by the Architect, shall be used as a basis for the Contractor's Applications for Payment and it may be used for determining the cost of the Work in deductive change orders, when a specific item of Work listed on the Schedule of Values is to be removed. Once the Schedule of Values is submitted at the Pre-Construction Conference, the schedule shall not be modified without approval from the Owner and Architect.

9.3 APPLICATIONS FOR PAYMENT

Delete Sections 9.3.1, 9.3.1.1, and 9.3.1.2 and substitute the following:

9.3.1 Monthly, the Contractor shall submit to the Architect a Facility Planning and Control – Application and Certification for Payment form, supported by any additional data substantiating the Contractor's right to payment as the Owner or the Architect may require. Application for Payment shall be submitted on or about the first of each month for the value of labor and materials incorporated into the Work and of materials, suitably stored, at the site as of the twenty-fifth day of the preceding month, less normal retainage as follows, per La R.S. 38:2248:

9.3.1.1 Projects with Contract price up to 500,000.00 - 10% of the Contract price.

9.3.1.2 Projects with Contract price of 500,000.00, or more -5% of the Contract price.

- 9.3.1.3 No payment shall be made until the revised schedule required by Section 3.10.1 is received.
- 9.3.1.4 The normal retainage shall not be due the Contractor until after substantial completion and expiration of the forty-five day lien period and submission to the Architect of a clear lien certificate, consent of surety, and invoice for retainage.

Delete Section 9.3.2 and substitute the following:

9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. Payments for materials or equipment stored on the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, including applicable insurance.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

Section 9.5.1.7: Delete the word "repeated".

Delete Section 9.5.4.

9.6 **PROGRESS PAYMENTS**

Delete Section 9.6.1 and substitute the following:

- 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment within twenty days except for projects funded fully or in part by a Federal reimbursement program. For such projects the Owner will make payment in a timely manner consistent with reimbursement.
- 9.6.2 Delete the phrase: "no later than seven days" from the first sentence.

After the end of the second sentence, add the following:

La R.S. 9:2784 (A) and (C) require a Contractor or Subcontractor to make payment due to each Subcontractor and supplier within fourteen (14) consecutive days of the receipt of payment from the Owner. If not paid, a penalty in the amount of $\frac{1}{2}$ of 1% per day is due, up to a maximum of 15% from the expiration date until paid. The contractor or subcontractor, whichever is applicable, is solely responsible for payment of a penalty.

9.6.4 Delete the first two sentences of Section 9.6.4 and add the following to the end of the Section:

Pursuant to La. R.S. 38:2242 and La. R.S. 38:2242.2, when the Owner receives any claim of nonpayment arising out of the Contract, the Owner shall deduct 125% of such claim from the Contract Sum. The Contractor, or any interested party, may deposit security, in accordance with La. R.S. 38:2242.2, guaranteeing payment of the claim with the recorder

of mortgages of the parish where the Work has been done. When the Owner receives original proof of such guarantee from the recorder of mortgages, the claim deduction will be added back to the Contract Sum.

Delete Section 9.7 FAILURE OF PAYMENT.

Delete Section 9.8 and substitute the following:

9.8 SUBSTANTIAL COMPLETION

- 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The Architect shall determine if the project is substantially complete in accordance with this Section.
- 9.8.2 When the Contractor considers that the Work is Substantially Complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.
- 9.8.3 Upon receipt of the Contractor's list, the Architect shall make an inspection to determine whether the Work is substantially complete. A prerequisite to the Work being considered as substantially complete is the Owner's receipt of the executed Roofing Contractor's and Roofing Manufacturer's guarantees, where roofing Work is part of the Contract. Prior to inspection by the Architect, the Contractor shall notify the Architect that the project is ready for inspection by the State Fire Marshal's office. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use, the Contractor shall, before the Work can be considered as Substantially Complete, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.
- 9.8.4 When the Architect determines that the project is Substantially Complete, he shall prepare a punch list of exceptions and the dollar value related thereto. The monetary value assigned to this list will be the sum of the cost estimate for each particular item of Work the Architect develops based on the mobilization, labor, material and equipment costs of correcting the item and shall be retained from the monies owed the contractor, above and beyond the standard lien retainage. The cost of these items shall be prepared in the same format as the schedule of values. At the end of the forty-five day lien period payment shall be approved for all punch list items completed up to that time. After that payment, none of the remaining funds shall be due the contractor until all punch list items are completed and are accepted by the Architect. If the dollar value of the punch list exceeds the amount of funds, less the retainage amount, in the remaining balance of the Contract, then the Project shall not be considered as substantially complete. If funds remaining are less than that required to complete the Work, the Contractor shall pay the difference.

- 9.8.5 When the preparation of the punch list is complete the Architect shall prepare a Recommendation of Acceptance incorporating the punch list and submit it to the Owner. Upon approval of the Recommendation of Acceptance, the Owner may issue a Notice of Acceptance of Building Contract which shall establish the Date of Substantial Completion. The Contractor shall record the Notice of Acceptance with the Clerk of Court in the Parish in which the Work has been performed. If the Notice of Acceptance has not been recorded seven (7) days after issuance, the Owner may record the Acceptance at the Contractor's expense. All additive change orders must be processed before issuance of the Recommendation of Acceptance. The Owner shall not be responsible for payment for any Work associated with change orders that is not incorporated into the contract at the time of the Recommendation of Acceptance.
- 9.8.6 Warranties required by the Contract Documents shall commence on the date of Acceptance of the Work unless otherwise agreed to in writing by the Owner and Contractor. Unless otherwise agreed to in writing by the Owner and Contractor, security, maintenance, heat, utilities, damage to the Work not covered by the punch list and insurance shall become the Owner's responsibility on the Date of Substantial Completion.
- 9.8.7 If all punch list items have not been completed by the end of the forty-five (45) day lien period, through no fault of the Architect or Owner, the Owner may hold the Contractor in default. If the Owner finds the Contractor is in default, the Surety shall be notified. If within forty-five (45) days after notification, the Surety has not completed the punch list, through no fault of the Architect or Owner, the Owner may, at his option, contract to have the balance of the Work completed and pay for such Work with the unpaid funds remaining in the Contract sum. Finding the Contractor in default shall constitute a reason for disqualification of the Contractor from bidding on future state contracts. If the surety fails to complete the punch list within the stipulated time period, the Owner may not accept bonds submitted, in the future, by the surety.

9.9 PARTIAL OCCUPANCY OR USE

Delete Section 9.9.1 and substitute the following:

9.9.1 Partial Occupancy is that stage in the progress of the Work when a designated portion of the Work is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the designated portion of the Work for its intended use. The Owner may occupy or use any substantially completed portion of the Work so designated by separate agreement with the Contractor and authorized by public authorities having jurisdiction over the Work. Such occupancy or use may commence provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers the designated portion substantially complete the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld.

9.10 FINAL COMPLETION AND FINAL PAYMENT

Delete Section 9.10.4 and replace with the following:

- 9.10.4 The making of final payment shall <u>not</u> constitute a waiver of Claims by the Owner for the following:
 - 9.10.4.1 Claims, security interests, or encumbrances arising out of the Contract and unsettled;
 - 9.10.4.2 failure of the Work to comply with the requirements of the Contract Documents irrespective of when such failure is discovered;
 - 9.10.4.3 terms of special warranties required by the Contract Documents; or
 - 9.10.4.4 audits performed by the Owner, after final payment.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.2 In the first sentence, between the words: "bearing on" and "safety", add the words: "the health and,"

10.3 HAZARDOUS MATERIALS

- 10.3.1 In the second sentence after (PCB) add: "or lead".
- 10.3.2 After the first sentence, delete all remaining sentences.

Add at the end: "The Contract time shall be extended appropriately."

Delete Section 10.4 and substitute the following:

10.4 EMERGENCIES

In an emergency affecting the safety of persons or property, the Contractor shall notify the Owner and Architect immediately of the emergency, simultaneously acting at his discretion to prevent damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency Work shall be determined as provided in Article 15 and Article 7.

ARTICLE 11

INSURANCE AND BONDS

AIA A101 – 2017 Exhibit A is not a part of these documents. Delete all of Sections 11.1, 11.2, 11.3, 11.4, and 11.5, and substitute the following:

INSURANCE REQUIREMENTS FOR NEW CONSTRUCTION, ADDITIONS AND RENOVATIONS

11.1 CONTRACTOR'S LIABILITY INSURANCE

The Contractor shall purchase and maintain without interruption for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by the Contractor, its agents, representatives, employees or subcontractors. The duration of the contract shall be from the inception of the contract until the date of final payment.

11.2 MINIMUM SCOPE AND LIMITS OF INSURANCE

11.2.1 Worker's Compensation

Worker's Compensation insurance shall be in compliance with the Worker's Compensation law of the Contractor's headquarters. Employers Liability is included with a minimum limit of \$1,000,000 per accident/per disease/per employee. If Work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act or other maritime law coverage shall be included. A.M. Best's insurance company rating requirement may be waived for Worker's compensation coverage only.

11.2.2 Commercial General Liability

Commercial General Liability insurance, including Personal and Advertising Injury Liability and Products and Completed Operations Liability, shall have a minimum limit per occurrence based on the project value. The Insurance Services Office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. Claims-made form is unacceptable.

The aggregate loss limit must apply to <u>each project</u>. ISO form CG 25 03 (current form approved for use in Louisiana), or equivalent, shall also be submitted. The State project number, including part number, and project name shall be included on this endorsement.

COMBINED SINGLE LIMIT (CSL) PER OCCURRENCE

Type of <u>Construction</u>	Projects <u>up to \$1,000,000</u>	Projects over \$1,000,000 up to \$10,000,000	Projects over <u>\$10,000,000</u>
New Buildings: Each Occurrence Minimum Limit	\$1,000,000	\$2,000,000	\$4,000,000
Per Project Aggregate	\$2,000,000	\$4,000,000	\$8,000,000
Renovations:	The building(s) valu	ie for the Project is \$4,3	52,994.
Each Occurrence Minimum Limit	\$1,000,000**	\$2,000,000**	\$4,000,000**

Per Project Aggregate	2 tin
	0001

2 times per occur limit** 2 times per occur limit** 2 times per occur limit**

**While the minimum Combined Single Limit of 1,000,000 is required for any renovation, the limit is calculated by taking 10% of the building value and rounding it to the nearest 1,000,000 to get the insurance limit. Example: Renovation on a 33,000,000 building would have a calculated 3,000,000 combined single limit of coverage (33,000,000 times .10 = 3,300,000 and then rounding down to 33,000,000). If the calculated limit is less than the minimum limit listed in the above chart, then the amount needed is the minimum listed in the chart. Maximum per occurrence limit required is 10,000,000 regardless of building value. The per project aggregate limit is then calculated as twice the per occurrence limit.

11.2.3 Automobile Liability

Automobile Liability Insurance shall have a minimum combined single limit per occurrence of \$1,000,000. ISO form number CA 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include third-party bodily injury and property damage liability for owned, hired and non-owned automobiles.

11.2.4 Excess Umbrella

Excess Umbrella Insurance may be used to meet the minimum requirements for General Liability and Automobile Liability only.

- 11.2.5 Builder's Risk
 - 11.2.5.1 Builder's Risk Insurance shall be in an amount equal to the amount of the construction contract including any amendments and shall be upon the entire Work included in the contract. The policy shall provide coverage equivalent to the ISO form number CP 10 20, Broad Form Causes of Loss (extended, if necessary, to include the perils of wind, earthquake, collapse, vandalism/malicious mischief, and theft, including theft of materials whether or not attached to any structure). The policy must include architects' and engineers' fees necessary to provide plans, specifications and supervision of Work for the repair and/or replacement of property damage caused by a covered peril, not to exceed 10% of the cost of the repair and/or replacement.
 - 11.2.5.2 Flood coverage shall be provided by the Contractor on the first floor and below for all projects, except as otherwise noted. The builder's risk insurance policy, sub-limit for flood coverage shall not be less than ten percent (10%) of the total contract cost per occurrence. If flood is purchased as a separate policy, the limit shall be ten percent (10%) of the total contract cost per occurrence (with a max of \$500,000 if NFIP). Coverage for roofing projects shall **not** require flood coverage.
 - 11.2.5.3 A Specialty Contractor may provide an installation floater in lieu of a Builder's Risk policy, with the similar coverage as the Builder's Risk policy, upon the

system to be installed in an amount equal to the amount of the contract including any amendments. Flood coverage is not required.

- 11.2.5.4 The policy must include coverage for the Owner, Contractor and any subcontractors as their interests may appear.
- 11.2.6 Pollution Liability (required when asbestos or other hazardous material abatement is included in the contract)

Pollution Liability insurance, including gradual release as well as sudden and accidental, shall have a minimum limit of not less than \$1,000,000 per claim. A claims-made form will be acceptable. A policy period inception date of no later than the first day of anticipated Work under this contract and an expiration date of no earlier than 30 days after anticipated completion of all Work under the contract shall be provided. There shall be an extended reporting period of at least 24 months, with full reinstatement of limits, from the expiration date of the policy if the policy is not renewed. The policy shall not be cancelled for any reason, except non-payment of premium.

11.2.7 Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and accepted by the Owner. The Contractor shall be responsible for all deductibles and self-insured retentions.

11.3 OTHER INSURANCE PROVISIONS

- 11.3.1 The policies are to contain, or be endorsed to contain, the following provisions:
 - 11.3.1.1 Worker's Compensation and Employers Liability Coverage
 - 11.3.1.1.1 To the fullest allowed by law, the insurer shall agree to waive all rights of subrogation against the Owner, its officers, agents, employees and volunteers for losses arising from Work performed by the Contractor for the Owner.
 - 11.3.1.2 Commercial General Liability Coverage
 - 11.3.1.2.1 The Owner, its officers, agents, employees and volunteers are to be added as additional insureds as respects liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor, premises owned, occupied or used by the Contractor. ISO Form CG 20 10 (for ongoing work) AND CG 20 37 (for completed work) (current forms approved for use in Louisiana), or equivalent, are to be used.
 - 11.3.1.2.2 The Contractor's insurance shall be primary as respects the Owner, its officers, agents, employees and volunteers for any and all losses that occur under the contract. The coverage shall contain no special limitations on the scope of protection afforded to the Owner, its officers, officials, employees or volunteers. Any insurance or self-

insurance maintained by the Owner shall be excess and noncontributory of the Contractor's insurance.

11.3.1.3 Builder's Risk

The policy must include an endorsement providing the following:

In the event of a disagreement regarding a loss covered by this policy, which may also be covered by a State of Louisiana self-insurance or commercial property policy through the Office of Risk Management (ORM), Contractor and its insurer agree to follow the following procedure to establish coverage and/or the amount of loss:

Any party to a loss may make written demand for an appraisal of the matter in disagreement. Within 20 days of receipt of written demand, the Contractor's insurer and either ORM or its commercial insurance company shall <u>each</u> select a competent and impartial appraiser and notify the other of the appraiser selected. The two appraisers shall select a competent and impartial umpire. The appraisers shall then identify the policy or policies under which the loss is insured and, if necessary, state separately the value of the property and the amount of the loss that must be borne by each policy. If the two appraisers fail to agree, they shall submit their differences to the umpire. A written decision by any two shall determine the policy or policies and the amount of the loss. Each insurance company agrees that the decision of the appraisers and the umpire if involved shall be binding and final and that neither party will resort to litigation. Each of the two parties shall pay its chosen appraiser and bear the cost of the umpire equally.

11.3.1.4 All Coverages

- 11.3.1.4.1 All policies must be endorsed to require 30 days written notice of cancellation to the Agency. Ten-day written notice of cancellation is acceptable for non-payment of premium. Notifications shall comply with the standard cancellation provisions in the Contractor's policy. In addition, Contractor is required to notify Agency of policy cancellations or reductions in limits.
- 11.3.1.4.2 Neither the acceptance of the completed Work nor the payment thereof shall release the Contractor from the obligations of the insurance requirements or indemnification agreement.
- 11.3.1.4.3 The insurance companies issuing the policies shall have no recourse against the Owner for payment of premiums or for assessments under any form of the policies.
- 11.3.1.4.4 Any failure of the Contractor to comply with reporting provisions of the policy shall not affect coverage provided to the Owner, its officers, agents, employees and volunteers.

11.3.2 Acceptability of Insurers

All required insurance shall be provided by a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located. Insurance shall be placed with insurers with an A.M. Best's rating of **A-: VI or higher**. This rating requirement may be waived for Worker's compensation coverage only.

If at any time an insurer issuing any such policy does not meet the minimum A.M. Best rating, the Contractor shall obtain a policy with an insurer that meets the A.M. Best rating and shall submit another certificate of insurance within 30 days.

11.3.3 Verification of Coverage

Contractor shall furnish the Owner with Certificates of Insurance reflecting proof of required coverage. The Certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Certificates are to be received and approved by the Owner before Work commences and upon any contract renewal or insurance policy renewal thereafter. The Certificate Holder must be listed as follows:

State of Louisiana Name of Owner Owner Address City, State, Zip Attn: Project #_____

The Owner reserves the right to request complete certified copies of all required insurance policies at any time.

Upon failure of the Contractor to furnish, deliver and maintain required insurance, this contract, at the election of the Agency, may be suspended, discontinued, or terminated. Failure of the Contractor to purchase and/or maintain any required insurance shall not relieve the Contractor from any liability or indemnification under the contract.

If the Contractor does not meet the insurance requirements at policy renewal, at the option of the Owner, payment to the Contractor may be withheld until the requirements have been met, OR the Owner may pay the renewal premium and withhold such payment from any monies due the Contractor, OR the contract may be suspended or terminated for cause.

11.3.4 Subcontractors

Contractor shall include all subcontractors as insureds under its policies <u>OR</u> shall be responsible for verifying and maintaining the certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Owner reserves the right to request copies of subcontractor's certificates at any time.

If Contractor does not verify subcontractors' insurance as described above, Owner has the right to withhold payments to the Contractor until the requirements have been met.

11.3.5 Worker's Compensation Indemnity

In the event Contractor is not required to provide or elects not to provide Worker's compensation coverage, the parties hereby agree the Contractor, its Owners, agents and employees shall have no cause of action against, and shall not assert a claim against, the State of Louisiana, its departments, agencies, agents and employees as an employer, whether pursuant to the Louisiana Worker's Compensation Act or otherwise, under any circumstance. The parties also hereby agree that the State of Louisiana, its departments, agencies, agents and employees shall in no circumstance be, or considered as, the employer or statutory employer of Contractor, its Owners, agents and employees. The parties further agree that Contractor is a wholly independent Contractor and is exclusively responsible for its employees, Owners, and agents. Contractor hereby agrees to protect, defend, indemnify and hold the State of Louisiana, its departments, agencies, agents and employees harmless from any such assertion or claim that may arise from the performance of this contract.

11.3.6 Indemnification/Hold Harmless Agreement

Contractor agrees to protect, defend, indemnify, save, and hold harmless, the State of Louisiana, all State Departments, Agencies, Boards and Commissions, its officers, agents, servants, employees and volunteers, from and against any and all claims, damages, expenses and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur, or in any way grow out of, any act or omission of Contractor, its agents, servants and employees, or any and all costs, expenses and/or attorney fees incurred by Contractor as a result of any claims, demands, suits or causes of action, except those claims, demands, suits or causes of action arising out of the negligence of the State of Louisiana, all State Departments, Agencies, Boards, Commissions, its officers, agents, servants, employees and volunteers.

Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent. The State of Louisiana may, but is not required to, consult with the Contractor in the defense of claims, but this shall not affect the Contractor's responsibility for the handling and expenses of all claims.

11.4 PERFORMANCE AND PAYMENT BOND

- 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.
- 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.
- 11.4.3 Recordation of Contract and Bond [La R.S. 38:2241 thru 38:2241.1]

The Owner shall record within thirty (30) days the Contract Between Owner and Contractor and Performance and Payment Bond with the Clerk of Court in the Parish in which the Work is to be performed.

ARTICLE 12

UNCOVERING AND CORRECTION OF WORK

12.2 CORRECTION OF WORK

12.2.1 Before Substantial Completion

At the end of the paragraph, add the following sentences: "If the Contractor fails to correct Work identified as defective within a thirty (30) day period, through no fault of the Designer, the Owner may hold the Contractor in default. If the Owner finds the Contractor in default, the Surety shall be notified. If within thirty (30) days after notification, the Surety has not corrected the nonconforming Work, through no fault of the Architect or Owner, the Owner may contract to have nonconforming Work corrected and hold the Surety and Contractor responsible for the cost, including architectural fees and other indirect costs. If the Surety fails to correct the Work within the stipulated time period and fails to meet its obligation to pay the costs, the Owner may elect not to accept bonds submitted in the future by the Surety. Finding the Contractor in default shall constitute a reason for disqualification of the Contractor from bidding on future state contracts.

12.2.2 After Substantial Completion

12.2.2.1 At the end of the paragraph delete the last sentence and add the following sentences:

"If the Contractor fails to correct nonconforming Work, or Work covered by warranties, within a thirty (30) day period, through no fault of the Architect or Owner, the Owner may hold the Contractor in default. If the Owner finds the Contractor is in default, the Surety shall be notified. If within thirty (30) days after notification, the Surety has not corrected the non-conforming or warranty Work, through no fault of the Architect or Owner, the Owner may contract to have the nonconforming or warranty Work corrected and hold the Surety responsible for the cost including architects fees and other indirect costs. Corrections by the Owner shall be in accordance with Section 2.4. If the Surety fails to correct the nonconforming or warranty Work within the stipulated time period and fails to meet its obligation to pay the costs, the Owner may not accept bonds submitted, in the future, by the Surety."

ARTICLE 13

MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

Delete all after the word "located".

13.2 SUCCESSORS AND ASSIGNS

13.2.1 In the second sentence, delete "Except as ... 13.2.2"

Delete Section 13.2.2.

13.3 RIGHTS AND REMEDIES

Add the following Section 13.3.3:

13.3.3 The Nineteenth Judicial Court in and for the Parish of East Baton Rouge, State of Louisiana shall have sole jurisdiction and venue in any action brought under this contract.

13.4 TESTS AND INSPECTIONS

In Section 13.4.1, delete the second sentence and substitute the following:

The Contractor shall make arrangements for such tests, inspections and approvals with the Testing Laboratory provided by the Owner, and the Owner shall bear all related costs of tests, inspections and approvals.

Delete the last two sentences of Section 13.4.1.

13.5 INTEREST

Delete Section 13.5.

ARTICLE 14

TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

Delete Section 14.1.1.4.

In Section 14.1.3, after the word "profit," delete the words "on Work not executed" and substitute the following: "for Work completed prior to stoppage".

14.2 TERMINATION BY THE OWNER FOR CAUSE

Add the following Section:

14.2.1.5 failure to complete the punch list within the lien period as provided in 9.8.7.

14.2.3 Add the following sentence:

"Termination by the Owner shall not suspend assessment of liquidated damages against the Surety."

Add the following Section:

14.2.5 If an agreed sum of liquidated damages has been established, termination by the Owner under this Article shall not relieve the Contractor and/or Surety of his obligations under the liquidated damages provisions and the Contractor and/or Surety shall be liable to the Owner for per diem liquidated damages.

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

In Section 14.4.3, delete all after "incurred by reason of the termination," and add "along with reasonable profit on the Work not executed."

ARTICLE 15

CLAIMS AND DISPUTES

15.1 CLAIMS

Delete Section 15.1.2, Time Limit on Claims, (See La R.S. 38:2189, and 38:2189.1).

- 15.1.3.1 Add the following to the end of the paragraph:"A Reservation of Rights and similar stipulations shall not be recognized under this contract as having any effect. A party must make a claim as defined herein within the time limits provided."
- 15.1.4.2 In the first sentence of the Section, delete "Initial Decision Maker's" and replace with "Architect's". In the second sentence of the Section, delete "the decision of the Initial Decision Maker" and replace with: "his/her decision".

Delete Section 15.1.6.2 and substitute the following:

15.1.6.2 If adverse weather conditions are the basis for a claim for additional time, the Contractor shall document that weather conditions had an adverse effect on the scheduled construction. An increase in the contract time due to weather shall not be cause for an increase in the contract sum. At the end of each month, the Contractor shall make one Claim for any adverse weather days occurring within the month. The Claim must be accompanied by sufficient documentation evidencing the adverse days and the impact on construction. Failure to make such Claim within twenty-one (21) days from the last day of the month shall prohibit any future claims for adverse days for that month. No additional adverse weather days shall be granted after the original or extended contract completion date, except those adverse weather days associated with a National Weather Service named storm or federally declared weather related disaster directly affecting the project site.

Add the following Section:

15.1.6.3 The following are considered reasonably anticipated days of adverse weather on a monthly basis:

January	<u>11</u> days	July	<u>6</u> days
February	<u>10</u> days	August	<u>5</u> days
March	<u>8</u> days	September	<u>4</u> days
April	<u> 7</u> days	October	<u>3</u> days
May	<u> 5</u> days	November	<u>5</u> days
June	<u>6</u> days	December	<u>8</u> days

The Contractor shall ask for total adverse weather days. The Contractor's request shall be considered only for days over the allowable number of days stated above.

Note: Contract is on a calendar day basis.

15.2 INITIAL DECISION

15.2.1 In the second sentence, delete the word "will" and replace with: "shall always".

In the second sentence, delete the phrase: ", unless otherwise indicated in the Agreement."

In the third sentence, delete the word "mediation" and replace with: "litigation".

At the end of the third sentence, add: "arising prior to the date final payment is due".

Delete the fourth sentence.

15.2.5 In the middle of the first sentence, delete all after the phrase: "rejecting the Claim".

In the second sentence, delete the phrase: "and the Architect, if the Architect is not serving as the Initial Decision Maker,".

In the third sentence, delete all after: "binding on the parties" and add the following: "except that the Owner may reject the decision or suggest a compromise or both".

Delete Section 15.2.6.

Delete Section 15.2.6.1.

15.3 MEDIATION

Delete Section 15.3.

15.4 ARBITRATION

Delete Section 15.4.

SOUTHERN UNIVERSITY AND A&M COLLEGE BATON ROUGE

<u>STATE OF LOUISIANA</u> <u>PARISH OF EAST BATON ROUGE</u>

PROJECT: ROOF REPLACEMENT **BUILDING/LOCATION:** HENRY THURMAN HALL

ATTESTATION AFFIDAVIT

Before me, the undersigned notary public, duly commissioned and qualified in and for the parish and state aforesaid, personally came and appeared Affiant, who after being duly sworn, attested as follows:

LA. R.S. 38:2227 PAST CRIMINAL CONVICTIONS OF BIDDERS

A. No sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes:

(a) Public bribery (R.S. 14:118)

- (c) Extortion (R.S. 14:66)
- (b) Corrupt influencing (R.S. 14:120)
- (d) Money laundering (R.S. 14:23)
- B. Within the past five years from the project bid date, no sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes, during the solicitation or execution of a contract or bid awarded pursuant to the provisions of Chapter 10 of Title 38 of the Louisiana Revised Statutes:
 - (a) Theft (R.S. 14:67)
 - (b) Identity Theft (R.S. 14:67.16)
 - (c) Theft of a business record
 - (R.S.14:67.20)
 - (d) False accounting (R.S. 14:70)
 - (e) Issuing worthless checks

LA. R.S. 38:2212.10 Verification of Employees

A. At the time of bidding, Appearer is registered and participates in a status verification system to verify that all new hires in the state of Louisiana are legal citizens of the United States or are legal aliens.

- B. If awarded the contract, Appearer shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.
- C. If awarded the contract, Appearer shall require all subcontractors to submit to it a sworn affidavit verifying compliance with Paragraphs (A) and (B) of this Subsection.

LA. R.S. 23:1726(B) Certification Regarding Unpaid Workers Compensation Insurance

- A. R.S. 23:1726 prohibits any entity against whom an assessment under Part X of Chapter 11 of Title 23 of the Louisiana Revised Statutes of 1950 (Alternative Collection Procedures & Assessments) is in effect, and whose right to appeal that assessment is exhausted, from submitting a bid or proposal for or obtaining any contract pursuant to Chapter 10 of Title 38 of the Louisiana Revised Statutes of 1950 and Chapters 16 and 17 of Title 39 of the Louisiana Revised Statutes of 1950.
- B. By signing this bid /proposal, Affiant certifies that no such assessment is in effect against the bidding / proposing entity.

NAME OF BIDDER

NAME OF AUTHORIZED SIGNATORY OF BIDDER

DATE

TITLE OF AUTHORIZED SIGNATORY OF BIDDER

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER/AFFIANT

Sworn to and subscribed before me by Affiant on the _____ day of ______, 2024.

Notary Public

(R.S. 14:71)

(f) Bank fraud (R.S. 14:71.1)

- (g) Forgery (R.S. 14:72)
- (h) Contractors; misapplication of payments (R.S. 14:202)
- (i) Malfeasance in office (R.S. 14:134)

Southern University and A&M College 15. PRE-CONSTRUCTION CONFERENCE AGENDA

As a minimum, the following items are to be covered in the pre-construction conference. The Designer may, at his discretion, add additional items which he feels are important to this particular project.

1. Contractor shall furnish the following prior to his first payment:

- a. Cost breakdown (Schedule of Values), shall be in standard Construction Specifications Institute format.
- b. List Sub-contractors and major suppliers
- c. Information listed in Paragraph 7.1 of the Supplementary Conditions.
- d. Construction Schedule as defined in 3.10.2 of General Conditions and Supplementary Conditions.

No payments to the contractor shall be made until this information is provided.

2. Roles of Individuals:

a. **Designer** – shall be solely responsible for the direction of the project. The Designer shall keep minutes of all meetings, including construction progress meetings, and distribute within 7 days. All instructions to contractor shall come from the designer. All decisions and directions shall be in writing. Verbal instructions shall be immediately confirmed in The Designer and his principal writing. consultants shall visit the project regularly according to the requirements of the Louisiana Capital Improvement Projects Procedure Manual for Design and Construction. The Designer shall NOT assume the role of his principal consultants in site visits. Copies of

Designer Site Visit Reports are to be sent to the User Agency on a weekly basis.

- b. Southern University and A&M College -Designer to receive instructions only from Southern University and A&M College. Program or design changes shall be approved by Southern University and A&M College prior to any work being performed by the Designer.
 - c. User Agency Address all requests for changes through Southern University and

A&M College. Establish ground rules for the contractor and his personnel while working on

their premises. If representatives of Southern University and A&M College or the using agency find any discrepancies, they believe to be contrary to the Contract Documents, they shall notify the designer. If it is thought that discrepancy needs immediate attention, the individual discovering the discrepancy and the contractor's representative should call the designer for immediate resolution.

d. **Contractor** - Work shall be according to the Contract Documents, not necessarily standard practice. Emergency action to protect life or property shall be taken immediately by the superintendent on the site. Less urgent action shall be resolved by telephone among the appropriate parties. Fire Marshal approved documents shall be accessible at all times at the project site, in accordance with Fire Marshal requirements. Approved documents from all other applicable regulatory agencies shall also be accessible at all times at the project site.

3. Change Orders:

All requests for a change in time and/or money shall be submitted to the designer, with proper back up data, for his review. The designer shall submit the Change Order to Southern University and A&M College with his recommendation of action required. The Change Order shall be approved by Southern University and A&M College prior to any additional work being performed.

- a. Change Orders cannot be approved without the proper breakdown as required by the Supplementary Conditions, Section <u>7.2</u>. The same requirements apply to time extension requests.
- b. Southern University and A&M College needs only the original and one (1) copy of backup.
- c. Change Orders should be rounded to the nearest whole dollar amount.
- d. User paid change orders are **not** allowed.

e. User requested change orders are to be avoided.

4. Invoice Procedure:

- a. Invoices may be submitted in electronic format.
 - Contractor shall submit one Certificate for Payment directly to the Designer. Southern University and A&M College – Application and Certification for Payment forms shall be used for submittal. Certificate for payment need **not** be notarized.
 - 2) After review, the Designer shall process the Certificate as promptly as possible, in any case within seven (7) days. If a Certificate is held for any reason, written notice stating the reason for delay should be given the owner and the contractor. If a Certificate is changed for any reason, changes will be made to all copies.
 - Distribution of copies shall be as follows:
 a) Designer forwards one Certificate for Payment directly to Southern University and A&M College with a transmittal letter/memo.

b) Designer forwards copy of transmittal letter and one (1) copy of Certificate to Contractor. One (1) copy retained for Designer records. One (1) copy sent to User Agency.

- b. During construction, designer's invoices shall be sent directly to Southern University and A&M College.
- c. If federal funds are involved, compliance with additional regulations is required including but not limited to:

Davis Bacon Act - Wage rate & payroll records. Drug Free Workplace Act Civil Rights EOP poster with name of EOP person shown.

d. Stored Materials must be on site for payment to be made. Payment will not be made for materials stored in a bonded warehouse or elsewhere. e. An Original <u>45 Day</u> Clear Lien and an Original Consent of Surety (AIA Form G707) is required prior to final payment to the contractor.

5. Prior Approval:

Only items as specified or prior approved in accordance with the Contract Documents will be incorporated into the project. Approval of shop drawings does not relieve Contractor of complying with the Prior Approval clause.

6. Testing Lab:

- a. The Owner will engage and pay for the testing laboratory if required. If the Contractor obtains the services of a testing laboratory, he will be responsible for all costs for that laboratory
- b. Designer should furnish Testing Lab with written notice of types and frequency of required tests. Set up procedure for Testing Lab notification.
- c. No off site testing unless called for in the Contract Documents.
- d. Southern University and A&M College will pay a minimum of standby time. Contractor may be billed if not well controlled.
- e. Testing Lab invoices shall be submitted by hardcopy or in electronic format through the Designer, who in turn acknowledges their recognition of services submitted.

7. Project Sign

When a project sign is specified, select location.

8. Meetings:

Establish a time and place for the Monthly Meeting. Designer shall notify Southern University and A&M College prior to and provide minutes of all meetings to all participants within 7 days.

9. Roofing:

Pre-roofing Conference - establish a direct line of communication, iron out initial questions regarding the project and to review project submittal requirements. This conference should be held shortly after award of the roofing contract and a minimum of six (6) weeks prior to the anticipated start of roofing. Attendance by general contractor, roofing subcontractor and manufacturer's representative is required. A letter from the manufacturer stating the roofer is an approved applicator and sample warranties shall be submitted at the Pre-roofing Conference, if not before.

- a. General Guidelines for Low Sloped Roofs
 1) Details in compliance with NRCA and Roof Manufacturer
 - 2) Concrete Decks are to be primed.

3) Nailable Decks; Red Rosin sheet is required on wood decks.

4) Fastening per manufacturer's requirements to comply with I-90 FM rating.

5) Asphalt

a) Type IV asphalt shall be used for all modified bitumen mop-down systems

b) Temperature at the point of application shall be the EVT temperature plus or minus 25 degrees.

6) Insulation

a) All wet insulation is to be rejected and removed from the site.

b) All insulation joints shall be staggered, including daily tie-ins.

- 7) Metal
 - a) Color Selection

b) Gravel guard - use minimal raised lip for areas where drainage is over the edge.

8) Drainage: Most guarantees prohibit water remaining on the roof more than 48 hours.

9) Roofing guarantees

a) No dollar limit. Guarantee system from the deck up, naming all products within the system.

b) No language about "no pay, no guarantee".

c) Warranty start date to be on or very near date of Acceptance of Building Contract. The roofing warranty required for his project must meet the requirements of Southern University and A&M College. It is important that the roofing manufacturer and applicator are aware of this. An incomplete or incorrect warranty **will** delay acceptance. d) Supplementary Conditions Section 13.3.3, the Nineteenth Judicial Court in and for the Parish of East Baton Rouge, State of Louisiana shall have sole jurisdiction in any action brought under this contract.

- Manufacturer's specification to be used in support of designer's specification. Manufacturer's requirements are a minimum, use designer's specification if it exceeds.
- 11) Track weather days including predicted rain percentage. Submit to designer monthly with pay estimate.

Pre-application Conference to verify readiness of the project structure, review assignments of Preliminary Conference, scan last minute details, changes or corrections and to review the anticipated schedule of progress. This conference should be held within one (1) week of roofing application. Attendance by general contractor, roofing subcontractor and superintendent or foreman and manufacturer's representative is required.

Representatives of the designer and Southern University and A&M College shall be visiting the site to make sure the roof is being installed per the manufacturers' require-ments and the Contract Documents. If found not in compliance, tests and corrective measures may be required to prove the roof is acceptable. Tests include Blow-Off Testing, etc.

Moisture Survey - When installation is complete, Southern University and A&M College will arrange to have a moisture survey performed. Deficiencies will be noted, either on the roof with paint or on roof plan drawing or both. After these deficiencies are corrected, this office will arrange to have these areas resurveyed. If these deficiencies are found not to be corrected and additional survey time is required, then the cost of this time will be assessed against the contractor at a rate of \$50.00 per hour through a credit change order.

Designer: Please fill out "Roof Completion Information" form and submit it with the Recommendation of Acceptance. If the roofed section is new, a scaled drawing is also needed. Preferably, this drawing would be on AutoCAD in compliance with the layers specified in our "Instructions to Designers."

10. General Correspondence:

a. Project Number must be on all correspondence.

b. Contractor shall copy Southern University and A&M College on any correspondence **if**:

1) It involves a controversial issue.

2) It relates to information requests to the Designer that had not been furnished in a timely manner.

11. Miscellaneous Items to be Discussed as Necessary:

a. Shop drawings, samples, hardware, and color schedules. Shop drawings submitted to the user by the designer are for record purposes only, not for approval. Approval is the sole responsibility of the designer.
 COLOR SELECTION: If the User does not

approve color selections in a timely manner, the Designer, in consultation with Southern University and A&M College, shall make the selections, which will be final.

- b. Establish the location and type of temporary facilities and utilities. Establish how payment for temporary utilities will be made and how costs will be tracked?
- c. Outages/Interruptions of Services. Contractor is to request, in writing, all outages/interruptions to the User. The amount of advance notice is to be determined by the user. Coordination of outages or interruptions is the responsibility of the contractor
- d. Contractor use/access to pertinent buildings and facilities.
- e. Location of staging area and/or fencing.
- f. Site and stored material security is the contractor's responsibility.
- g. Use of site, parking of vehicles, decals and/or permits for parking
- h. The User shall have first refusal of salvaged materials. Where are they to be delivered? The contractor is responsible for the disposition of

all other materials in accordance with laws and regulations.

- i. Safety and First Aid. This is the contractor's responsibility.
- Procedure for keeping Record Documents. j. Contractor to record as-built information that varies from the contract documents, on (1) one set of prints, to be furnished to the Designer at completion of the job. As-builts are prepared by Designer, inclusive of Supplemental Drawings, the Contractor, based on the as-built work and the required adjustments to the contract documents and the change orders, and shall be submitted timely to Southern University and A&M College. Plans shall be marked "AS-BUILT". As-built drawings submitted to Southern University and A&M College shall consist of (2) two full size paper sets of Record Drawings (As-Built) prepared by the Designer. Also required are (2) two disks or flash drives of As-built drawings in AutoCAD (.dwg) and .pdf format, including electronic copies of the bid specifications and addenda. Acceptable As-builts are required prior to the Designer's final payment.
- k. Use of any Asbestos Containing materials is prohibited.
- 1. Pictures or videos of existing conditions may be made.
- m. Near the end of the project the Southern University and A&M College Project Manager will review the work to determine compliance with Southern University and A&M College's ADA Non-Comprehensive Field Checklist. Any accessibility problems identified in this review shall be corrected before the project can be considered complete.

12. Pre-Close Out Conference

When the project reaches 75 to 80% completion the Designer will schedule a meeting with the Contractor, Southern University and A&M College and the User to review the requirements and procedures for the Final Inspection and Acceptance.

SCHEDULE OF VALUES

The Contractor is to use the following format. The total Contract Cost is to be itemized in each Subsection listed (as applicable)

DIVISION 0	1 – GENERAL REQUIREMENTS	Quantity	Cost
01 32 50 Rec	neral Requirements ford Drawings, Shop Drawings, Product es and other submittals.	TOTAL	
DIVISION 0	2 – EXISTING CONDITIONS	IOTAL _	
02 30 00 Su 02 41 00 De	bsurface Investigation emolition		
DIVISION 0	3 – CONCRETE		
03 11 00 Cc 03 15 00 Cc 03 20 00 Cc 03 30 00 Ca 03 40 00 Pr	aintenance of Concrete oncrete Forming oncrete Accessories oncrete Reinforcing Ist-in-place Concrete ecast Concrete Ist Decks & Underlayment		
DIVISION 0	4 – MASONRY		
04 05 13 M 04 05 19 M	aintenance of Masonry asonry Mortaring asonry Anchorage & Reinforcing asonry Accessories hit Masonry		
DIVISION 0	5 – METALS		
05 10 00 Str 05 20 00 M 05 30 00 M 05 50 00 M			
DIVISION 0	6 – WOOD, PLASTICS, & COMPOSITES		
06 10 00 Ro 06 13 00 He 06 17 00 Sh	op-fabricated Structural Wood		
06 20 00 Fin	nish Carpentry	SUB-TOTAL	

	COMPOSITES (CONTINUES)		
	Architectural Woodwork		
	Plastic Fabrications		
06 80 00	Composite Fabrications		
DUNGLO		TOTAL	
DIVISIO	N 07 – THERMAL AND MOISTURE		
	PROTECTION		
07 10 00	Demonscrafting and Waterproofing		
	Dampproofing and Waterproofing Traffic Coatings		
	Water Repellents		
	Thermal Insulation		
	Exterior Insulation & Finish Systems		
	Weather Barriers		
	Shingles and Shakes		
	Roof Tiles		
	Roofing and Siding Panels		
	Membrane Roofing		
	Flashing and Sheet Metal		
	Sheet Metal Roofing		
	Roof & Wall Specialties and Accessories		
	Fire and Smoke Protection		
07 90 00	Joint Protection		
07 95 00	Expansion Control		
		TOTAL	
DIVISIO	N 08 – OPENINGS		
08 11 00	Metal Doors and Frames		
08 11 00 08 14 00	Metal Doors and Frames Wood Doors		
08 11 00 08 14 00 08 15 00	Metal Doors and Frames Wood Doors Plastic Doors		
08 11 00 08 14 00 08 15 00 08 30 00	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames		
08 11 00 08 14 00 08 15 00 08 30 00 08 41 00	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts		
08 11 00 08 14 00 08 15 00 08 30 00 08 41 00 08 44 00	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies		
08 11 00 08 14 00 08 15 00 08 30 00 08 41 00 08 44 00 08 51 00	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows		
$\begin{array}{c} 08 \ 11 \ 00 \\ 08 \ 14 \ 00 \\ 08 \ 15 \ 00 \\ 08 \ 30 \ 00 \\ 08 \ 41 \ 00 \\ 08 \ 44 \ 00 \\ 08 \ 51 \ 00 \\ 08 \ 52 \ 00 \end{array}$	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows Wood Windows		
$\begin{array}{c} 08 \ 11 \ 00 \\ 08 \ 14 \ 00 \\ 08 \ 15 \ 00 \\ 08 \ 30 \ 00 \\ 08 \ 41 \ 00 \\ 08 \ 51 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 53 \ 00 \end{array}$	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows Wood Windows Plastic Windows		
$\begin{array}{c} 08 \ 11 \ 00 \\ 08 \ 14 \ 00 \\ 08 \ 15 \ 00 \\ 08 \ 30 \ 00 \\ 08 \ 41 \ 00 \\ 08 \ 44 \ 00 \\ 08 \ 51 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 53 \ 00 \\ 08 \ 56 \ 00 \end{array}$	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows Wood Windows Plastic Windows Special Function Windows		
$\begin{array}{c} 08 \ 11 \ 00 \\ 08 \ 14 \ 00 \\ 08 \ 15 \ 00 \\ 08 \ 30 \ 00 \\ 08 \ 41 \ 00 \\ 08 \ 44 \ 00 \\ 08 \ 51 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 53 \ 00 \\ 08 \ 56 \ 00 \\ 08 \ 60 \ 00 \end{array}$	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows Wood Windows Plastic Windows Special Function Windows Roof Windows and Skylights		
$\begin{array}{c} 08 \ 11 \ 00 \\ 08 \ 14 \ 00 \\ 08 \ 15 \ 00 \\ 08 \ 30 \ 00 \\ 08 \ 41 \ 00 \\ 08 \ 44 \ 00 \\ 08 \ 51 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 53 \ 00 \\ 08 \ 56 \ 00 \\ 08 \ 60 \ 00 \\ 08 \ 70 \ 00 \end{array}$	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows Wood Windows Plastic Windows Special Function Windows Roof Windows and Skylights Hardware		
$\begin{array}{c} 08 \ 11 \ 00 \\ 08 \ 14 \ 00 \\ 08 \ 15 \ 00 \\ 08 \ 30 \ 00 \\ 08 \ 41 \ 00 \\ 08 \ 44 \ 00 \\ 08 \ 51 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 56 \ 00 \\ 08 \ 60 \ 00 \\ 08 \ 70 \ 00 \\ 08 \ 80 \ 00 \end{array}$	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows Wood Windows Plastic Windows Special Function Windows Roof Windows and Skylights Hardware Glazing		
$\begin{array}{c} 08 \ 11 \ 00 \\ 08 \ 14 \ 00 \\ 08 \ 15 \ 00 \\ 08 \ 30 \ 00 \\ 08 \ 41 \ 00 \\ 08 \ 44 \ 00 \\ 08 \ 51 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 56 \ 00 \\ 08 \ 60 \ 00 \\ 08 \ 70 \ 00 \\ 08 \ 80 \ 00 \end{array}$	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows Wood Windows Plastic Windows Special Function Windows Roof Windows and Skylights Hardware		
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$\begin{array}{c} 08 \ 11 \ 00 \\ 08 \ 14 \ 00 \\ 08 \ 15 \ 00 \\ 08 \ 30 \ 00 \\ 08 \ 41 \ 00 \\ 08 \ 41 \ 00 \\ 08 \ 51 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 52 \ 00 \\ 08 \ 53 \ 00 \\ 08 \ 56 \ 00 \\ 08 \ 70 \ 00 \\ 08 \ 80 \ 00 \\ 08 \ 90 \ 00 \end{array}$	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows Wood Windows Plastic Windows Special Function Windows Roof Windows and Skylights Hardware Glazing Louvers and Vents		
08 11 00 08 14 00 08 15 00 08 30 00 08 41 00 08 44 00 08 51 00 08 52 00 08 53 00 08 56 00 08 60 00 08 70 00 08 80 00 08 90 00	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows Wood Windows Plastic Windows Special Function Windows Roof Windows and Skylights Hardware Glazing Louvers and Vents		
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08 11 00 08 14 00 08 15 00 08 30 00 08 41 00 08 44 00 08 51 00 08 52 00 08 53 00 08 56 00 08 60 00 08 70 00 08 80 00 08 90 00 DIVISIO 09 22 00 09 23 00 09 24 00 09 29 00	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows Wood Windows Plastic Windows Special Function Windows Roof Windows and Skylights Hardware Glazing Louvers and Vents N 09 – FINISHES Supports for Plaster and Gypsum Board Gypsum Plastering Portland Cement Plastering Gypsum Board		
08 11 00 08 14 00 08 15 00 08 30 00 08 41 00 08 51 00 08 52 00 08 52 00 08 53 00 08 56 00 08 60 00 08 70 00 08 80 00 08 90 00 DIVISIO 09 22 00 09 23 00 09 24 00	Metal Doors and Frames Wood Doors Plastic Doors Specialty Doors and Frames Entrances and Storefronts Curtain Wall and Glazed Assemblies Metal Windows Wood Windows Plastic Windows Special Function Windows Roof Windows and Skylights Hardware Glazing Louvers and Vents N 09 – FINISHES Supports for Plaster and Gypsum Board Gypsum Plastering Portland Cement Plastering Gypsum Board	 TOTAL	

DISISION 06 - WOOD, PLASTICS, &

DIVISION 09 – FINISHES (CONTINUED)

09 50 00	Acoustical Ceilings		
09 54 00	Specialty Ceilings		
	Quantity		
09 61 00	Flooring Treatment		
	Specialty Flooring		
09 63 00	Masonry Flooring		
09 64 00	Wood Flooring		
09 65 00	Resilient Flooring		
09 66 00	Terrazzo Flooring		
09 68 00	Carpeting		
	Access Flooring		. <u> </u>
09 97 00	Wall Finishes		
09 91 00	Painting		
09 97 00	Special Coatings		
		TOTAL	
DIVISIO	N 10 – SPECIALTIES		
10 11 00	Visual Display Surfaces		
10 14 00			
	Compartments and Cubicles		
10 22 00	Partitions		
10 26 00	Wall and Door Protection		
10 28 00	Toilet, Bath, and Laundry Accessories		
	Fire Protection Specialties		
10 51 00	Lockers		
	Storage Assemblies		
10 82 00	Grilles and Screens	TOTAL	. <u> </u>
DIVISIO	N 11 – EQUIPMENT		
	Security, Detention, and Banking Equipment		
	Detention Equipment		
11 23 00	Commercial Laundry and		
	Dry Cleaning Equipment		
	Unit Kitchens		
	Photographic Processing Equipment		
	Foodservice Equipment		
	Library Equipment		
	Audio-Visual Equipment		
	Laboratory Equipment		
	Theater and Stage Equipment		
11 65 00	Theater and Stage Equipment Athletic and Recreational Equipment		
11 65 00	Theater and Stage Equipment		
11 65 00 11 70 00	Theater and Stage Equipment Athletic and Recreational Equipment Healthcare Equipment	TOTAL	
11 65 00 11 70 00	Theater and Stage Equipment Athletic and Recreational Equipment	TOTAL	
11 65 00 11 70 00 DIVISIO	Theater and Stage Equipment Athletic and Recreational Equipment Healthcare Equipment N 12 – FURNISHINGS	TOTAL	
11 65 00 11 70 00 DIVISIO 12 20 00	Theater and Stage Equipment Athletic and Recreational Equipment Healthcare Equipment N 12 – FURNISHINGS Window Treatments	TOTAL	
11 65 00 11 70 00 DIVISIO 12 20 00 12 30 00	Theater and Stage Equipment Athletic and Recreational Equipment Healthcare Equipment N 12 – FURNISHINGS Window Treatments Casework	TOTAL	
11 65 00 11 70 00 DIVISIO 12 20 00 12 30 00 12 40 00	Theater and Stage Equipment Athletic and Recreational Equipment Healthcare Equipment N 12 – FURNISHINGS Window Treatments Casework Furnishings and Accessories		
11 65 00 11 70 00 DIVISIO 12 20 00 12 30 00 12 40 00	Theater and Stage Equipment Athletic and Recreational Equipment Healthcare Equipment N 12 – FURNISHINGS Window Treatments Casework		

DIVISION 13 - SPECIAL CONSTRUCTION

13 10 00	Special Facility Components		
13 34 00	Fabricated Engineered Structures		
	Radiation Protection		
		TOTAL	
		10 mil	
DIVISIO	N 14 – CONVEYING EQUIPMENT		
DIVISIO	N 14 - CONVETTINO EQUITIMENT		
14 20 00	Elemeters		
	Elevators		
	Escalators and Moving Walks		
14 40 00			
14 80 00	Scaffolding		
		TOTAL	
DIVISIO	N 21 – FIRE SUPPRESSION		
21 10 00	Water-Based Fire-Suppression Systems		
	Piping		
21 20 00	Fire-Extinguishing Systems		
	Fire Pumps		
DIVISIO	N 22 – PLUMBING	TOTAL	
DIVISIO		TOTAL	
22 07 00	Plumbing Insulation		
	Facility Water Distribution		
	Facility Sanitary Sewerage		
	Facility Storm Drainage		
	Plumbing Equipment		
22 40 00	Plumbing Fixtures		
		TOTAL	
DIVISIO	N 23 – HEATING, VENTILATING, & AIR-		
DIVISIO	N 23 – HEATING, VENTILATING, & AIR- CONDITIONING		
DIVISIO			
	CONDITIONING		
23 05 93	CONDITIONING Testing, Adjusting, & Balancing for HVAC		
23 05 93 23 07 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation		
23 05 93 23 07 00 23 09 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC		
23 05 93 23 07 00 23 09 00 23 13 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment N 26 – ELECTRICAL		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00 DIVISION 26 09 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment N 26 – ELECTRICAL		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00 DIVISIOI 26 09 00 26 10 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment N 26 – ELECTRICAL Instrumentation & Control for Electrical Systems Medium-Voltage Electrical Distribution		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00 DIVISION 26 09 00 26 10 00 26 20 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment N 26 – ELECTRICAL Instrumentation & Control for Electrical Systems Medium-Voltage Electrical Distribution Low-Voltage Electrical Transmission		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00 DIVISION 26 09 00 26 10 00 26 20 00 26 27 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment N 26 – ELECTRICAL Instrumentation & Control for Electrical Systems Medium-Voltage Electrical Distribution Low-Voltage Distribution Equipment	 TOTAL	
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00 DIVISION 26 09 00 26 10 00 26 20 00 26 27 00 26 30 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment N 26 – ELECTRICAL Instrumentation & Control for Electrical Systems Medium-Voltage Electrical Distribution Low-Voltage Distribution Equipment Facility Electrical Power Generating	 TOTAL	
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00 DIVISIO 26 09 00 26 10 00 26 20 00 26 27 00 26 30 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment N 26 – ELECTRICAL Instrumentation & Control for Electrical Systems Medium-Voltage Electrical Distribution Low-Voltage Distribution Equipment Facility Electrical Power Generating & Storage Equipment	 TOTAL	
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00 DIVISIO 26 09 00 26 10 00 26 20 00 26 20 00 26 30 00 26 40 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment N 26 – ELECTRICAL Instrumentation & Control for Electrical Systems Medium-Voltage Electrical Distribution Low-Voltage Electrical Transmission Low-Voltage Distribution Equipment Facility Electrical Power Generating & Storage Equipment Electrical and Cathodic Protection	 TOTAL	
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00 DIVISIO 26 09 00 26 10 00 26 20 00 26 27 00 26 30 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment N 26 – ELECTRICAL Instrumentation & Control for Electrical Systems Medium-Voltage Electrical Distribution Low-Voltage Electrical Transmission Low-Voltage Distribution Equipment Facility Electrical Power Generating & Storage Equipment Electrical and Cathodic Protection		
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00 DIVISIO 26 09 00 26 10 00 26 20 00 26 20 00 26 30 00 26 40 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment N 26 – ELECTRICAL Instrumentation & Control for Electrical Systems Medium-Voltage Electrical Distribution Low-Voltage Electrical Transmission Low-Voltage Distribution Equipment Facility Electrical Power Generating & Storage Equipment Electrical and Cathodic Protection	 TOTAL	
23 05 93 23 07 00 23 09 00 23 13 00 23 20 00 23 30 00 23 40 00 23 50 00 23 60 00 23 70 00 DIVISIO 26 09 00 26 10 00 26 20 00 26 20 00 26 30 00 26 40 00	CONDITIONING Testing, Adjusting, & Balancing for HVAC HVAC Insulation Instrumentation & Control for HVAC Facility Fuel-Storage Tanks HVAC Piping and Pumps HVAC Air Distribution HVAC Air Cleaning Devices Central Heating Equipment Central Cooling Equipment Central HVAC Equipment Central HVAC Equipment N26 – ELECTRICAL Instrumentation & Control for Electrical Systems Medium-Voltage Electrical Distribution Low-Voltage Electrical Transmission Low-Voltage Distribution Equipment Facility Electrical Power Generating & Storage Equipment Electrical and Cathodic Protection Lighting		

DIVIASION 27 – COMMUNICATIONS

	Structured Cabling		
27 20 00	Data Communications		
27 30 00	Voice Communications		
27 40 00	Audio-Video Communications		
27 50 00	Distributed Communications &		
	Monitoring Systems		
		TOTAL	
DIVISIO	N 28 – ELECTRONIC SAFETY AND		
	SECURITY		
	52001011		
28 10 00	Electronic Access Control &		
20 10 00	Intrusion Detection		
28 20 00	Electronic Surveillance		
	Electronic Detection and Alarm		
	Electronic Monitoring and Control		
20 40 00	Electronic Womtoring and Control	TOTAL	
		TOTAL	
	N 31 – EARTHWORK		
DI V 1510.	N 31 – EARTHWORK		
21 10 00	Site Cleaning		
	Site Clearing		
	Earth Moving	<u> </u>	
	Soil Treatment		
	Soil Stabilization		
	Shoring and Underpinning		
	Excavation Support and Protection		
31 60 00	Special Foundations and Load-		
	Bearing Elements		
		TOTAL	
DUUGIO			
DIVISIO	N 32 – EXTERIOR IMPROVEMENTS		
32 10 00	Bases, Ballasts, and Paving		
32 10 00 32 30 00	Bases, Ballasts, and Paving Site Improvements		
32 10 00	Bases, Ballasts, and Paving Site Improvements		
32 10 00 32 30 00 32 90 00	Bases, Ballasts, and Paving Site Improvements Planting	TOTAL	
32 10 00 32 30 00 32 90 00	Bases, Ballasts, and Paving Site Improvements	TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES	 TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities	TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities	TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities	 TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities	 TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities	 TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities Electrical Utilities	 TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities		
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00 33 80 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities Electrical Utilities Communications Utilities	 TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00 33 80 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities Electrical Utilities		
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00 33 80 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities Electrical Utilities Communications Utilities		
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00 33 80 00 DIVISIO	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities Electrical Utilities Communications Utilities	 TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00 33 80 00 DIVISIO	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities Electrical Utilities Communications Utilities N 34 – TRANSPORTATION		
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00 33 80 00 DIVISIO 34 00 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities Electrical Utilities Communications Utilities N 34 – TRANSPORTATION Transportation N 35 – WATERWAY AND MARINE	 TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00 33 80 00 DIVISIO 34 00 00	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities Electrical Utilities Communications Utilities N 34 – TRANSPORTATION Transportation	 TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00 33 80 00 DIVISIO 34 00 00 DIVISIO	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities Electrical Utilities Communications Utilities N 34 – TRANSPORTATION Transportation N 35 – WATERWAY AND MARINE CONSTRUCTIONS	 TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00 33 80 00 DIVISIO 34 00 00 DIVISIO	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities Electrical Utilities Communications Utilities N 34 – TRANSPORTATION Transportation N 35 – WATERWAY AND MARINE	TOTAL	
32 10 00 32 30 00 32 90 00 DIVISIO 33 10 00 33 30 00 33 40 00 33 50 00 33 60 00 33 70 00 33 80 00 DIVISIO 34 00 00 DIVISIO	Bases, Ballasts, and Paving Site Improvements Planting N 33 – UTILITIES Water Utilities Sanitary Sewerage Utilities Storm Drainage Utilities Fuel Distribution Utilities Fuel Distribution Utilities Hydronic & Steam Energy Utilities Electrical Utilities Communications Utilities N 34 – TRANSPORTATION Transportation N 35 – WATERWAY AND MARINE CONSTRUCTIONS	 TOTAL	

DIVISION 40-43 – PROCESS EQUIPMENT		
DIVISION 44 – POLLUTION CONTROL EQUIPMENT		
 44 40 00 Water Treatment Equipment 44 41 00 Packaged Water Treatment Plants 44 50 00 Solid Waste Control 	 	
DIVISION 45 – INDUSTRY SPECIFIC MANUFACTURING EQUIPMENT	TOTAL	
DIVISION 48 – ELECTRICAL POWER GENERATION		
48 10 00 Electrical Power Generation Equipment48 70 00 Electrical Power Generation Testing	TOTAL	

Southern University and A&M College

CHANGE ORDER

PROJECT NAME:		CHANGE ORDER No.
PROJECT NUMBER:	WBS No.	CONTRACT DATE:
CONTRACTOR:		CFMS / SRM No(s).
SITE CODE:	STATE ID:	NOTICE TO PROCEED DATE:

You are directed to make the following change(s) in this contract. Attach SUMMARY, BREAKDOWN and/or UNIT PRICE BREAKDOWN forms as required and give a brief description of the change(s) below.

The Original Contract Sum	
Total Changes by Previous Change Order(s)	
Current Contract Sum	
Contract Sum will be (increased) (decreased) (unchanged) by this Change Order	
New Contract Sum	
The Original Contract Completion Date and Contract Time. Date:	DAYS
Total Time extended by Previous Change Order(s)	DAYS
Contract Time will be (increased) (decreased) (unchanged) by this Change Order	DAYS
New Contract Completion Date & Revised Contract Time Date:	DAYS
Added Building Area	(Sq. Ft.)

<u>NOTE</u>: No additional increase in time or money will be considered for a Change Order item after it has been executed.

RECOMMENDED Designer's Name:		ACCEPTED Contractor's N	ame:	APPROVED Project Manager:
Address:		Address:		Southern University and A&M College
Email Address:		Email Address	s:	
By:		By:		By:
Date:		Date:		Date:
SOUTHERN UNIVERSI Classification	TY AND A&M COL Amount	LEGE USE ON	LY Classification	Amount
Omission (Type "O")*			Miscellaneous (Type "M")	
Error (Type "E")*			Owner Requested (Type "R")	
COMMENTS:		Senior M	anager/Assistant Director approval:	

Construction Contract Change Order SUMMARY

Southern University and A&M College State Project No. WBS No. Project Name:		Item No. RFI No. (or COR, C Date:	PR, etc.)	
Contractor Name:				
Description of Work:				
General Contractor Direct Costs - Breakdow (See attached breakdown) Total General Contractor Cost (General Contract Direct Cost plus OH&P)	vn No		<mark>%</mark> (Max: 8%)	
Subcontractor Cost Breakdowns (See attached.)		А	В	С
Subcontractor Name	Breakdown No.	Total Direct Cost	OH&P (Max 8%) 	Total A+(A X B)
			%	
			% % %	
Subcontractor Direct Costs Total (Sum column A)		\$ -	70	
Subcontractor Direct Costs + Subcontra (Sum column C)	actor OH&P			
General Contractor OH&P on Subcontr (Sum column A times General Contractor OH&P rate.)	ractor Direct	Cost at	0⁄0 (Max: 8%)	
Total Subcontractor Costs (Subcontractor Direct Costs + OH&P + General Contractor C	DH&P)			
Change Order Subtotal (Sum of Total General Contractor Costs and Total Subcontractor	ctor Costs)			
Performance and Payment Bond at (Change Order Subtotal times Performance and Payment	t Bond rate)		%	
Amount will be increased de (Sum of Change Order Subtotal and Performance and Payme	ecreased [nt Bond)	unchanged by		
Days will be increased de de (Attach supporting data such as meteorological reports)	creased	unchanged by		

Construction Contract Change Order BREAKDOWN

Southern University and A&M College State Project No. WBS No. Project Name:	Breakdown No. Item No. RFI No. (or COR, CPR, etc.) Date:			-		
Contractor/Subcontractor Name:						
Direct Cost of Work : A. Labor Check here if explained on the Comment Sheet 1) J	Hourly W	age Rate	Hours	-	Total Cost
2					-	
4					-	
6 7					- -	
	Add	Labor Burden			%	
B. Material		Unit Price	Unit	Units		Total Cost
					-	
3					-	
5	- 0				-	
7 (Copies of invoices may be required.)		Add Tax @			- %	
		MATERIAL TOTAL				
C. Equipment		Unit Rate	Unit	Units		Total Cost
2					-	
4					-	
6					-	
7 (Copies of invoices may be required.)	_ □	Add Tax @			%	
		EQUIPM	ENT TO	TAL		
TOTAL DIRECT COST FOR THIS BREAK	עסס	VN∙				
(Sum A, B & C) July 2021		,				CO-3

Construction Contract Change Order BREAKDOWN COMMENT SHEET

Southern University and A&M College State Project No. WBS No. Project Name:	Date:	
Contractor/Subcontractor Name:		
A. Labor No. (From BREAKDOWN Sheet)		
B. Material		
C. Equipment		
<u> </u>		

Construction Contract Change Order UNIT PRICE BREAKDOWN

Southern University and A&M College State Project No. WBS No.	Breakdown No. Item No. RFI No. (or COR, CPR, etc.) Date:		
Project Name: Contractor/Subcontractor Name:			

Unit Price Tabulation

(Unit prices must be included in the bid or clearly defined in a standard, industry recognized pricing reference. The pricing reference shall be identified herein.)

Unit Price Description	Reference*	Unit Price	Units	Total
* Reference Legend:				

Unit Price Total:

(Sum Total column)

Southern University and A&M College Instructions for Change Order Back Up Forms

The General Conditions of the Contract for Construction, AIA Document A201, 2017 Edition, and the Supplementary Conditions provide for changes in the contract in the form of change orders. The costs of such changes must be carefully, clearly and accurately documented. The University has prepared a set of forms to be used to provide this documentation in a consistent format that is in accordance with the Contract Documents.

Change orders will typically contain one or more items of work. Each item of work will typically include work by the general contractor and/or one or more subcontractors. The documentation begins with a breakdown of the work of the contractor and each subcontractor. This is prepared using the form entitled "BREAKDOWN." One form for the General Contractor and one for each subcontractor. Each breakdown will be summarized on the form entitled "SUMMARY." Each item of work will, in turn, be summarized on the change order itself. This should be on the face of the change order.

The forms are available as a Microsoft Excel worksheet for ease of preparation, with formulas established for mark-ups and other basic mathematical operations.

These forms are to be used as provided. Any alteration to the forms may cause the change order to be rejected.

GENERAL: (Refer to Article 7 of the Supplementary and General Conditions)

Forms - There are five forms to be used for all Facility Planning and Control change orders: CHANGE ORDER form, SUMMARY, BREAKDOWN, BREAKDOWN COMMENT SHEET and UNIT PRICE BREAKDOWN. The CHANGE ORDER form is the highest level and is the official, signed document. A CHANGE ORDER form may include one or more items of work, each of which is backed up by a SUMMARY. Each SUMMARY will be backed up with one or more BREAKDOWNs. Any unusual rates, unit costs or quantities may be explained on the COMMENT SHEET. It's simple. The BREAKDOWN form must be used for the general contractor and any subcontractor, at any level, that is to get OH&P. Use as many as needed.

Unit Pricing - Labor, material and equipment breakdown is the standard method of pricing change orders for The University. However, unit pricing may be considered in some circumstances if the unit prices are clearly established such as by unit prices that were included in the bid. These prices may also be derived from a construction industry standard reference such as R.S. Means. If unit prices were included in the bid they are acceptable for pricing change order work and, in fact, must be used for any work that is included in the change order for which they were established . The UNIT PRICE BREAKDOWN is provided for this purpose.

CHANGE ORDER:

Project identification information: Complete as required. The Site Code, State ID and CFMS / SRM No(s). (contract numbers) can be obtained from the Southern University and A&M College Project Manager.

Description: This will include a list of each attached SUMMARY that makes up this change order and a brief statement of the work included in each.

New Contract Sum: Calculate the new contract amount using the original contract amount, previous change orders and the new change order. Select the appropriate word for increase, decrease or unchanged, and delete the terms that don't apply.

New Contract Completion Date and Revised Time: Calculate the new contract time using the original Contract Completion Date and Contract Time, previous changes in time and the change in time by this change order. Select the appropriate word for increase, decrease or unchanged and delete the terms that don't apply. Show days in the main column and the date in the blank indicated.

Added Building Area: Show any building area added by this change order. If none, enter "None."

RECOMMENDED: Show the Designer's name and address, sign on the line indicated as "By:" and date on the indicated line.

ACCEPTED: Show the Contractor's name and address, sign on the line indicated as "By:" and date on the indicated line.

APPROVED: For approval by Southern University and A&M College.

SUMMARY: (Refer to Article 7 of the Supplementary and General Conditions)

Item No.: Show the Item number as it will appear on the CHANGE ORDER Form. Note: This may be one of several items included in one CHANGE ORDER form.

RFI No.: Show the number of the request for information. This may be known by another name such as COR (Change Order Request,) CPR (Change Proposal Request,) etc.

Project No., WBS No., Date, Project Name. Complete as appropriate.

Contractor: Name of General Contractor.

Description of Work: Give a brief description of the work included in this Item.

General Contractor Direct Costs: Show the total General Contractor Cost from the BREAKDOWN and show the Breakdown No. in the space provided.

General Contractor Total Cost: Show the total General Contractor Cost plus the General Contractor's overhead and profit. The overhead and profit shall not exceed 8% of the Direct Cost.

Subcontractor Cost Breakdowns: List each subcontractor, Breakdown No. and Total Direct Cost (in column "A") from the attached BREAKDOWN sheets. Show the subcontractor's overhead and profit percentage in column "B" and show the calculated total of the direct cost plus the percentage of the direct cost in column "C." If the electronic version of the form is being used, column "C" will be automatically calculated. The overhead and profit shall not exceed 8% of the Total Direct Cost.

Subcontractor Direct Costs Total: Sum of column "A." This will be used to calculate the General Contractor's overhead and profit on the subcontractors' work. If the electronic version is being used, this will be an automatic calculation.

Subcontractor Direct Costs + Subcontractor OH&P: Sum of column "C." This represents the total amount that subcontractors will be paid. Automatic calculation.

General Contractor OH&P on Subcontractor Direct Cost at ____%. The contractors overhead and profit on the subcontractors' direct cost (without subcontractor OH&P.) Enter the percentage of the contractor's OH&P on the subcontractors' work (not to exceed 8%) and show the calculated total of the subcontractors' direct cost plus the percentage of the direct cost in the space. Automatic calculation.

Total Subcontractor Costs: Total of the last two spaces.

Change Order Subtotal: Total of change order except bond.

Performance and Payment Bond at ____%: Enter bond percentage (from amount provided by the contractor at the Pre-Construction Conference) and calculate the amount for the bond.

Amount will be (increased) (decreased) (unchanged) by: Add bond and calculate total change order amount. Indicate "increase," "decrease" or "unchanged", and <u>delete the terms that don't apply</u>.

Days will be (increased) (decreased) (unchanged) by: Show the number of days to be added or deleted from the contract, if any, due to changes in scope, adverse weather, unusual delays or other factors, **only** if it is proven the critical path is affected. Note that a change in scope does not necessarily indicate a change in time. Indicate "increased," "decreased" or "unchanged", and <u>delete the terms that don't apply</u>.

BREAKDOWN:

Item No. Show the Item number as it will appear on the CHANGE ORDER Form and the SUMMARY. Note: This may be one of several items included in one CHANGE ORDER form.

RFI No.: Show the number of the request for information. This may be known by another name such as COR (Change Order Request,) CPR (Change Proposal Request,) etc.

Project No., WBS No., Date, Project Name. Complete as appropriate.

Contractor: Name of General Contractor or Subcontractor.

Direct Cost of Work:

Check here if explained on the Comment Sheet: If rates, unit costs or quantities may appear unreasonable compared to standard costs or quantities the reasons may be explained on the attached comment sheet and the box checked to indicate that there is an explanation.

A. Labor: Include the "wages paid" hourly direct labor and/or foreman necessary to perform the required change. "Wages paid" is the amount actually paid the employee, not the fully burdened charge rate used in the bid, etc. Supervisory personnel in district or home office shall not be included. Do not include the project superintendent, except as permitted by Section 7.2 of Supplementary Conditions. Supervisory personnel on the job-site, but with broad supervisory responsibility shall not be included as Direct Labor, except as permitted by Section 7.2 of Supplementary Conditions. Typically there will be only one superintendent on the job and his/her time shall not be included, except as permitted by Section 7.2 of Supplementary Conditions. List by job title each person employed on the work, his/her hourly rate, the number hours work and the extended Total Cost. Do not list crews unless the rates for them are readily available in standard cost estimating references such as R. S. Means. Add the labor burden that was provided at the Pre-Construction conference and in compliance with the Contract Documents, and total the amounts in LABOR TOTAL.

B. Material: Include the acquisition cost of all materials directly required to perform the required change. List each material used in the work, the price per unit, name of the unit, the number of units used and the extended Total Cost. Add the tax rate and tax and total the amounts in MATERIAL TOTAL.

C. Equipment: Include the rental cost of equipment items necessary to perform the change. For companyowned equipment items, include documentation of internal rental rates submitted at the pre-construction conference. Charges for small tools, and craft specific tools are not allowed. List each piece of equipment used in the work, the rate by units of time (hour, day, week, etc.,) number of units of time the piece was in service on the work and the extended total cost. Add the tax rate, calculate the tax and total the amounts in EQUIPMENT TOTAL.

TOTAL DIRECT COST FOR THIS BREAKDOWN: Total of A. Labor, B. Material and C. Equipment. This is the amount that will be carried forward to the SUMMARY Sheet. This amount does **NOT** include Overhead and Profit. This will be added on the SUMMARY Sheet.

COMMENTS SHEET:

The COMMENTS SHEET uses the same heading as the SUMMARY and BREAKDOWN.

The COMMENTS SHEET includes three sections, one each for A. Labor, B. Materials and C. Equipment. These correspond to the sections in the BREAKDOWN. Each comment should be entered in the section to which it corresponds on the BREAKDOWN and numbered to correspond to the appropriate line. Comments are to used only to explain unusual rates, costs or quantities.

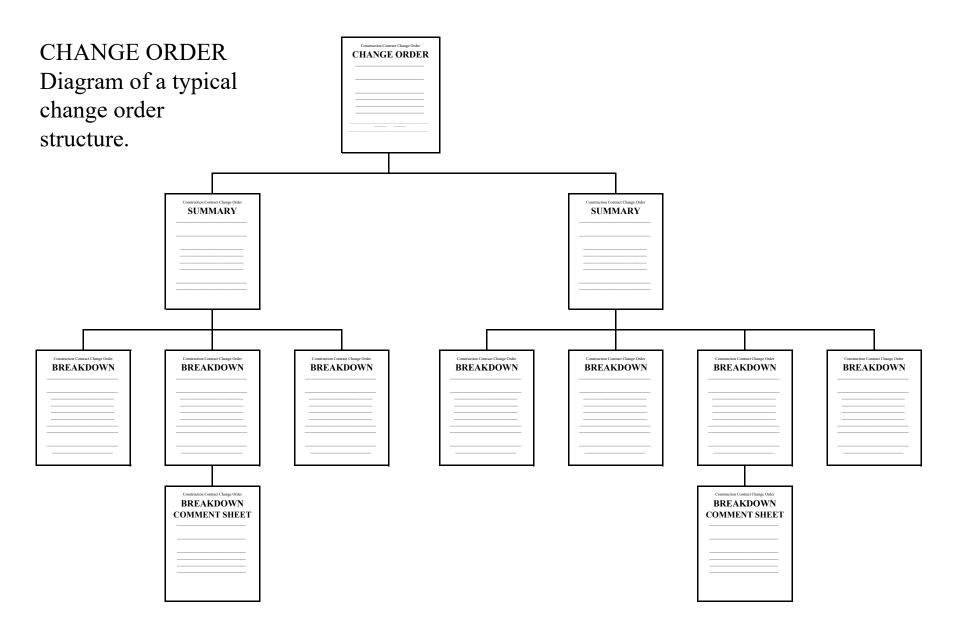
UNIT PRICE BREAKDOWN:

The UNIT PRICE BREAKDOWN uses the same heading as the BREAKDOWN.

The UNIT PRICE BREAKDOWN is similar to the BREAKDOWN.

Unit Price Tabulation: Each unit price is listed along with its corresponding price and the number of units used in the work. The price and number of units are multiplied to provide the total cost of each unit price item. The pricing reference, such as the bid form for the project or a construction industry standard reference, must be cited for each unit price. This may be more fully described in "Reference Legend,"

Unit Price Total: Sum the unit prices to obtain the total cost for unit prices.



\clubsuit not for recordation purposes \clubsuit

University of Southern and A&M College RECOMMENDATION OF ACCEPTANCE

	rsity of Southern and A&M College al Plant Building	FROM:	
	mes Hunt Street	-	
Baton	Rouge, LA 70813	-	Design Firm Name and Address
DATE:			
PROJECT NA	ME:		
			WBS No.
SITE CODE:			CFMS/SRM #:
CONTRACTO)R:		
ORIGINAL C	ONTRACT AMOUNT: \$		
	DING AREA (SQ. FEET):		
		, this project is substa	ntially complete in accordance with the Plans
-	ons to the point where it can be used	for the purpose which	h was intended. It is recommended that it be
accepted.			
DATE OF AC	CEPTANCE:		
NUMBER OF	DAYS (OVERRUN) (UNDERRUN)) (As of Acceptance I	Date)
			\$
VALUE OF P	UNCH LIST		\$
Was part of pro	oject occupied prior to Acceptance?	\Box No \Box Y	es, see attached Partial Occupancy Forms
ADA Certifica	te of Compliance Required?	\Box No \Box Y	es, see attached form.
La. Building C	ode Certificate of Compliance Requir	red? \Box No \Box Y	es, see attached form.
ROOF GUAR	-MANUF:		END DATE:
ROOFER:		START DATE:	END DATE:
		Ι	DESIGNER
FOR USE OF I	PROJECT MANAGER:		
		Signed:	PROJECT MANAGER
		I	PROJECT MANAGER
c: User Agency			
	* NOT FOR RE	CORDATION PUR	POSES *

CERTIFICATE OF COMPLIANCE

with

Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines

TO:	University of Southern and A&M College Physical Plant Building 515 James Hunt Street Baton Rouge, LA 70813	
FROM:		_
	Design Firm Name and Address	_
PROJECT NAME:		
PROJECT No.: WBS No.:		_
SITE CODE:	STATE ID:	
DATE OF ACCEPT	ANCE:	
belief, this project has	certify that, to the been constructed in compliance with the Americans v Act Accessibility Guidelines as reviewed by the fire n	

_____ Date: _____

Designer Signature

Southern University and A&M College

CERTIFICATE OF COMPLIANCE with **Louisiana Building Code for State Owned Buildings**

TO:	University of Southern and A&M College Physical Plant Building
	515 James Hunt Street
	Baton Rouge, LA 70813
FROM:	
	Design Firm or Owner/User Name and Address
PROJECT NAME:	
PROJECT No.:	
WBS No.:	
SITE CODE:	STATE ID:
DATE OF ACCEPT	ANCE:
I,	certify that, to the best of my knowl
this project has been cor	structed in compliance with the construction documents determined t

I, ______ certify that, to the best of my knowledge and belief, this project has been constructed in compliance with the construction documents determined to be satisfactory by the Southern University and A&M College

_____ Date: _____

(Signature of Designer or Owner/User)

✤ NOT FOR RECORDATION PURPOSES ◆

Southern University and A&M College PARTIAL OCCUPANCY

PROJECT NAME:

PROJECT LOCATION:

PROJECT / PART NUMBER:

CFMS / SRM No.

WBS NUMBER:

CONTRACTOR:

USER AGENCY:

The below described portion of subject project is, to the best of my knowledge and belief, complete to a point where the User desires to use in according with the Contract Documents.

DATE OCCUPIED: _____.

WARRANTY items covered by Occupancy:

			Designer	Date
			Contractor	Date
			Facility Planning and Control	Date
Punch List:	Attached			
	None			
c: User Agency, OF	RM			
	*	NOT FOR RECORDAT	ION PURPOSES 🛠	

Southern University and A&M College 4. RECOMMENDED AGENDA FOR ROOFING CONFERENCES

Project Name:			
Project Number & WBS:			
Conference Location:	Preliminary	I Pre-Application	Date: Final Inspection
Designer:			
Roofing Contractor:			
General Contractor:			
CONFERENCES ATTE	NDEES:		
NAME	ORGANIZATION	PHONE #	EMAIL ADDRESS

AGENDA FOR PRELIMINARY ROOFING CONFERENCE

PURPOSE: Establish a direct line of communication, iron out initial questions regarding the project and to review project submittal requirements.

TIMING: The meeting should be held shortly after award of the Contract and at least six weeks prior to the anticipated start of roofing. Re-Roofing Projects may combine with Pre-Const. Conf. (ITB § 15).

1. A complete set of Contract Documents (plans and specifications) to be available for review.

2. All meeting minutes to be furnished by the Designer to all parties within 7 days. Establish project record keeping procedures.

3. Review tentative progress schedule for roofing. Set approximate date.

4. Review roofing system and insulation requirements. Size (4'x4' adhered, 4'x8' Mech. Fastened) and Thickness (R-Value), Staggered Joints

5. Weather considerations as they may apply to the project roofing installation.

6. Temporary roofing guidelines for the project. Who and when, will final decision be made, if necessary.

7. Inspection and Testing Requirements:

Name of Inspection Firm: Name of inspector: Phone:

a. On-Site Inspection - Discussproject requirements.b. Laboratory Tests

8. Roof Deck:

Type and Thickness: (if Lt. Wt. Conc. has a Pull Test been done?)

Slope: Location and Type of Drains:

Tentative Schedule for Installation:

Nailers, curbs, and sheet metal must be completed prior to roofing application. Review CD Details, and discuss if raising Equip. Curbs is required or not.

9. Discuss material storage areas, dumpster location, worker parking, and equipment set-up locations. Review requirements.

10. Specific submittals from the Roofing Contractor:

- a. Material approval list
- b. Shop drawings (if any)
- c. Product material brochures and samples
- d. Manufacturer's Guarantee review for compliance with specifications (20-Year State Warranty)

e. Manuf. Assembly Letter (required for Pre-App. Conf. as well as materials on site)

11. Specific project detail discussion. (Include perimeter wall construction and rooftop mechanical equipment details, necessity of disconnecting any Exist. Rooftop Equip.)

12. Other:

13. Review above items briefly and establish date for tentative <u>Pre-Application Conference</u>. (Manuf. Assembly Letter and materials therein required on site prior to scheduling conference). Roof Manuf. Rep. and Southern University and A&M College representative to be scheduled to attend.

PURPOSE:

To verify readiness of the project structure

To walk site with Roof Manuf. Assembly Letter in hand, verifying materials on site comply.

To scan last minute details, changes or corrections

To review anticipated schedule of progress

TIMING: Following receipt of Roof Manuf. Assembly Letter, all materials on letter delivered to site, and prior to Roofing Work.

ATTENDANCE: List attendees

(Required attendees: Southern University and A&M College representative, Roof Manuf. Rep., User Agency Contact, Designer, Contractor Superintendent.)

1. Copies of approved submittals should be available for review. Are any material changes required due to availability problems or other? Reminder that formal approvals are still required.

- 2. Review minutes of Preliminary Conference.
- 3. Discuss revised Roofing Application Schedule.

4. Check equipment set-up and on-site material storage.

5. Deck Readiness:

a. Any required roof deck certifications must be in order

- b. Rooftop inspection by those in attendance
- c. Drain hookups complete

d. Curbs, nailers, roof deck penetrations, perimeter edges and mechanical equipment - should all be set and complete. Roof Drain Pipes are verified free of Demo Debris 6. Review roof system, including insulation above deck. Discuss the required application of each to the other components.

a. (2) Layers Polyiso Insulation (staggered),(1) Layer Cover Board (any special techniques required?)

b. Mechanical or adhesive attachments (Mech. Fasteners = 4'x8' or Adhesion = 4'x4' board size)

- c. Vapor Retarders
- d. Flashings
- e. Saddles and/or crickets
- f. Venting
- g. Sheet metal

7. Phase Construction Guidelines for project. Factors affecting guidelines include local practices, climate and weather considerations. Tie-offs at days end.

8. Temporary roofing final decisions.

9. Housekeeping, material handling and finished work protection requirements.

10. Inspection and testing requirements - State Roofing Consultant at Final Inspection; Roof Manuf. Inspector as required and at Final Inspection.

11. Project changes in plans, specifications or procedures to be followed - discuss and establish who can approve and how documented.

12. Contractor must provide State 2-Yr Guarantee, and perform 1 & 2 Year Inspections. Roof Manuf. must provide 20-Yr Warranty. Pre-Finished Metal Manuf. must provide 20-Year Finish Warranty.

NOTES

AGENDA FOR ROOFING FINAL INSPECTION

PURPOSE: To assure 100% completion of contract requirements.

TIMING: Prior to the Roofing Contractor concludes his work at the site.

1. Attendance must include those in attendance at the Pre-Application Conference.

- 2. Complete rooftop walk over and review:
 - a. Perimeter edges
 - b. Walls
 - c. Curbs and other equipment
 - d. Drains
 - e. Rooftop penetrations
 - f. Site cleanup
 - g. Sheet metal
 - h. Any special conditions

3. Final Punch List establishment of items to be completed. Copies to all parties. Attached to Meeting Minutes issued by Designer

4. Summary of project records. Organize for final file. Wrap up any loose ends.

5. Stress importance of Bi-Annual (and after storm) Maintenance to User-Agency (keep file for claim)

6. Discuss responsibility for roof system protection until project completed. Responsibility for coordination usually rests with General Contractor. Any damage or additional work to be conducted by original Roofing Contractor in order to keep original guarantee valid.

7. Acceptance by the state will not be issued without submittal and approval of fully executed **NOTES**

guarantees for each type of roof installed, which shall include, but not necessarily be limited to the following applicable forms, which can be found on the Instructions to Designers page of the State Website:

- a. <u>Recommendation of Acceptance (ROA)</u>: (Designer's Responsibility)
- b. <u>Letter of Concurrence</u>: Concurring in Designer's ROA (User Agency's Responsibility)
- c. <u>Roof Completion Information Form</u>: with a Roof Plan on 8-1/2"x11" of Individual State ID's or different Material Roof (Designer's Responsibility)
- d. <u>Roof Guarantee/Warranty (2)</u>: (Contractor's Responsibility)
 - i. 20-Year Manuf. Membrane Warranty (State Form in ITD § 28e; 28d for Metal Roof)
 - 2-Year Contractor Warranty R-1 (Sub & GC) or R-2 (GC) (State Forms in ITD § 28a, 28b); 28c for Metal Roof)
- e. <u>Final Cost & Const. Data Report:</u> Div. 7 Primarily, attached to "DESIGNER LETTER" E-mail when project began (Designer's Responsibility)
- f. <u>As-Builts:</u> Const. that changed from Contract Docs, Marked-up Job Prints delivered to designer (Contractor's Responsibility)
- g. <u>Final Documents delivered:</u> drawings & specs marked "*RECORD DOCUMENTS*" as Hard-copy, as well as PDF & CAAD DWG Files (include Line Weight Files) on Thumb-Drive to User Agency (Designer's Responsibility)

ROOF COMPLETION INFORMATION

Faci	lity Name:			Bu	ilding Name:		
Site Code: State I.D: Project No. & WBS:							
Roo	f Section:			Rej	nla comonte		
1. 2.	Roof Type: SBS Mod. Bit. PVC	1. 2.	Surfacing Type: Ceramic Granules Smooth Uncoated	1. 2.	Connection Type: Cold Process Hot Asphalt	1. 2.	Drainage Type: Over the Edge Roof Drains
3. 4. 5.	TPO Metal Tile	3. 4. 5.	Modified Asphalt Silicone Acrylic	2. 3. 4. 5.	Torched Asphalt Mechanical Fastener	2. 3. 4. 5.	Perimeter Gutter Internal Gutter
6. 7. 8.	Shingle Cedar Shake	6. 7. 8. 9.	Urethane Aluminum Pre-Finished Paint			Tota	al Penetrations:
	Slope:		Deck Type:		Insulation:	No.	of Plies:
1. 2. 3. 4.	1/4 in./ft. 1/8 in./ft. 1/2 in/ft.	1. 2. 3. 4. 5. 6. 7.	Structural Concrete Gypsum Metal Lt. Wt. Concrete Cement Fiber Wood	1. 2. 3. 4. 5.	Polisocyanurate Cover Board Fiberglass Wood Fiber		llation Thickness: f Area (sq. ft.)
	Iress:						ranty Beginning Date: ne as Acceptance Date)
						War	ranty Ending Date:
Roo	fing Contractor's Telephone: fing Contractor's Email:						
Roo	fing Manufacturer (20-Yea	r Stat	te Warranty):			Roo	f Warranty Number:
Add	lress:					-	inning Date: ne as Acceptance Date)
	fing Manufacturer's Telepho	ne:				End	ing Date:
Koo	fing Manufacturer's Email:	-					

ROOFING GUARANTEE R-1

OWNER:	STATE OF LOUISIANA
ADDRESS:	OFFICE OF FACILITY PLANNING AND CONTROL POST OFFICE BOX 94095 CAPITOL STATION BATON ROUGE, LOUISIANA 70804-9095
WHEREAS _	
Address	
Telephone () Email
Documents for (hereinafter cal	e "Roofing Contractor", has performed roofing and flashing in accordance with the Contrac Project / Part No, WBS No, ed the "Work") under a
	1
General Contra	tor on the Following Project:
Name of Projec	:
User Agency:	
Location/Addre	SS:
	of Building(s):
	Building I.D
Type(s) of Roo	Deck(s):
Total Roof Are	: SF; Flashing, Edge: LF; Base: LF
Date of Accept	nce:Guarantee Period: <u>2 Years</u>
Date of Expirat	on:

AND WHEREAS the Roofing Contractor has contracted (as a Subcontractor) to guarantee said work against water entry from faulty or defective materials and workmanship for the designated Guarantee period;

Roofing G	arantee R-1
Page 1 of	3
Proj No.	Pt
WBS No.	

AND WHEREAS the General Contractor, by its acceptance of the Contract for the above described project, has jointly assumed with the Roofing Contractor the obligations to the Owner of said guarantee against leaks and faulty or defective materials and workmanship;

NOW THEREFORE the Roofing Contractor and the General Contractor jointly and severally guarantee, subject to the terms and conditions herein set forth, that during the Guarantee Period they will at their own cost and expense, make or cause to be made with approved procedures and materials such repairs to or replacements of said work resulting from water entry or faults or defects of said Work as are necessary to correct faulty and defective work and as are necessary to maintain said Work in watertight conditions and further to respond on or within two (2) working days upon written notification of leaks or defects by the Owner/User Agency. Furthermore, they will at their own cost and expense maintain the roof for (2) years after acceptance, in accordance with the current edition of the <u>Roof Maintenance Manual</u> published by the Roofing Industry Educational Institute. The roof shall be inspected a minimum of twice each year, and a report prepared documenting the conditions observed at each inspection. These inspections shall be made once during the months of April or May and once during the months of September and October. Two copies of each report shall be forwarded to the Owner and User Agency.

This Guarantee is made subject to the following terms and conditions:

1. Specifically excluded from this guarantee are damages to the Work, other parts of the building and building contents caused by: A) lightning, and storm (includes hurricanes and tornadoes), hailstorm, earthquakes and other unusual phenomena of the elements; B) fire; and C) structural failures causing excessive roof deck, edgings and related roof components movement. When the Work has been damaged by any of the foregoing causes, the Guarantee will be null and void until such damage has been repaired by the Roofing Contractor, and until the cost and expense thereof has been paid by the Owner or another responsible party so designated.

2. During the Guarantee Period, if the Owner/User Agency allows alteration of the Work by anyone other than a Contractor approved in writing by the Roofing Subcontractor, General Contractor, and Roofing Material Manufacturer prior to the work being performed, including cutting, patching and maintenance in connection with penetrations, attachment of other work, and positioning of anything on the roof, this Guarantee shall become null and void upon the date of said alterations. If the Owner/User Agency engages the Roofing Contractor, prior to proceeding with said work, shall have notified the Owner/User Agency in writing, showing reasonable cause for claim that said alterations would likely damage or deteriorate the Work, thereby reasonably justifying a termination of this Guarantee.

3. During the Guarantee Period, if the original use of the roof is changed and it becomes used for, but for which it was not originally designed or specified, as a promenade, work deck, spray-cooled surface, flooded basin, or other use of service more severe than originally specified, this Guarantee shall become null and void upon the date of said change.

4. During the Guarantee Period, if any building or area of a building is changed to uses creating extremes of interior temperature and/or humidity, but for which it was not originally designed and specified, without provisions and alterations made to the building which effectively contain or control these conditions, this guarantee shall become null and void upon the date of said change.

5. The Owner/User Agency shall promptly notify the Roofing Contractor in writing of observed, known or suspected leaks, defects or deterioration, and shall afford reasonable opportunity for the Roofing Contractor to inspect the Work, and to examine the evidence of such leaks, defects or deterioration.

Roofing G	arantee R-1
Page 2 of 1	
Proj No.	Pt
WBS No.	

July 2022

6. This Guarantee is recognized to be the only guarantee of the General and Roofing Contractor on said work, and shall not operate to restrict or cut off the Owner from other remedies and recourses lawfully available to him in case of roofing failure. Specifically, this Guarantee shall not operate to relieve the Roofing Contractor of his responsibility for performance of the original work, regardless of whether the Contract was a Contract directly with the Owner or a Subcontract with the Owner's General Contractor.

IN WITNESS THEREOF, this instrument has been duly executed this day of, 20
Roofing Contractor's Signature:
Typed Name:
Representing:
Telephone (), Email
Witness:
Witness:
And has been countersigned by the General Contractor issuing the Roofing Contractor's Subcontract for said work:
Name of General Contractor:
Date: Authorized Signature:
Representing:
Typed Name:
Telephone (), Email
Witness:
Witness:

Roofing G	arantee R-1
Page 3 of 1	3
Proj No.	Pt
WBS No.	

ROOFING GUARANTEE R-2

OWNER:	STATE OF LOUISIANA			
ADDRESS:	OFFICE OF FACILITY PLANNING AND CONTROL POST OFFICE BOX 94095 CAPITOL STATION BATON ROUGE, LOUISIANA 70804-9095			
WHEREAS _				
Address				
Telephone (Email			
Documents for	he "Roofing Contractor", has performed roofing and flashing in accordance with the Contract Project / Part No, WBS No, lled the "Work") under a Contract with the Owner.			
Name of Proje	ct:			
User Agency:				
Location/Addr	ess:			
Name and Typ	e of Building(s):			
	Building I.D.			
Type(s) of Roo	of Deck(s):			
	ea:SF; Flashing, Edge:LF; Base:LF			
	tance: Guarantee Period: <u>2 Years</u>			
	tion:			

AND WHEREAS the Roofing Contractor has contracted to guarantee said work against water entry from faulty or defective materials and workmanship for the designated Guarantee period;

NOW THEREFORE the Roofing Contractor as the General Contractor guarantees, subject to the terms and conditions herein set forth, that during the Guarantee Period he will at his own cost and expense, make or cause to be made with approved procedures and materials such repairs to or replacements of said work resulting from water entry or faults or defects of said Work as are necessary to correct faulty and defective work and as are necessary to maintain said Work in watertight conditions and further to respond on or within

Roofing Guarantee R-2		
Page 1 of 3		
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WBS No.		

July 2022

two (2) working days upon written notification of leaks or defects by the Owner/User Agency. Furthermore, he will at his own cost and expense maintain the roof for (2) years after acceptance, in accordance with the current edition of the <u>Roof Maintenance Manual</u> published by the Roofing Industry Educational Institute. The roof shall be inspected a minimum of twice each year, and a report prepared documenting the conditions observed at each inspection. These inspections shall be made once during the months of April or May and once during the months of September and October. Two copies of each report shall be forwarded to the Owner and User Agency.

This Guarantee is made subject to the following terms and conditions:

1. Specifically excluded from this guarantee are damages to the Work, other parts of the building and building contents caused by: A) lightning, windstorm (includes hurricanes and tornados), hailstorm, earthquakes and other unusual phenomena of the elements; B) fire; and C) structural failures causing excessive roof deck, edgings and related roof components movement. When the Work has been damaged by any of the foregoing causes, the Guarantee will be null and void until such damage has been repaired by the Roofing Contractor, and until the cost and expense thereof has been paid by the Owner or another responsible party so designated.

2. During the Guarantee Period, if the Owner/User Agency allows alteration of the Work by anyone other than a Contractor approved in writing by the Roofing Subcontractor, General Contractor, and Roofing Material Manufacturer prior to the work being performed, including cutting, patching and maintenance in connection with penetrations, attachment of other work, and positioning of anything on the roof, this Guarantee shall become null and void upon the date of said alterations. If the Owner/User Agency engages the Roofing Contractor, prior to proceeding with said work, shall have notified the Owner/User Agency in writing, showing reasonable cause for claim that said alterations would likely damage or deteriorate the Work, thereby reasonably justifying a termination of this Guarantee.

3. During the Guarantee Period, if the original use of the roof is changed and it becomes used for, but for which it was not originally designed or specified, as a promenade, work deck, spray-cooled surface, flooded basin, or other use of service more severe than originally specified, this Guarantee shall become null and void upon the date of said change.

4. During the Guarantee Period, if any building or area of a building is changed to uses creating extremes of interior temperature and/or humidity, but for which it was not originally designed and specified, without provisions and alterations made to the building which effectively contain or control these conditions, this Guarantee shall become null and void upon the date of said change.

5. The Owner/User Agency shall promptly notify the Roofing Contractor in writing of observed, known or suspected leaks, defects or deterioration and shall afford reasonable opportunity for the Roofing Contractor to inspect the Work, and to examine the evidence of such leaks, defects or deterioration.

6. This Guarantee is recognized to be the only guarantee of the General and Roofing Contractor on said work, and shall not operate to restrict or cut off the Owner from other remedies and recourses lawfully available to him in case of roofing failure. Specifically, this Guarantee shall not operate to relieve the Roofing Contractor of his responsibility for performance of the original work, regardless of whether the Contract was a Contract directly with the Owner or a Subcontract with the Owner's General Contractor.

Roofing Guarante	ee R-2
Page 2 of 3	
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July 2022

IN WITNESS THEREOF, this instr day of	rument has been duly executed this, 20
Roofing Contractor's Signature:	
Typed Name:	
Representing:	
	Email
Witness:	
Witness:	

Roofing Guarantee	e R-2
Page 3 of 3	
Proj No	Pt
WBS No.	

MANUFACTURER'S NDL WATERTIGHTNESS MEMBRANE ROOFING SYSTEM WARRANTY

ISSUE TO:

STATE OF LOUISIANA- DOA- FACILITY PLANNING AND CONTROL

MFGR WARRANTY NUMBER:

, hereinafter referred to as "mfgr" hereby warrants to the owner, known as the State of Louisiana, hereinafter referred to as the "State" that the referenced membrane roofing assembly will remain in a watertight condition for a period of _____years. For the purpose of this warranty "watertight" or "watertightness means that the roofing system does not allow water to leak through a breach in the roofing system. Mfgr further warrants the performance of the products listed below and warrants that the material and installation of the roofing assembly is free of material and known installation defects at the time of application and that the materials listed below conform to mfgr specifications.

All products used in the roofing assembly from the deck (structural concrete, metal, LWIC, wood, etc.), up are included in this warranty regardless of whether mfgr furnished or branded the products with the exception of shop fabricated metals not furnished by mfgr. These products are to include, but not be limited to: base sheets, fasteners and plates, insulation board, cover board, asphalt, adhesives (insulation and membrane), mastics, field plies, membrane flashing plies and liquid flashing products. The roofing products are specifically listed as follows:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 9.
- 10.

In the event that the new membrane roofing assembly is installed in a recover fashion over an existing roofing assembly, the performance of the existing roofing products that remain in-place beneath the new roofing assembly are excluded from this warranty.

In the event that covered leaks occur in the roofing system that are attributable to the workmanship of the installing contractor or a defect in or failure of any of the mfgr products listed above, mfgr will make repairs required to return the roof to a watertight condition, regardless of the scope and cost of the required repairs. The State will notify mfgr within 30 days of the discovery of the leak. Should the State not make this notification within the prescribed 30 day time period, then further damage to the roofing assembly caused by the delay in notification will not be construed as a warranty repair item. Mfgr will respond to the leak notification within 10 days and once it is confirmed that the leak(s) is within the scope of mfgrs responsibilities under this warranty, mfgr will execute repairs promptly thereafter. Mfgr's failure to respond timely and make proper repairs shall enable the State to engage service of "others" to address the problem(s) at mfgr's expense assuming the cost of the repair is reasonable and the scope of the repair is limited to the remedy of the leak without jeopardizing State's protection under terms of this warranty. The State may make reasonable and customary emergency temporary repairs at its discretion and at mfgrs expense without jeopardizing the State's protection under the terms of this warranty.

The manufacturers of SBS products that are approved by the State and included in the State's list of acceptable products have agreed to a dimensional stability of the cap sheet and interply sheet of 0.2% per ASTM D 5147, section 10. 0.2% of a 33 foot roll is approximately equal to $\frac{3}{4}$ ". For the term of this warranty, SBS cap sheet shrinkage in excess of $\frac{3}{4}$ " will be repaired by the mfgr by cutting out the interply void in the "T" lap, cleaning and drying, and repair with an acceptable cap sheet product.

The following items are excluded from this warranty:

- 1. Damage to the roof caused by wind exceeding 72 mph, lightning, hail, fire or physical damage from falling or wind-blown objects
- 2. Deficient design by other than mfgr
- 3. Intentional or accidental damages to the roof, or misuse, abuse, vandalism or the likes
- 4. Leaks caused by deterioration or failure of items not included in the warranty
- 5. Modifications or alterations to the roofing assembly after completion unless done in a manner approved by mfgr
- 6. Damage to the roofing assembly after issuance of this warranty caused by excessive foot traffic or its use as a work platform or storage area
- 7. Damage to the roofing assembly caused by ponding water, which is defined as water on the surface of the roof that does not dissipate within 72 hours of average drying conditions
- 8. Consequential and incidental damages, including damage to the building or its contents
- 9. Damage to the roofing assembly caused by failure by the State to exercise reasonable care and maintenance

- 10.Damage to the roofing assembly caused by structural defects or failure or excessive movement of building components
- 11.Damage to the roofing assembly due to exposure to chemical attack, including deposits of animal fats, grease and oil
- 12. The State shall be responsible for the costs associated with the removal and replacement of any overburden, superstrata or overlays, either permanent or temporary, which include but are not limited to: structures or assemblies added after installation, fixtures or utilities on or through the roofing assembly, support platforms or bases for solar panels, garden roofs, decks, patios or any other obstacles that impede access, clear observation, investigation or repairs to the roofing system, excluding ballast or pavers or any other overburden specifically accepted by mfgr to be included within warranty coverage.

For wind related events, this warranty excludes damage to the roofing assembly where the cause includes any of the following:

- A. Failure or excessive movement of primary or secondary structural elements or roof deck, wood nailers or blocking and edge system components not furnished by mfgr
- B. Failure of walls, doors, windows, openings or other building envelope components
- C. Rooftop structures and equipment

Mfgr may have access to the roof for inspection purposes for the term of the warranty by scheduling through the appropriate State Agency.

This warranty is tendered for the benefit of the State and is not transferable or assignable without the written consent of Mfgr.

The Nineteenth Judicial District Court in and for the Parish of East Baton Rouge, State of Louisiana shall have sole jurisdiction in any action brought as a result of this warranty by any party hereto. This warranty shall be governed by and construed in accordance with the laws of the State of Louisiana.

This warranty instrument supersedes and is in lieu of any and all other expressed or implied warranties that are or may be in conflict with terms and conditions stated herein.

This warranty requires the signature of an authorized officer of Mfgr. Three fully executed copies are to be provided to the State as a prerequisite for project acceptance. The State's signature shall not be a requirement for implementation of, or cause to validate this warranty.

A separate and independent warranty shall be issued for each building or independent roof system in the case of multiple buildings or mixed roof types.

Abbreviations:

LWIC—Lightweight Insulating Concrete

ASTM—American Society for Testing and Materials

PROJECT DATA / SIGNATURE

Owner: State of Louisiana- DOA- Facility Planning and Control
Building/Project Name:
Roof Type:
No. of Squares:
Location:
La. State Building I.D.:
Site Code:
LA State Project Number:
Date of Project Acceptance and Commencement of Warranty:
Warranty End Date:
Manufacturer Name Address and Phone Number:
Authorized Manufacturer Signature:
Printed name Date
Title
Direct to:
STATE of LOUISIANA (Owner)
DIVISION OF ADMINISTRATION
Facility Planning and Control
PO Box 94095
Baton Rouge, Louisiana 70804-9095
////////// END NDL WATERTIGHTNESS WARRANTY \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 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.

1.2 SUMMARY

- A. Section Includes:
 - 1. Project information.
 - 2. Work covered by Contract Documents.
 - 3. Access to site.
 - 4. Coordination with occupants.
 - 5. Work restrictions.
 - 6. Specification and Drawing conventions.
 - 7. Miscellaneous provisions.
- B. Related Requirements:
 - 1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 **PROJECT INFORMATION**

- A. Project Identification: Southern University Baton Rouge Henry Thurman Hall Roof Replacement.
 - 1. Project Location: 8608 Robert E. Smith Boulevard, Baton Rouge, LA 70813.
- B. Owner: Southern University System.
 - 1. Owner's Representative: Wynton Johnson 225.771.5727.
- C. Architect: Holly & Smith Architects, APAC
 - 1. 2302 Magazine Street, New Orleans, LA 70130; Phone: 504.585.1315, Fax: 504.585.1316.
- D. Architect's Consultants: Architect has retained the following design professionals who have prepared designated portions of the Contract Documents:
 - 1. Asbestos Design Professional: Ritter Consulting Engineers, 2014 W. Pinhook Road, Suite 200, Lafayette, LA 70508. Phone 337-984-8498.
- E. Web-Based Project Software: Project software administered by Architect will be used for purposes of managing communication and documents during the construction stage.

1. See Section 013100 "Project Management and Coordination." for requirements for using web-based Project software.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
 - Removal of the existing coal tar built up roof with broadcast aggregate down to top of existing roof deck including some materials noted to contain hazardous material and require abatement. A new insulated SBS modified bitumen roof will be installed over the existing roof deck as per details, specifications and other Work indicated in the Contract Documents.
- B. Type of Contract:
 - 1. Project will be constructed under a single prime contract.

1.5 ACCESS TO SITE

- A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- B. Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Driveways, Walkways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.
- D. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.6 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy site and existing building(s) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.

2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

1.7 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 6 a.m. to 6 p.m., Monday through Friday, unless otherwise indicated.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
 - 2. Obtain Owner's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 - 1. Notify Owner not less than two days in advance of proposed disruptive operations.
 - 2. Obtain Owner's written permission before proceeding with disruptive operations.
- E. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.
- F. Restricted Substances: Use of tobacco products and other controlled substances on Project site is not permitted.
- G. Employee Identification: Owner will provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.
- H. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.
 - 1. Maintain list of approved screened personnel with Owner's representative.

1.8 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor.

- 2. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
- 3. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 - 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
 - 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

1.9 MISCELLANEOUS PROVISIONS

- A. Construction Parameters: Refer to drawings and specifications for the required construction parameters. The approach to how the work is executed, if outlined in these contract documents are diagrammatic representations of the approach to construction derived from the Owner ™s strategy for maintaining operations while the scope of the Work is under construction. Areas indicated as limits of the Work are the approximate location of the boundaries and are not to be construed as an absolute limit of work scope. General Contractor ™s shall acknowledge Owner requirements, field conditions, and project scheduling may alter this preliminary construction information by the time of actual performance, therefore any reliance by the General Contractor on these preliminary construction parameters are at the General Contractors own risk. Therefore, the General Contractor shall waive all claims related to delay, acceleration and/or inefficiency related to any subsequent modification of this preliminary construction parameters information.
- B. Meetings to Discuss Approach: Meet with Owner and Architect far enough in advance to coordinate takeover and initiating each construction component / Approach. Failure to coordinate and document such a meeting will result in potential delays not the fault of the Owner or Architect or any of their consultants.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for unit prices.

1.2 **DEFINITIONS**

A. Unit price is an amount incorporated into the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 **PROCEDURES**

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- A. Unit Price No. 1: Light Weight Insulated Concrete Patch and Repair for areas where less than 2" depth in thickness of top surface requires patching.
 - 1. Description: Unit cost of all materials, labor, tax, delivery, hauling and incidentals to provide, deliver and install a patching compound, as recommended by the roofing manufacturer and according to drawings and Section 075500 SBS Modified Bitumen Membrane Roofing.
 - 2. Unit of Measurement: Square Foot of installed patch and repair material.

- B. Unit Price No. 2: Light Weight Insulated Concrete Replacement with Tapered Rigid Insulation for areas where more than 2" depth of slab requires replacement.
 - 1. Description: Unit cost of all materials, labor, tax, delivery, hauling and incidentals to provide, deliver and replace Light Weight Concrete with Tapered Insulation according to drawings and Section 075500 SBS Modified Bitumen Membrane Roofing
 - 2. Unit of Measurement: Cubic Foot of installed Tapered Rigid Insulation Matching and aligning with adjacent light-weight concrete roof deck depth and slope.
 - 3.
- C. Unit Price No. 3: Installation of loose existing wire inside 1" diameter galvanized metallic conduit.
 - 1. Description: Unit cost of all materials, labor, tax, delivery, hauling and incidentals to provide, deliver and install loose existing wire inside 1" diameter galvanized metallic conduit with conduit supports at 6'-0" o.c. according to drawings and Section 077200 Roof Accessories
 - 2. Unit of Measurement: Linear Foot of installed 1" diameter galvanized metallic conduit with conduit supports at 6'-0" o.c..
 - 3.
- D. Unit Price No. 4: Additional Ponding Roof Plies.
 - 1. Description: Unit cost of all materials, labor, tax, delivery, hauling and incidentals to provide, deliver and install additional Modifoed Bitumen Roof Cover Plies according to drawings and Section 075500 SBS Modified Bitumen Membrane Roofing
 - 2. Unit of Measurement: Square Foot of Roof Ply installed to eliminate ponding present in punch list inspection.

END OF SECTION

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 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.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

1.4 **PROCEDURES**

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Provide all labor, material, equipment and incidentals as required to do the following:.
 - 1. Base Bid: Existing roof system and related roof edge flashing located within the West Roof area labeled as Alternate No. 1 shall be existing to remain.

Alternate: Existing roof system and related roof edge flashing located within the West Roof area labeled as Alternate No. 1 shall be removed and replaced with the new roof system and roof edge flashing as shown in the drawings.END OF SECTION

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.3 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on Architect's Supplemental Instruction (ASI) form included in Project Manual.

1.4 **PROPOSAL REQUESTS**

- A. Owner-Initiated Proposal Requests: **Architect** will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Change Proposal Requests issued by **Architect** are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request, or 14 days when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Quotation Form: Use [forms provided by Owner. Sample copies are included in Project Manual] [Change Proposal Quotation form included in Project Manual] [forms acceptable to Architect].

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to **Architect**.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Proposal Request Form: Use Change Proposal Quotation form included in Project Manual.
- C. Tracking of Change Proposal Requests: The Architect shall maintain the official Change Proposal Request (CPR) Log . The General Contractor is allowed to monitor and maintain their own system; however, the official contract system shall be maintained by the Architect.
 - 1. Contractor-Initiated Proposals: Assignment of a Contractor-Initiated Proposal as a Change Proposal Request shall be by the Architect, after evaluation and upon determination that the claim is valid.
- D. Change Proposal Quotations shall include only the values of labor and materials that are directly affected by the requested change. It shall not include the cost of labor and materials that are on-going during the course of the work for subcontractors, suppliers, and the General Contractor. In addition, the requirements set forth in other sections of the contract documents and not allowing the cost of off-site subcontractors, suppliers and General Contractor's expenses shall apply. The Contractor shall adhere to the following when executing a Change Proposal Quotation:
 - 1. If the work is concurrent with the ongoing construction of the project, and the work is, in the opinion of the architect, concurrent with the ongoing work in process, supervision and support personnel, including the Project Superintendent and all personnel on site shall not be included in the cost of the change.
 - 2. If extensions of time are requested in the change and the work is, in the opinion of the architect, concurrent with the ongoing work in process, extensions of time will not be granted.
 - 3. If extensions of time are requested because additional manpower is needed to execute the work and the work is, in the opinion of the architect, concurrent with the ongoing work in process, the lack of manpower will not be acceptable as a basis for an extension of time.
 - 4. In all cases, the request for any supervision expenses can only be considered when an extension of time is granted that extends work beyond the substantial completion date set at the time the request is submitted and if the work is, in the opinion of the architect, non-concurrent with the ongoing work in process.

1.5 CONTRACTOR'S RESPONSE TO PROPOSAL REQUEST

- A. The Contractor is obligated to respond to the time frames as noted on the issued Change Proposal Request Form or advise the Architect in writing of the date on which the proposal submission will be submitted. Failure to do so obligates the Contractor to respond within the time frame indicated on the Change Proposal Request Form. Should the timeframe for receipt of the change proposal quotation exceed that indicated on the Change Proposal Request form:
 - 1. The Contractor shall not have grounds for a claim for a request for an extension of time.
 - 2. The Contractor shall not have grounds for a claim for additional cost due to delay of the project.
 - 3. The Contractor shall not have grounds for a claim for additional cost or extension of time for the development of conditions manifesting as a result of failure of the Contractor to meet the timeframes stipulated.
- B. The Contractor is obligated to respond to the change request in sufficient itemized form to be properly evaluated by the Architect and the Owner. At a minimum the following shall be included in the breakdown using the forms required by the owner or as indicated within these specifications:
 - 1. Itemized labor with unit cost for each category of labor used.
 - 2. Wages shall itemize direct cost and delineate a labor burden markup for applicable payroll taxes, worker compensation insurance, unemployment compensation, and social security taxes. As a means to be specific the following is to be included in the Labor Burden calculations:
 - a. FICA
 - b. Medicare
 - c. Employer FICA and Medicare Match
 - d. Worker's Compensation
 - e. FUTA
 - f. SUTA
 - g. All other components of labor burden not listed above are considered overhead and shall be included in overhead and profit multiplier that is allowed as per the General Conditions of the Contract for Construction. No other markups for labor burden will be considered.
 - 3. Cost of materials, and supplies including the identification of each item and its cost.
 - 4. Identify each piece of machinery and equipment and its individual cost. Only include the cost of the machinery for the time period in which it is being actively used.
 - 5. Cost for estimating the change, schedule revisions, and management efforts associated with implementation of the change into the project shall not be included as line items, as they are tasks considered overhead in this contract.
- C. Failure of the Contractor to provide information to properly evaluate the cost associated with the proposed change shall result in the following:
 - 1. The Contractor shall not have grounds for a claim for a request for an extension of time.
 - 2. The Contractor shall not have grounds for a claim for additional cost due to delay of the project.
 - 3. The Contractor shall not have grounds for a claim for additional cost or extension of time for the development of conditions manifesting as a result of failure of the Contractor to meet the timeframes stipulated.

1.6 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Section 012200 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

1.7 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.8 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714 . Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract. At a minimum, the Contractor shall meet the requirements noted in Paragraph 1.5B of this section plus all itemized timesheets for labor and receipts for material.
 - 2. Owner reserves the right to monitor all construction change directives by whatever means necessary to document the work taking place. The Contractor and all subcontractors, sub-subcontractors and suppliers shall fully cooperate with the owner and the owner¢s assigned representatives in these endeavors.

1.9 CONTRACTOR'S REQUEST FOR INFORMATION (RFI)

- A. Refer to Division 01 Section "Project Management and Coordination" for RFI requirements.
- B. If the Contractor believes an RFI response warrants change in the Contract Time or the Contract Sum, he shall notify Architect in writing within ten (10) days of receipt of the RFI response. Assignment of an RFI as a Change Proposal Quotation shall be done by the Architect, after evaluation and upon determination that the Contractor's claim is valid.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 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.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
 - 1. Section 012200 "Unit Prices" for administrative requirements governing the use of unit prices.
 - 2. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.

1.3 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Coordinate line items in the schedule of values with the following:
 - a. Items required to be indicated as separate activities in Contractor's construction schedule.
 - b. Submittal Schedule
 - 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven (7) days after the Pre-Construction Conference.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's Project number.

- d. Contractor's name and address.
- e. Date of submittal.
- 2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate breakdown with the Project Manual Table of Contents. Provide multiple line items for principal subcontract amounts in excess of five (5) percent of the Contract Sum. Break out all values as follows:
 - a. Delivered cost of product with taxes paid (material).
 - b. Total installation cost with overhead and profit (labor).
 - c. Round amounts to nearest whole dollar
- 3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
- 4. Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.
- 5. Overhead Costs: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
- 6. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five(5) percent of the Contract Sum and subcontract amount.
- 7. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 - 1. The Owner reserves the right to request additional cost information breakdowns in any format necessary as may be required for their needs in getting the project completed. This request shall be submitted to the Architect for processing to the Contractor. The Contractor shall submit the requested information to the Owner, through the Architect, within fourteen days of the request by the Architect.
 - 2. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect] will return incomplete applications without action.
 - 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.

- 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
- 3. Include amounts of Change Orders issued before last day of construction period covered by application.
- 4. Submit a draft application to the architect for review prior to submitting the actual monthly application. Submit in sufficient time to allow field review by the architect and the architect's consultants. Time draft submission to coincide with scheduled monthly Owner meeting at the site.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. The contractor shall not apply for any stored materials not delivered to the site.
 - 1. If required by the Owner, provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
 - 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials. The attached supporting documentation shall include the following:
 - a. Quantity of each different material included in application.
 - b. Unit price of each different material in application.
 - c. Extended cost of each different material in application.
 - d. Signature of authorized party representing the supplier.
 - 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
 - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
 - 4. Do not apply for stored materials that are out of sequence with construction operations. The Architect's decision on this matter is final.
 - 5. Failure to follow the information contained herein shall result in immediate rejection of the whole Application for Payment.
- F. Transmittal: Submit three (3) signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit conditional final or full waivers.

- 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
- 4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
- 5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. List of subcontractors.
 - 2. Approved Schedule of Values.
 - 3. Approved Contractor's construction schedule.
 - 4. Submittal schedule (preliminary if not final).
 - 5. Copies of building permits.
 - 6. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 - 7. Certificates of insurance and insurance policies.
 - 8. Performance and payment bonds.
 - 9. Data needed to acquire Owner's insurance.
- I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
 - 1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 - 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 - 1. Evidence of completion of Project closeout requirements.
 - 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 - 3. Updated final statement, accounting for final changes to the Contract Sum.
 - 4. AIA Document G707, "Consent of Surety to Final Payment."
 - 5. Evidence that claims have been settled.
 - 6. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 - 7. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 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.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. Requests for Information (RFIs).
 - 3. Administrative and supervisory personnel.
 - 4. Digital project management procedures.
 - 5. Project meetings.
 - 6. Official Project Communications
- B. Related Requirements:
 - 1. Section 011000 "Summary of Work" for coordination and scheduling of equipment and movables by the Owner.
 - 2. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
 - 3. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 4. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

1.3 **DEFINITIONS**

- A. BIM: Building Information Modeling.
- B. RFI: Request for Information. Request from Owner, [Construction Manager,]Architect, or Contractor seeking information required by or clarifications of the Contract Documents.
- C. Letter: A written, typed, or printed communication, especially one sent in an envelope by mail or courier.
- D. Email: Messages distributed by electronic means from one computer user to one or more recipients via a network.
- E. Text Message: An electronic communication sent and received by mobile phone.
- F. Verbal Communication: The sharing of information between individuals by using speech.

1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within ten (10) 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 cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
 - 1. Post copies of list in project meeting room, in temporary field office, [in web-based Project software directory,]and in prominent location in built facility. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

- 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 to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- 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 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.

1.6 COORDINATION DRAWINGS

- A. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:
 - 1. Architect will furnish Contractor, at Architect's discretion, digital data files of Drawings for use in preparing coordination digital data files.
 - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
 - b. Digital Data Software Program: Drawings are available in Autodesk AutoCAD version 2019.
 - c. Contractor shall execute a data licensing agreement in the form of Agreement included in this Project Manual.

1.7 REQUEST FOR INFORMATION (RFI)

- A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 - 1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.
 - 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 information or interpretation and the following:
 - 1. Project name.
 - 2. Architect's and Owner's Project number.
 - 3. Date.
 - 4. Name of Contractor.
 - 5. Name of Architect.
 - 6. RFI number, numbered sequentially.
 - 7. RFI subject.
 - 8. Specification Section number and title and related paragraphs, as appropriate.
 - 9. Drawing number and detail references, as appropriate.
 - 10. Field dimensions and conditions, as appropriate.
 - 11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 - 12. Contractor's signature.
 - 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.
 - 1. Attachments shall be electronic files in PDF format.

- D. Architect's Action: Architect will review each RFI, determine action required, and respond. For standard or simple issues, allow seven (7) working days for Architect's response for each RFI. For more complicated issues as determined by the Architect, the Architect shall submit a schedule indicating when the Architect expects to take action. RFIs received by Architect after 1:00 p.m. will be considered as received the following business day.
 - 1. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 - 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt by Architect of additional information.
 - 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 Section 012600 "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 ten (10) days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log monthly. Use software log that is part of web-based Project software. Software log 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 returned without action or withdrawn.
 - 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 Chnage Proposal Request, as appropriate.
- F. 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 seven (7) days if Contractor disagrees with response.

1.8 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. General: In addition to Project superintendant, 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.
- B. Project Superintendent: General Contractor shall provide a full time on-site personnel to perform the duties of Project Superintendent for the duration of this project.

- 1. General Contractor shall designate a Project Superintendent for this project in the post-bid information prior to contract award. General Contractor shall, in designating the name of this Project Superintendent, warrant and represent that such Project Superintendent has completed two (2) projects of similar size and complexity in the capacity of Project Superintendent during the past 7 years.
- 2. Submit a resume as a component of post-bid information.
- C. Project Manager: General Contractor shall provide a full time staff member to perform the duties of Project Manager for the duration of this project.
 - 1. General Contractor shall designate the Project Manager in the post-bid information prior to contract award. General Contractor shall, in designating the name of this Project Manager, warrant and represent that such Project Manager has a minimum of 2 years of construction experience and has completed a minimum of 2 projects of at least similar size and complexity in the capacity of Project Manager in the last 7 years.
 - 2. The Project Manager shall obtain, process and if necessary execute all coordination drawings required to execute the work. This shall include all aspects of the effort so that the Project Manager is fully aware and as a result responsible for the development and proper working order of systems within this coordination effort. Failure to execute this work or to properly execute this work shall result in the general contractor being fully responsible for all modifications, repairs or other necessary work in order for provide systems that meet the specified performance requirements and to allow ease of maintenance and repair
 - 3. Submit a resume as a component of post-bid information

1.9 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Use of Architect's Digital Data Files: Digital data files of Architect's CAD drawings will be provided by Architect, at the Architect's discretion, for Contractor's use during construction.
 - 1. Digital data files may be used by Contractor in preparing coordination drawings, Shop Drawings, and Project record Drawings.
 - 2. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Contract Drawings.
 - 3. Digital Drawing Software Program: Contract Drawings are available in Autodesk AutoCAD 2019.
 - 4. Contractor shall execute a data licensing agreement in the form of Agreement included in Project Manual.
 - a. Subcontractors, and other parties granted access by Contractor to Architect's digital data files shall execute a data licensing agreement in the form of Agreement included in this Project Manual.
- B. Web-Based Project Software: The General Contractor shall be required to access and use the Architect's web-based Project software site (Project Website) for communication during construction for the activities noted below, and can be accessed at https://projects.hollyandsmith.com/UserWeb/. The Architect's Project Website shall host the information that the Architect is using for tracking the work of the contract. This information is available until final acceptance of the project to which access by the General Contractor will be provided for all information indicated below for construction communications.
 - 1. The Project Website includes the following project activities that require interface by the General Contractor:

- a. RFI forms and logs of the Architect.
- b. Submission of RFI's.
- c. Submittal forms and logs of the Architect.
- d. Process and tracking of submittals.
- e. Reminder and tracking functions issued by the Architect.
- f. Field review minutes of the Architect (Compliance Review).
- 2. The General Contractor shall become familiar with the operations of the Project Website and shall have the responsibility for continuous use of the website for the benefit of the project. This effort shall include, but is not limited to, the following:
 - a. Confirm that access has been granted for each of the functions itemized above for all assigned parties.
 - b. Become fluent with the operation of the website at a level that will allow ease of access and regular use.
 - c. Schooling all parties assigned to this project within the General Contractor¢s staff for access and use.
- 3. The Project Website is not intended to replace any General Contractor based project management software but is an enhancement to be used by the General Contractor for accessing information normally requested of the Architect in preparation for meetings, or general project management activities of the General Contractor.
- 4. The General Contractor shall use the information contained within the Project Website to update their project information in preparation for meetings, communications with the subcontractors, or other project management related activities
- C. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:
 - 1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 - 2. Name file with submittal number or other unique identifier, including revision identifier.
 - 3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

1.10 **PROJECT MEETINGS**

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
 - 1. Attendees: 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 a minimum of 10 working days prior to meeting.
 - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 - 3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three (3) days of the meeting.
- B. Preconstruction Conference: Schedule and conduct 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.

- 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. 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. Responsibilities and personnel assignments.
 - b. Tentative construction schedule.
 - c. Critical work sequencing and long lead items.
 - d. Designation of key personnel and their duties.
 - e. Lines of communications.
 - f. Use of web-based Project software.
 - g. Procedures for processing field decisions and Change Orders.
 - h. Procedures for RFIs.
 - i. Procedures for processing Applications for Payment.
 - j. Distribution of the Contract Documents.
 - k. Submittal procedures.
 - I. Use of the premises[and existing building].
 - m. Work restrictions.
 - n. Working hours.
 - o. Owner's occupancy requirements.
 - p. Responsibility for temporary facilities and controls.
 - q. Procedures for moisture and mold control.
 - r. Procedures for disruptions and shutdowns.
 - s. Construction waste management and recycling.
 - t. Parking availability.
 - u. Office, work, and storage areas.
 - v. Equipment deliveries and priorities.
 - w. Security.
 - x. Progress cleaning.
- 3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other sections and when required for 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:
 - a. Contract Documents.
 - b. Related RFIs.
 - c. Related Change Orders.
 - d. Deliveries.
 - e. Submittals.
 - f. Possible conflicts.
 - g. Compatibility requirements.
 - h. Time schedules.
 - i. Weather limitations.
 - j. Warranty requirements.
 - k. Compatibility of materials.

- I. Acceptability of substrates.
- m. Temporary facilities and controls.
- n. Space and access limitations.
- o. Testing and inspecting requirements.
- p. Installation procedures.
- q. Coordination with other work.
- r. Protection of adjacent work.
- s. Protection of construction and personnel.
- 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
- 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
- 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. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 30 days prior to the scheduled date of Substantial Completion.
 - 1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 - 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of Record Documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Requirements for preparing operations and maintenance data.
 - e. Requirements for delivery of material samples, attic stock, and spare parts.
 - f. Preparation of Contractor's punch list.
 - g. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - h. Owner's partial occupancy requirements.
 - i. Responsibility for removing temporary facilities and controls.
 - 4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Conduct progress meetings at monthly intervals.
 - 1. Coordinate dates of meetings with preparation of payment requests.
 - 2. Attendees: In addition to representatives of Owner[, Owner's Commissioning Authority] and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities within the next 30 Days shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 3. Agenda: Review and correct or approve minutes of previous progress 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. Review present and future needs of each entity present, including the following:
 - 1) Sequence of operations.
 - 2) Status of submittals.
 - 3) Deliveries.
 - 4) Off-site fabrication.
 - 5) Access.
 - 6) Site use.
 - 7) Temporary facilities and controls.
 - 8) Progress cleaning.
 - 9) Quality and work standards.
 - 10) Status of correction of deficient items.
 - 11) Field observations.
 - 12) Status of RFIs.
 - 13) Status of Proposal Requests.
 - 14) Pending changes.
 - 15) Status of Change Orders.
 - 16) Pending claims and disputes.
 - 17) Documentation of information for payment requests.
- 4. Minutes: Record and distribute the meeting minutes to each party present and to parties requiring information.

1.11 OFFICIAL PROJECT COMMUNICATIONS

- A. General: Use of letters and emails are recognized as official project communication mediums for this project.
 - 1. Under no circumstances will text messages or verbal communication be considered official project communications. Should text messages or verbal communication be used, follow up with official project communications is necessary for the information to be recognized.
 - 2. The transmittal of all procedural documents (e.g. schedules, submittals, applications for payment, RFIs, ARFIs, etc.) shall only be done through official communications mediums only.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 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.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Startup construction schedule.
 - 2. Contractor's Construction Schedule.
 - 3. Construction schedule updating reports.
 - 4. Daily construction reports.
 - 5. Material location reports.
 - 6. Site condition reports.
 - 7. Unusual event reports.

1.3 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 Activity: An activity on the critical path that 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. Baseline Schedule: The Contractor's initial CPM Progress Schedule presenting an orderly and realistic plan for completion of the entire Work of the Project. When accepted by the Owner, the Baseline Schedule becomes the initial version of the Official Progress Schedule. The Baseline Schedule is prepared in chart or graph format, consistent in all respects with the Contract Time(s) and order of Work, presented in sufficient detail to show the chronological relationship of all activities of the Project including but not limited to planned starting and completion dates of various activities, submittal of Shop Drawings and Product Data, procurement of materials and equipment, and deliveries of materials and equipment
- 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 set or sequence of predecessor/successor activities which will take the longest time to complete. The duration of the critical path is the sum of the activities' durations along the path. Thus, the critical path can be defined as the longest possible path through the network of project activities. The duration of the critical path represents the minimum time required to complete a project and contains no float.
- E. Event: The starting or ending point of an activity.
- F. Float: The number of work/calendar days an activity can be delayed without impacting the project completion date.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date. The Project "owns" float.
 - 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. Resource Loading: The allocation of manpower and equipment necessary for completing an activity as scheduled.
- H. Official Progress Schedule: The Contractor's Progress Schedule and all revisions and updates thereto, accepted by the Owner, in accordance with the requirements of the Contract Documents.
- I. Revised Official Progress Schedule: A proposed Schedule submitted with the Contractor's written request to revise the current version of the Official Progress Schedule. If the Owner accepts the Contractor's request to revise the Official Progress Schedule, it becomes the new current version of the Official Progress Schedule.
- J. Updated Official Progress Schedule: The current version of the Official Progress Schedule updated monthly to include the actual start and finish dates of activities and the percentage of completion of each activity. Actual start and finish dates must be identical to the actual start and finish dates indicated on the Contractor's Short Interval Schedule submissions.
- K. Recovery Schedule: Contractor's detailed schedule indicating how Contractor intends to recover lost time.
- L. Network Window: Also known as "fragnets" or "hammocks", Network Windows must be provided as needed to 'explode' a section of the Official Progress Schedule to show the effects of proposed changes or delays to the schedule

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. Working electronic copy of schedule file.
 - 2. PDF file.
- B. Startup construction schedule.

- 1. Submittal of cost-loaded, startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
- D. Construction Schedule Updating Reports: Submit with Applications for Payment.
- E. Daily Construction Reports: Submit at monthly intervals.
- F. Material Location Reports: Submit with Applications for Payment.
- G. Site Condition Reports: Submit at time of discovery of differing conditions.
- H. Unusual Event Reports: Submit at time of unusual event.

1.5 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, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

1.6 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
- B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final 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.
 - 2. The Project Time for completion of the entire Project, including Milestone activities, shall adhere to the start and finish times stated in the Contract Documents, unless Contractor formally requests and the Owner approves in writing earlier (advanced) time(s) of completion. Approval of such request shall be at Owner's discretion and shall be in the form of a Change Order.
- C. Activities: Treat each roof or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 15 days, unless specifically allowed by Architect.

- 2. Procurement Activities: Include procurement process activities for the following 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.
- 3. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.
- 4. Startup and Testing Time: Include no fewer than 15 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.
- 6. Punch List and Final Completion: Include not more than 45 days for completion of punch list items and final 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. Phasing: Arrange list of activities on schedule by phase.
 - 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.
 - 3. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Submittals.
 - b. Purchases.
 - c. Deliveries.
 - d. Installation.
 - e. Tests and inspections.
 - f. Startup and placement into final use and operation.
 - 4. Construction Areas: 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. Temporary enclosure and space conditioning.
 - b. Permanent space enclosure.
 - c. Completion of electrical installation.
 - d. 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. Temporary enclosure and space conditioning.
- F. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
 - 1. Unresolved issues.

- 2. Unanswered Requests for Information.
- 3. Rejected or unreturned submittals.
- 4. Notations on returned submittals.
- 5. Pending modifications affecting the Work and the Contract Time.
- G. 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 final completion percentage for each activity.
- H. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.
- I. 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.
- J. Failure of the Official Progress Schedule to include an element of the Work required for performance of this Contract, or an inaccuracy in Official Progress Schedule, shall not relieve the Contractor from responsibility for accomplishing all activities required to complete the Work of this Project and shall not constitute grounds for a claim for delay in the execution of the Work.
- K. Failure of Contractor to substantially comply with requirements of this Section 013200 shall constitute a failure by Contractor to prosecute Work with such diligence as will ensure its completion within the Contract Time and may be considered grounds for termination or other remedy by Owner pursuant to terms of this Contract.

1.7 GANTT-CHART SCHEDULE REQUIREMENTS

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's Construction Schedule within 15 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.

1.8 CPM SCHEDULE REQUIREMENTS

- A. General: Prepare network diagrams using AON (activity-on-node) format.
- B. Startup Network Diagram: Submit diagram within [14] <Insert number> days of date established for [commencement of the Work] [the Notice to Proceed] [the Notice of Award]. Outline significant construction activities for the first [90] <Insert number> days of construction. Include skeleton diagram for the remainder of the Work.
- C. CPM Schedule: Prepare Contractor's Construction Schedule using a time-scaled CPM network analysis diagram for the Work.
 - 1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than [60] <Insert number> days after date established for [commencement of the Work] [the Notice to Proceed] [the Notice of Award].
 - a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates.
 - 2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
 - 3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting[and payment request dates].
 - 4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule to coordinate with the Contract Time.
- D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.
 - 1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
 - a. Preparation and processing of submittals.
 - b. Mobilization and demobilization.
 - c. Purchase of materials.
 - d. Delivery.
 - e. Utility interruptions.
 - f. Installation.
 - g. Punch list and final completion.
 - h. Activities occurring following final completion.
 - Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
 - 3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
 - 4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
 - a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.

- E. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:
 - 1. Contractor or subcontractor and the Work or activity.
 - 2. Description of activity.
 - 3. Main events of activity.
 - 4. Immediate preceding and succeeding activities.
 - 5. Early and late start dates.
 - 6. Early and late finish dates.
 - 7. Activity duration in workdays.
 - 8. Total float or slack time.
 - 9. Average size of workforce.
 - 10. Dollar value of activity (coordinated with the schedule of values).
- F. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
 - 1. Identification of activities that have changed.
 - 2. Changes in early and late start dates.
 - 3. Changes in early and late finish dates.
 - 4. Changes in activity durations in workdays.
 - 5. Changes in the critical path.
 - 6. Changes in total float or slack time.
 - 7. Changes in the Contract Time.

1.9 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, including presence of rain or snow.
 - 7. Testing and inspection.
 - 8. Accidents.
 - 9. Meetings and significant decisions.
 - 10. Unusual events.
 - 11. Stoppages, delays, shortages, and losses.
 - 12. Emergency procedures.
 - 13. Orders and requests of authorities having jurisdiction.
 - 14. Change Orders received and implemented.
 - 15. Construction Change Directives received and implemented.
 - 16. Services connected and disconnected.
 - 17. Partial completions and occupancies.
 - 18. Substantial Completions authorized.

- B. Material Location Reports: At monthly intervals, 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. Indicate the following categories for stored materials:
 - 1. Material stored prior to previous report and remaining in storage.
 - 2. Material stored prior to previous report and since removed from storage and installed.
 - 3. Material stored following previous report and remaining in storage.
- C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.
- D. Unusual Event Reports: 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, responses by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.
 - 1. Submit unusual event reports directly to Owner within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 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.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Preconstruction photographs.
 - 2. Periodic construction photographs.
 - 3. Final completion construction photographs.

1.3 INFORMATIONAL SUBMITTALS

- A. Digital Photographs: Submit image files within seven (7) days of taking photographs.
 - 1. Submit photos by uploading to web-based project software site. Include copy of key plan indicating each photograph's location and direction.
 - 2. Identification: Provide the following information with each image description in file metadata tag:
 - a. Name of Project.
 - b. Name of Contractor.
 - c. Date photograph was taken.
 - d. Description of location, vantage point, and direction.

1.4 FORMATS AND MEDIA

- A. Digital Photographs: Provide color images in JPG format, produced by a digital camera with minimum sensor size of 12 megapixels, and at an image resolution of not less than 3200 by 2400 pixels. Use flash in low light levels or backlit conditions.
- B. Digital Images: Submit digital media as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
- C. Metadata: Record accurate date and time from camera.
- D. File Names: Name media files with date, Project area and sequential numbering suffix.

1.5 CONSTRUCTION PHOTOGRAPHS

A. General: Take photographs with maximum depth of field and in focus.

- 1. Maintain key plan with each set of construction photographs that identifies each photographic location.
- B. Preconstruction Photographs: Before commencement of demolition, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by [Architect].
 - 1. Flag construction limits before taking construction photographs.
 - 2. Take 20 photographs minimum to show existing conditions adjacent to property before starting the Work.
 - 3. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.
- C. Periodic Construction Photographs: Take minimum 50 photographs monthly coinciding with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.
- D. Final Completion Construction Photographs: Take minimum 50 photographs after date of Substantial Completion for submission as Project Record Documents. Architect will inform photographer of desired vantage points.
- E. Additional Photographs: Architect may request photographs in addition to periodic photographs specified. Additional photographs will be paid for by Change Order and are not included in the Contract Sum.
 - 1. Three days' notice will be given, where feasible.
 - 2. In emergency situations, take additional photographs within 24 hours of request.
 - 3. Circumstances that could require additional photographs include, but are not limited to, the following:
 - a. Special events planned at Project site.
 - b. Immediate follow-up when on-site events result in construction damage or losses.
 - c. Photographs to be taken at fabrication locations away from Project site. These photographs are not subject to unit prices or unit-cost allowances.
 - d. Substantial Completion of a major phase or component of the Work.
 - e. Extra record photographs at time of final acceptance.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Administrative and procedural requirements for submittals.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.3 SUBMITTAL FORMATS

- A. Submittal Information: Include the following information in each submittal:
 - 1. Project name.
 - 2. Date.
 - 3. Name of Architect.
 - 4. Name of Contractor.
 - 5. Name of firm or entity that prepared submittal.
 - 6. Names of subcontractor, manufacturer, and supplier.
 - 7. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier; and alphanumeric suffix for resubmittals.
 - 8. Category and type of submittal.
 - 9. Submittal purpose and description.
 - 10. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
 - 11. Drawing number and detail references, as appropriate.
 - 12. Indication of full or partial submittal.
 - 13. Location(s) where product is to be installed, as appropriate.
 - 14. Remarks.
 - 15. Signature of transmitter.
- B. Options: Identify options requiring selection by Architect.
- C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

D. Submittals for Utilizing Web-Based Project Management Software: Prepare submittals as PDF files, or other format indicated by Project management software.

1.4 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 - 1. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project management software website. Enter required data in web-based software site to fully identify submittal.
- B. Architect's Digital Data Files: Electronic copies of CAD Drawings of the Contract Drawings may be provided by Architect, at the Contractor's written request, for Contractor's use in preparing submittals.
 - 1. Architect will furnish, at their discretion, digital data drawing files of the Contract Drawings requested in writing by the Contractor for use in preparing Shop Drawings.
 - a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
 - b. Contractor shall execute an Electronic Data Licensing agreement. Form of agreement shall be provided by the Architect at time of Contractor's written request.
- C. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 - 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
- D. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - 2. Resubmittal Review: Allow 15 days for review of each resubmittal.
- E. Resubmittals: Make resubmittals in same form as initial submittal.
- F. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- G. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp and/or transmittal.

1.5 SUBMITTAL REQUIREMENTS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's written recommendations.
 - d. Manufacturer's installation instructions.
 - e. Standard color charts.
 - f. Statement of compliance with specified referenced standards.
 - g. Application of testing agency labels and seals.
 - h. Notation of coordination requirements.
 - 4. Submit Product Data before Shop Drawings, and before or concurrent with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data unless submittal based on Architect's digital data drawing files is otherwise permitted.
 - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Dimensions.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Compliance with specified standards.
 - f. Notation of coordination requirements.
 - g. Notation of dimensions established by field measurement.
 - h. Relationship and attachment to adjoining construction clearly indicated.
- C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other materials.
 - 1. Identification: Permanently attach label on unexposed side of Samples that includes the following:
 - a. Project name and submittal number.
 - b. Generic description of Sample.
 - c. Product name and name of manufacturer.
 - d. Number and title of applicable Specification Section.
 - e. Specification paragraph number and generic name of each item.
 - 2. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
 - 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

- 4. Samples for Initial Selection: Submit manufacturer's physical color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal electronically with options selected.
- 5. It is a request of this Contract for the General Contractor to provide all color samples to the Architect before action can be taken on selection of colors/finishes. Upon receipt of the complete package, the Architect shall provide final selections within 45 days. The General Contractor shall allow sufficient time for this to take place in his schedule.
- D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
- E. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
- F. Certificates:
 - 1. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
 - 2. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- G. Test and Research Reports:
 - 1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for substrate preparation and primers required.
 - 2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
 - 3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
 - 4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
 - 5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a gualified testing agency.
 - 6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

1.6 CONTRACTOR'S REVIEW

- A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
 - 1. Architect will not review submittals received from Contractor that do not have Contractor's review and approval.

1.7 ARCHITECT'S REVIEW

- A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required, and return it.
 - 1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action, as follows:
 - a. Reviewed, No Exceptions.
 - b. Reviewed, Note Comments.
 - c. Revise and Resubmit.
 - d. Rejected, Resubmit.
 - e. Review is only for general conformance with the design concept and the information in the Contract Documents. Comments made as part of this review do not relieve Contractor from compliance with the Contract Documents, applicable codes, and laws, all of which have priority over this submittal. Architect does not warrant or represent that the information within the submittal is either accurate or complete. Contractor is responsible for: all dimensions, quantities, and performance requirements, which shall be confirmed and correlated at the job site; all information that pertains soley to fabrication processes or to techniques of construction; all coordination of the Work with that of other trades; and performing the Work in a satisfactory manner.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- D. Architect will return without review submittals received from sources other than Contractor.
- E. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)



ELECTRONIC DOCUMENT REQUEST

DATE:				
CONTRACTOR:				
PROJECT:				
PROJECT NO:				
	and understands Electronic Data Agreement: ronic Data Agreement attached: Yes No No			
Purpose of Electronic Data Use: Shop Drawings As-Built Drawings				
Contractor is request	ing an electronic copy of the following files:			
Sheet No.	Description			

ELECTRONIC DATA AGREEMENT

CONTRACTOR:

PROJECT:

Holly & Smith Architects (H/S) is providing electronic files for the contractor's convenience and use in the preparation of shop drawings, bid documents, as-built drawings, or other use as noted on the Electronic Document Request related to the above referenced project, subject to the following terms and conditions:

H/S electronic files were prepared in Autodesk Revit 2023 and shall be exported to AutoCAD .dwg electronic format for transmission to the Contractor, and we make no representation as to the compatibility of these files with your hardware or your software.

Data contained on these electronic files is part of H/S instruments of professional service and shall not be used by the Contractor, or anyone else receiving this data through or from the Contractor, for any purpose other than as a convenience in the preparation of shop drawings, as-built drawings, or other use as noted on the Electronic Document Request for the referenced project. Any other use or reuse by the contractor or by others will be at the contractor's sole risk and without liability or legal exposure to H/S. The contractor agrees to make no claim and hereby waives, to the fullest extent permitted by law, any claim or cause of action of any nature against H/S, its officers, directors, employees, agents, or sub-consultants which may arise out of, or in connection with, the contractor's use of the electronic files.

Furthermore, the contractor shall, to the fullest extent permitted by law, indemnify and hold harmless H/S from all claims, damages, losses, liabilities, and expenses, including attorney's fees and defense costs arising out of or resulting from use of these electronic files.

These electronic files are not Contract Documents. Significant differences may exist between these electronic files and corresponding hard copy contract documents due to addenda, change orders, or other revisions. Additional related work and materials may be shown on other drawings or may be required by the specifications. H/S makes no representation regarding the accuracy, completeness, or suitability of the electronic files received. Drawings may not be drawn to scale. In the event that a conflict arises between the issued contract documents and the electronic files, the issued contract documents shall govern. The contractor is responsible for determining if any conflict exists. By use of these electronic files, the contractor is not relieved of the duty to fully comply with the contract documents, including and without limitation, the need to check, confirm, and coordinate all dimensions and details, take field measurements, verify field conditions, and coordinate work with that of other contractors for the project.

Because of the potential that the information presented on the electronic files can be modified, unintentionally or otherwise, H/S removes its ownership and/or involvement for each electronic display.

Under no circumstances shall delivery of the electronic files for use by you be deemed a sale by H/S, and H/S makes no warranties, either expressed or implied, of merchantability and fitness for any particular purpose. In no event shall H/S be liable for any loss of profit or any consequential damages.

Because data stored in electronic media format can deteriorate or be modified inadvertently, the contractor agrees to perform acceptance tests on the electronic files within 30 days of receipt, after which the contractor shall be deemed to have accepted the data thus transferred. Any data errors detected within the 30-day acceptance period will be corrected by H/S.

Accepted by:

Print Name and Company

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 2. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections:
 - 1. Divisions 02 through 49 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- D. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- E. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

- F. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- G. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five (5) previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities, material types or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal or conflicting requirements relative to materials, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

1.6 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and if not directly paid by the Contractor, the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control activities required of the Contractor by authorities having jurisdiction, whether specified or not.

- 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
- 2. Notify testing agencies at least twenty-four (24) hours in advance of time when Work that requires testing or inspecting will be performed.
- 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
- 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
- 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a manufacturer's authorized representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Proceedures."
- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 - 6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 4. Facilities for storage and field curing of test samples.
 - 5. Delivery of samples to testing agencies.
 - 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 7. Security and protection for samples and for testing and inspecting equipment at Project site.

- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- H. Building Envelope: It is the intent of the Contract Documents that the Project be constructed free of water infiltration, excessive air infiltration, excessive moisture or relative humidity build-up in building materials and that continuous thermal barriers against excessive heat loss or gain are maintained. The proper application of certain materials such as vapor permeable air barriers, flexible and rigid flashing and building insulation are essential to ensure this performance. It is the responsibility of the Contractor to review the Contract Documents carefully and notify the Architect in writing of any concerns or recommendations in regard to potential problem areas. It is also the responsibility of the Contractor, during construction, to execute and coordinate the work of his own forces and among all trades to ensure that the integrity of the continuous waterproofing, air barrier and thermal envelope is installed and maintained in strict accordance with manufacturer's recommendations using sound construction practices and workmanlike procedures.

1.7 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections as required by authorities having jurisdiction as the responsibility of the Owner, and as follows:
 - 1. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - 2. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 - 3. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 - 4. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 - 5. Retesting and reinspecting corrected work.

1.8 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: submit quality-control plan within ten (10) days of Notice to Proceed, and not less than five (5) prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's construction schedule.
- B. Quality-Control Personnel Qualifications: Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for project.
 - 1. Project quality-control manager may also serve as Project superintendant.
- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.

- D. Testing and Inspection: Include in quality-control plan a comprehensive schedule of Work requiring testing or inspection, including the following:
 - 1. Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
 - 2. Special inspections required by authorities having jurisdiction and indicated on the "Statement of Special Instructions."
 - 3. Owner-performed tests and inspections indicated in the Contract Documents.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring Work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. Protect construction exposed by or for quality-control service activities.
- B. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations, List: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities in the following list. Abbreviations and acronyms not included in this list are to mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States." The information in this list is subject to change and is believed to be accurate as of the date of the Contract Documents.
 - 1. ACI American Concrete Institute; www.concrete.org.
 - 2. AIA American Institute of Architects (The); www.aia.org.
 - 3. AISC American Institute of Steel Construction; www.aisc.org.
 - 4. AISI American Iron and Steel Institute; www.steel.org.
 - 5. ANSI American National Standards Institute; www.ansi.org.
 - 6. BIA Brick Industry Association (The); www.gobrick.com.
 - 7. CRRC Cool Roof Rating Council; www.coolroofs.org.
 - 8. CSI Construction Specifications Institute (The); www.csiresources.org.
 - 9. FM Approvals FM Approvals LLC; www.fmapprovals.com.
 - 10. FM Global FM Global; www.fmglobal.com.
 - 11. ICC International Code Council; www.iccsafe.org.
 - 12. MPI Master Painters Institute; www.paintinfo.com.
 - 13. NAAMM National Association of Architectural Metal Manufacturers; www.naamm.org.
 - 14. NADCA National Air Duct Cleaners Association; www.nadca.com.
 - 15. NAIMA North American Insulation Manufacturers Association; www.insulationinstitute.org.
 - 16. NECA National Electrical Contractors Association; www.necanet.org.
 - 17. NEMA National Electrical Manufacturers Association; www.nema.org.
 - 18. NETA InterNational Electrical Testing Association; www.netaworld.org.
 - 19. NFPA National Fire Protection Association; www.nfpa.org.
 - 20. NFPA NFPA International; (see NFPA).
 - 21. NRCA National Roofing Contractors Association; www.nrca.net.
 - 22. SDI Steel Deck Institute; www.sdi.org.
 - 23. SEI/ASCE Structural Engineering Institute/American Society of Civil Engineers; (see ASCE).
 - 24. SMACNA Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
 - 25. UL Underwriters Laboratories Inc.; www.ul.org.
- B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.
 - 1. ICC International Code Council; www.iccsafe.org.
 - 2. ICC-ES ICC Evaluation Service, LLC; www.icc-es.org.

- C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities in the following list. Information is subject to change and is up to date as of the date of the Contract Documents.
 - 1. OSHA Occupational Safety & Health Administration; www.osha.gov.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Section:
 - 1. Division 01 Section "Summary" for work restrictions and limitations on utility interruptions.
 - 2. Division 01 Section "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
 - 3. Division 01 Section "Execution Requirements" for progress cleaning requirements.
 - 4. Divisions 02 through 49 for temporary heat, ventilation, and humidity requirements for products in those Sections.
- C. Temporary Utilities include, but are not limited to, the following:
 - 1. Sanitary facilities, including toilets, wash facilities, and drinking-water facilities.
 - 2. Electric power service.
- D. Support facilities include, but are not limited to, the following:
 - 1. Dewatering facilities and drains.
 - 2. Project identification and temporary signs.
 - 3. Waste disposal facilities.
 - 4. Storage and fabrication sheds.
 - 5. Lifts and hoists.
 - 6. Temporary stairs.
 - 7. Construction aids and miscellaneous services and facilities.
- E. Security and protection facilities include, but are not limited to, the following:
 - 1. Stormwater control.
 - 2. Site enclosure fence and gates. (Additional as required and maintenance of existing)
 - 3. Security enclosure and lockup.
 - 4. Barricades, warning signs, and lights.
 - 5. Temporary enclosures including overhead protection at pedestrian egress paths and protection of interior equipment and furnishings.
 - 6. Temporary partitions.

1.3 DEFINITIONS

A. Permanent Enclosure: As determined by Architect, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary enclosures.

1.4 USE CHARGES

- A. General: Cost or use charges for temporary facilities are not chargeable to Owner or Architect and shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
 - 1. Owner's construction forces.
 - 2. Occupants of Project.
 - 3. Architect.
 - 4. Testing agencies.
 - 5. Personnel of authorities having jurisdiction.

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- C. Electric Power Service: Pay electric power service use charges, whether metered or otherwise, for electricity used by all entities engaged in construction activities at Project site. Coordinate transfer from temporary power to permanent power with the Owner. Contractor is responsible for all power use charges until the building is substantially complete.
- D. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.5 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
 - 1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
 - 2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
- C. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
 - 1. Locations of dust-control partitions at each phase of work.
 - 2. HVAC system isolation schematic drawing.
 - 3. Location of proposed air-filtration system discharge.
 - 4. Waste handling procedures.
 - 5. Other dust-control measures.

1.6 QUALITY ASSURANCE

- A. Standards: Comply with ANSI A10.6, NECA's "Temporary Electrical Facilities," and NFPA 241.
 - 1. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the ADA Accessibility Guidelines .

1.7 PROJECT CONDITIONS

- A. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
 - 1. Keep temporary services and facilities clean and neat.
 - 2. Relocate temporary services and facilities as required by progress of the Work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Architect. Provide materials suitable for use intended.
- B. Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide concrete or galvanized steel bases for supporting posts.
- C. Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry••.
- D. Tarpaulins: Fire-resistive labeled with flame-spread rating of 15 or less.
- E. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.
- F. Dust-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches.

2.2 TEMPORARY FACILITIES AND EQUIPMENT

- A. General: Provide equipment suitable for use intended.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

- C. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- D. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- E. Drinking-Water Fixtures: Drinking-water fountains or Containerized, tap-dispenser, bottled-water drinking-water units, including paper cup supply.
 - 1. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 deg F.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

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

3.2 TEMPORARY UTILITY INSTALLATION

- A. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
 - 1. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
 - 2. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy.
 - 3. Drinking-Water Facilities: Provide bottled-water, drinking-water units.
 - 4. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel who handle materials that require wash up. Dispose of drainage properly. Supply cleaning compounds appropriate for each type of material handled.
 - a. Provide safety showers, eyewash fountains, and similar facilities for convenience, safety, and sanitation of personnel.
- B. Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnecting means, automatic ground-fault interrupters, and main distribution switchgear.
 - 1. Install electric power service underground, unless overhead service must be used.

- 2. Install power distribution wiring overhead and rise vertically where least exposed to damage.
- 3. Connect temporary service to power source, as directed by electric company officials.
- 4. Contractor shall pay all use charges.
- C. Electric Distribution: Provide receptacle outlets adequate for connection of power tools and equipment.
 - 1. Provide waterproof connectors to connect separate lengths of electrical power cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
 - 2. Provide warning signs at power outlets other than 110 to 120 V.
 - 3. Provide metal conduit, tubing, or metallic cable for wiring exposed to possible damage. Provide rigid steel conduits for wiring exposed on grades, floors, decks, or other traffic areas.
 - 4. Provide metal conduit enclosures or boxes for wiring devices.
 - 5. Provide 4-gang outlets, spaced so 100-foot extension cord can reach each area for power hand tools and task lighting. Provide a separate 125-V ac, 20-A circuit for each outlet
- D. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
 - 2. Provide one 100-W incandescent lamp per 500 sq. ft., uniformly distributed, for general lighting, or equivalent illumination.
 - 3. Provide one 100-W incandescent lamp every 50 feet in traffic areas.
 - 4. Provide one 100-W incandescent lamp per story in stairways and ladder runs, located to illuminate each landing and flight.
 - 5. Install exterior-yard site lighting that will provide adequate illumination for construction operations, traffic conditions, and signage visibility when the Work is being performed

3.3 SUPPORT FACILITIES INSTALLATION

- A. Temporary Use of Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
 - 1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
 - 2. Prepare subgrade and install subbase and base for temporary roads and paved areas according to Division 31 Section "Earth Moving."
 - 3. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.
 - 4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course according to Division 32 Section "Asphalt Paving."

- B. Traffic Controls: Provide temporary traffic controls at junction of temporary roads with public roads. Include warning signs for public traffic and "STOP" signs for entrance onto public roads. Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- D. Dewatering Facilities and Drains: The contractor shall be cognizant of the importance of proper surface drainage. The contractor's lack of maintenance of drainage during construction may affect the ability to achieve the specified compaction requirements on initial and subsequent lifts of fill placed on the sub grade for foundations or other surface improvements. This condition will be exacerbated by wet weather, particularly if the contractor allows surface drainage to enter and pond in and around disturbed or existing soils. Soils that are disturbed by construction traffic or other activities will increase the moisture content of the soil and can cause reduction in the soil strength and support characteristics. In addition these activities will cause the soil to dry less and thus will significantly retard the progress of grading and compaction activities. In these conditions the contractor shall be fully responsible for employing methods that will create optimum conditions for construction.
 - 1. Comply with requirements in applicable Division 2 Sections for temporary drainage and dewatering facilities and operations not directly associated with construction activities included in individual Sections. Where feasible, use same facilities.
 - 2. Maintain Project site, excavations, and construction free of water.
 - 3. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 - 4. Before connection and operation of permanent drainage piping system, provide temporary drainage where roofing or similar waterproof deck construction is completed.
 - 5. Maintain, repair and/or replace as required the existing storm water ump system until deemed by the contractor as no longer needed.
 - 6. Under no circumstances will wet soil or other site conditions that were a result of construction activities be grounds for extensions of time
- E. Project Identification and Temporary Signs: Prepare Project identification and other signs in sizes indicated. Install signs where indicated to inform public and persons seeking entrance to Project. Do not permit installation of unauthorized signs.
 - 1. Engage an experienced sign painter to apply graphics for Project identification signs. Comply with details indicated. Obtain rendering digital file from architect. Other use of this file without written consent of the architect is prohibited.
 - 2. Prepare temporary signs to provide directional information to construction personnel and visitors.
 - 3. Construct signs of exterior-type Grade B-B high-density concrete form overlay plywood in sizes and thicknesses indicated. Support on posts or framing of preservative-treated wood or steel.
 - 4. Paint sign panel and applied graphics with exterior-grade alkyd gloss enamel over exterior primer. Obtain rendering digital file from architect. Other use of this file without written consent of the architect is prohibited.
 - 5. Obtain and install image of building (digital artwork by architect).
- F. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.

- 1. If required by authorities having jurisdiction, provide separate containers, clearly labeled, for each type of waste material to be deposited.
- G. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished, permanent stairs with protective covering of plywood or similar material so finishes will be undamaged at time of acceptance.
- H. Lifts and Hoists: Provide facilities for hoisting materials and personnel. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects. Avoid using tools and equipment that produce harmful noise. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near Project site.
- B. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
 - 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
 - 2. Set fence posts in a manner to last throughout the construction period.
 - 3. Provide gates in sizes and at locations necessary to accommodate delivery vehicles and other construction operations.
 - 4. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Provide Owner and Architect with one set of keys.
- C. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- D. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including flashing red or amber lights.
 - 1. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch- thick exterior plywood.
- E. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- F. Covered Walkway: Erect protective, covered walkway for passage of individuals through or adjacent to Project site. Coordinate with entrance gates, other facilities, and obstructions. Comply with regulations of authorities having jurisdiction and requirements indicated on Drawings.
 - 1. Construct covered walkways using scaffold or shoring framing.

- 2. Provide overhead decking, protective enclosure walls, handrails, barricades, warning signs, exit signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage.
- 3. Paint and maintain appearance of walkway for duration of the Work.
- G. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner and tenants from fumes and noise.
 - 1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
 - a. Provide polyethylene sheet over fire-retardant treated plywood. Overlap and tap full length of joints.
 - 2. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
 - 3. Insulate partitions to control noise transmission to occupied areas.
 - 4. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
 - 5. Protect air-handling equipment.
 - 6. Provide walk-off mats at each entrance through temporary partition.
- H. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
 - 2. Vertical Openings: Close openings of 25 sq. ft. or less with plywood or similar materials.
 - 3. Horizontal Openings: Close openings in floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
 - 4. Install tarpaulins securely using fire-retardant-treated wood framing and other materials.
 - 5. Where temporary wood or plywood enclosure exceeds 100 sq. ft. in area, use fire-retardant-treated material for framing and main sheathing.
 - 6. Insulate partitions to control noise transmission to occupied areas.
 - 7. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
 - 8. Protect air-handling equipment.
 - 9. Provide walk-off mats at each entrance through temporary partition.
- I. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 - 1. Provide fire extinguishers, installed on walls on mounting brackets, visible and accessible from space being served, with sign mounted above.
 - a. Field Offices: Class A stored-pressure water-type extinguishers.
 - b. Other Locations: Class ABC dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for exposures.
 - c. Locate fire extinguishers where convenient and effective for their intended purpose; provide not less than one extinguisher on each floor at or near each usable stairwell.

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- 2. Store combustible materials in containers in fire-safe locations.
- 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for firefighting. Prohibit smoking in hazardous fire-exposure areas.
- 4. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
- 5. Permanent Fire Protection: At earliest feasible date in each area of Project, complete installation of permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.
- 6. Develop and supervise an overall fire-prevention and first-aid fire-protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
- 7. Provide hoses for fire protection of sufficient length to reach construction areas. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
 - 1. Protect porous materials from water damage.
 - 2. Protect stored and installed material from flowing or standing water.
 - 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 - 4. Remove standing water from decks.
 - 5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
 - 1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 - 2. Keep interior spaces reasonably clean and protected from water damage.
 - 3. Periodically collect and remove waste containing cellulose or other organic matter.
 - 4. Discard or replace water-damaged and wet material.
 - 5. Do not install material that is wet.
 - 6. Discard, replace or clean stored or installed material that begins to grow mold.
 - 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
 - 1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 - 2. Use permanent HVAC system to control humidity when ready for operation and after approval by Owner.
 - 3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

- a. Hydroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 24 hours are considered defective.
- b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record daily readings over a forty-eight hour period. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
- c. Remove materials that cannot be completely restored to their manufactured moisture level within 24 hours.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage caused by freezing temperatures and similar elements.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 - 2. Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations
- C. Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Section:
 - 1. Division 01 Section "Closeout Procedures" for submitting warranties for Contract closeout.
 - 2. Divisions 02 through 49 Sections for specific requirements for warranties on products and installations specified to be warranted.
 - 3. Refer to other sections of the Contract Documents for prior approval requirements.

1.3 DEFINITIONS

- Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Prior Approvals: Acceptance of a product or material submitted before opening of bids, in accordance with the Contract Documents, by the Contractor or a potential supplier which are comparable to those specified, but which are not included in the list of approved products and/or manufacturers within the bid documents.

D. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

- A. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.
- B. Product Prior Approval Submittal: Comply with requirements in this Section and in Division 01 Section œœSubmittal Procedures.••
 - 1. Prior Approval Request Form: Use facsimile of form provided in the Project Manual at the end of this Section. Architect may provide electronic copy of form upon request
- C. Product Substitution Submittal: Comply with requirements in this Section and in Division 01 Section Submittal Procedures.••
 - 1. Substitution Request Form: Use facsimile of form provided in the Project Manual at the end of this Section. Architect may provide electronic copy of form upon request

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
 - 1. Store products to allow for inspection and measurement of quantity or counting of units.
 - 2. Store materials in a manner that will not endanger Project structure.

- 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
- 4. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
- 5. Store cementitious products and materials on elevated platforms.
- 6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
- 7. Protect stored products from damage and liquids from freezing.

1.7 **PRODUCT WARRANTIES**

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. Manufacturer's Warranty: Preprinted written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner or to extend time limit provided by manufacturer's warranty.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 - 3. Refer to Divisions 02 through 49. Sections for specific content requirements and particular requirements for submitting special warranties.
 - 4. Submit a draft for approval before final execution.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Where products are accompanied by the term "as selected," Architect will make selection.
 - 4. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.

- B. Product Selection Procedures:
 - 1. Products: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Prior approval of comparable products will be considered in accordance with the Contract Documents. Substitutions for Contractor's convenience [will] [will not] be considered, unless otherwise indicated.
 - 2. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Prior approval of comparable products will be considered in accordance with the Contract Documents. Substitutions for Contractor's convenience will not be considered, unless otherwise indicated.
 - 3. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Where specifications name a product and do not include a list of manufacturers, provide the product or its prior approved equal.
 - 4. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements, provided it is prior approved
 - 5. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements, provided it is prior approved.
 - 6. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system.
- C. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with specified requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration, General: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
 - 1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 - 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - 3. Evidence that proposed product provides specified warranty.
 - 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
- B. Prior Approval Requests: Architect will consider requests for prior approvals if received no later than seven (7) days prior to bid date.
 - 1. Conditions upon which the Architect will consider a potential Contractor¢¢s or supplier¢¢s request for prior approval include, but are not limited to, the following:

- a. Requested product or material does not require revisions to the Contract Documents.
- b. Requested product or material is consistent with the Contract Documents and will produce indicated results.
- c. Requested product or material will not adversely affect Contractor's construction schedule.
- d. Requested product or material has received necessary approvals of authorities having jurisdiction.
- e. Requested product or material is compatible with other portions of the Work.
- f. Requested product or material provides specified warranty.
- C. Substitution Requests: Architect will consider requests for substitution if received within 60 days after the Notice to Proceed.
 - 1. Conditions upon which the Architect will consider Contractor¢¢s request for substitution include, but are not limited to, the following:
 - Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Requested substitution will not adversely affect Contractor's construction schedule.
 - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - f. Requested substitution is compatible with other portions of the Work.
 - g. Requested substitution has been coordinated with other portions of the Work.
 - h. Requested substitution provides specified warranty.
 - i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
 - Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven (7) days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.

PART 3 - EXECUTION (Not Used)



PRIOR APPROVAL REQUEST

Project:	H/S Project No.:
	Owner Project No.:
From:	
	Date:
Specification Title:	Description:
Section: Page:	Article/Paragraph:
Proposed Product for Prior Approval:	
Manufacturer: Address:	Phone:
Trade Name:	Model No.:
Installer: Address:	Phone:
History: New product 2-5 years old	□ 5-10 yrs old □ More than 10 years old
Differences between proposed product and spe	ecified product:
Supporting Data Attached: Drawings] Product Data 🗌 Samples 🗌 Tests 🔤 Reports 📄 Other
 Same warranty will be furnished for propose Same maintenance service and source of Proposed product will have no adverse effe Cost data as stated above is complete. quently become apparent are to be waived Proposed substitution does not affect dime Payment will be made for changes to built the substitution. 	replacement parts, as applicable, is available. ect on other trades and will not affect or delay progress schedule. Claims for additional costs related to accepted substitution which may subse- l.
Submitted by:	Address:
Firm:	
Signature:	Telephone:
Attachments:	—

A/E's REVIEW AND ACTION						
 Product approved - Make submittals in accordance with Specification Section 01330. Product approved as noted - Make submittals in accordance with Specification Section 01330. Product rejected - Use specified materials. Prior Approval Request received too late - Use specified materials. 						
Signed by:		Date:				
Additional Comments:	Contractor	Subcontractor Supplier	🗌 Manufacturer 🗌 A/E 🗌			

SECTION 017300 – EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Installation of the Work.
 - 4. Cutting and patching.
 - 5. Progress cleaning.
 - 6. Starting and adjusting.
 - 7. Protection of installed construction.
 - 8. Correction of the Work.
 - 9. Use Sound Construction Practices

1.3 SUBMITTALS

A. As-Built Survey: Submit three (3) copies showing the Work performed and record survey data.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SUPERVISION AND CONSTRUCTION PROCEDURES

- A. The Contractor shall be responsible for implementing pre-installation planning and construction practices that are consistent with current industry standards. This requirement includes complete responsibility by the contractor to guard against defects in the work. This effort shall include all aspects of the construction process and shall be reviewed and attended to daily during the duration of the work under The Contract.
- B. It shall be the Contractor's responsibility to review and coordinate the Contract Documents completely and call to the attention of the Architect, in writing, any concerns or recommendations in regard to potential or anticipated problem areas, prior to the execution of the Work. This includes but is not limited to details, assemblies, specifications, or any other intent of the Contract Documents as issued.

3.2 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

3.3 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside, submit a Request for Information to Architect according to requirements in Division 01 Section "Project Management and Coordination." Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.4 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- C. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.5 FIELD ENGINEERING

- A. 1Identification: Contractor shall identify existing benchmarks, control points, and property corners by using a qualified land surveyor.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

- 1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
- 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points

3.6 EXTERIOR BUILDING ENVELOPE & WATERPROOFING

A. General: All details, material descriptions, notations and specifications attending to the exterior envelope, including exterior wall assemblies, waterproofing, roofing, flashings, sub-grade installations and penetrations are intended to be constructed free of water infiltration, excessive air infiltration, excessive moisture or relative humidity build-up in the building materials and that continuous thermal barriers against excessive heat loss or gain are maintained. The Contractor and all appropriate subcontractors shall guard against any deviations to this intent and shall act, using construction practices generally accepted in the industry, to insure that the exterior envelope integrity is maintained as described herein, even if the details, material descriptions, notations and / or specifications do not specifically address the condition necessary to achieve this requirement.

3.7 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.

- 2. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.8 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold waste materials more than seven (7) days during normal weather or three (3) days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris. Keep adjacent streets and sidewalks free of debris, dirt and mud
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Cutting and Patching: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.
 - 1. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition
- H. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.

- I. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- J. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- K. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.10 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 1 Section "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

SECTION 017329 – CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. See Divisions 02 through 49 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.3 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
 - 3. Products: List products to be used and firms or entities that will perform the Work.
 - 4. Dates: Indicate when cutting and patching will be performed.
 - 5. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
 - 6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
 - 7. Architect's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work

1.4 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1.5 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize and/or prevent interruption to occupied areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer, comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 5. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - 3. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition waste.
 - 2. Disposing of nonhazardous demolition and construction waste.

1.2 DEFINITIONS

- A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.
- C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner's property.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.3 INFORMATIONAL SUBMITTALS

A. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

1.4 QUALITY ASSURANCE

A. Waste Management Conference(s): Conduct conference(s) at Project site to comply with requirements in Section 013100 "Project Management and Coordination."

1.5 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan according to requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Distinguish between demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
 - 1. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 2. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 - 3. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.
 - 1. Distribute waste management plan to everyone concerned within three days of submittal return.
 - 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- C. 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 and recycled.
 - 2. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

- A. Comply with requirements in Section 024119 "Selective Demolition" for salvaging demolition waste.
- B. Salvaged Items for Sale: Permitted on Project site.

3.3 **RECYCLING DEMOLITION WASTE**

- A. Metals: Separate metals by type.
 - 1. Recycle all copper metal flashing as indicated in the drawings..

3.4 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged or recycled, 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.

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final Completion procedures.
 - 3. List of incomplete items.
 - 4. Submittal of Project warranties.
 - 5. Final cleaning.
- B. Related Requirements:
 - 1. Section 012900 "Payment Proceedures" for requirements for Applications for Payment for Substantial and Final Completion.
 - 2. Section 013233 "Photographic Documentation" for submitting final completion construction photographic documentation.
 - 3. Section 017823 "Operation and Maintenance Data" for additional operation and maintenance manual requirements.
 - 4. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 5. Section 017900 "Demonstration and Training" for requirements to train Owner's maintenance personnel to adjust, operate, and maintain products, equipment, and systems.

1.2 ACTION SUBMITTALS

- A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- B. Certified List of Incomplete Items: Final submittal at Final Completion.

1.3 CLOSEOUT SUBMITTALS

1.4 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's "punch list"), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

- 1. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
- 2. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
- 3. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Advise Owner of pending insurance changeover requirements.
 - 2. Advise Owner of changeover in utility services.
 - 3. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 4. Complete final cleaning requirements.
 - 5. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Review: Submit a written request for review to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final review and tests. On receipt of request, Architect will either proceed with review or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after review 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.

1.5 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:
 - 1. Submit a final Application for Payment in accordance with Section 012900 "Payment Procedures."
 - 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion review list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list will state that each item has been completed or otherwise resolved for acceptance.
 - 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Review: Submit a written request for final review to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final review and tests. On receipt of request, Architect will either proceed with review or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after review or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1.6 LIST OF INCOMPLETE ITEMS

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 - 1. Organize list of spaces in sequential order, proceeding from lowest floor to highest floor, listed by room or space number.
 - 2. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.

1.7 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- C. Warranty Electronic File: Provide warranties in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
 - 1. Submit on digital media acceptable to Architect or by uploading to web-based project software site.

PART 2 - PRODUCTS

2.1 MATERIALS

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

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

- 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
 - b. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - c. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - d. Clean flooring, removing debris, dirt, and staining; clean in accordance with manufacturer's instructions.
 - e. Vacuum and mop concrete.
 - f. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean in accordance with manufacturer's instructions if visible soil or stains remain.
 - g. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - h. Remove labels that are not permanent.
 - i. Wipe surfaces of mechanical and electrical equipment[, elevator equipment,] and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - j. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - k. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
 - I. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
 - m. Clean strainers.
 - n. Leave Project clean and ready for occupancy.
- C. Construction Waste Disposal: Comply with waste-disposal requirements in Section 017419 "Construction Waste Management and Disposal."

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Product maintenance manuals.

1.2 CLOSEOUT SUBMITTALS

- A. Submit operation and maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - 1. Architect will comment on whether content of operation and maintenance submittals is acceptable.
 - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operation and maintenance manuals in the following format:
 - 1. Submit three paper copies. Architect will return two copies.
- C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
 - 1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.
- D. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

1.3 FORMAT OF OPERATION AND MAINTENANCE MANUALS

- A. Manuals, Paper Copy: Submit manuals in the form of hard-copy, bound and labeled volumes.
 - 1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - 2. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.

1.4 REQUIREMENTS FOR OPERATION AND MAINTENANCE MANUALS

- A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - 1. Title page.
 - 2. Table of contents.
 - 3. Manual contents.
- B. Title Page: Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.
 - 5. Name and contact information for Contractor.
 - 6. Name and contact information for Architect.
 - 7. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

1.5 PRODUCT MAINTENANCE MANUALS

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- C. Product Information: Include the following, as applicable:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Color, pattern, and texture.
 - 4. Material and chemical composition.
 - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
 - 1. Inspection procedures.
 - 2. Types of cleaning agents to be used and methods of cleaning.
 - 3. List of cleaning agents and methods of cleaning detrimental to product.
 - 4. Schedule for routine cleaning and maintenance.
 - 5. Repair instructions.

- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record specifications.
 - 3. Record Product Data.
- B. Related Requirements:
 - 1. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.2 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit copies of Record Drawings as follows:
 - a. Initial Submittal:
 - 1) Submit PDF electronic files of scanned record prints and one set(s) of file prints.
 - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit Record Digital Data Files and three set(s) of Record Digital Data File plots.
- B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and Contract modifications.
- C. Record Product Data: Submit annotated PDF electronic files and directories of each submittal.
 - 1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

1.3 RECORD DRAWINGS

A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.

- 1. Preparation: Mark record prints to show the actual installation, where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.
 - e. Cross-reference record prints to corresponding photographic documentation.
- 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Revisions to routing of piping and conduits.
 - d. Actual equipment locations.
 - e. Locations of concealed internal utilities.
 - f. Changes made by Change Order or Construction Change Directive.
 - g. Changes made following Architect's written orders.
 - h. Details not on the original Contract Drawings.
 - i. Field records for variable and concealed conditions.
 - j. Record information on the Work that is shown only schematically.
- 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
- 4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
- 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
- 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
 - 1. Format: Annotated PDF electronic file with comment function enabled.
 - 2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
 - 3. Refer instances of uncertainty to Architect through Construction Manager for resolution.
 - 4. Architect will furnish Contractor with one set of digital data files of the Contract Drawings for use in recording information.
- C. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
 - 1. Format: Annotated PDF electronic file with comment function enabled.
 - 2. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
 - 3. Identification: As follows:

- a. Project name.
- b. Date.
- c. Designation "PROJECT RECORD DRAWINGS."
- d. Name of Architect.
- e. Name of Contractor.

1.4 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation, where installation varies from that indicated in Specifications, addenda, and Contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - 4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
 - 5. Note related Change Orders, Record Product Data, and Record Drawings where applicable.
- B. Format: Submit record specifications as annotated PDF electronic file.

1.5 RECORD PRODUCT DATA

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and revisions to Project Record Documents as they occur; do not wait until end of Project.
- B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.
- C. Format: Submit Record Product Data as annotated PDF electronic file.

1.6 MAINTENANCE OF RECORD DOCUMENTS

A. Maintenance of Record Documents: Store Record Documents in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal of selected portions of building or structure.
 - 2. Salvage of existing items to be reused or recycled.

1.2 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.3 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.

1.4 INFORMATIONAL SUBMITTALS

A. Predemolition photographs or video.

1.5 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

а. .

- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: Refer to hazardous material abatement scope noted in drawings and coordinate with all other demolition activities..
- E. Storage or sale of removed items or materials on-site is not permitted unless specifically noted.

- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.
- G. Arrange selective demolition schedule so as not to interfere with Owner's operations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Inventory and record the condition of items to be removed and salvaged.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

3.3 **PROTECTION**

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- B. Remove temporary barricades and protections where hazards no longer exist.

3.4 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.

- 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
- 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
- 4. Maintain fire watch during and for at least two hours after flame-cutting operations.
- 5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- 6. Dispose of demolished items and materials promptly. Comply with requirements in Section 017419 "Construction Waste Management and Disposal."
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Salvaged Items:
 - 1. Clean salvaged items.
 - 2. Store items in a secure area until delivery to Owner.
 - 3. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
 - 1. Clean and repair items to functional condition adequate for intended reuse.
 - 2. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 CLEANING

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction. and recycle or dispose of them according to Section 017419 "Construction Waste Management and Disposal."
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 - 4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.
- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

ROOF REPLACEMENT, HENRY THURMAN BUILDING, SOUTHERN UNIVERSITY AND A&M COLLEGE

SECTION 053100 - STEEL DECKING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Roof deck.

1.2 ACTION SUBMITTALS

- A. Product Data:
 - 1. Roof deck.
- B. Shop Drawings:
 - 1. Include layout and types of deck panels, anchorage details, reinforcing channels, pans, cut deck openings, special jointing, accessories, and attachments to other construction.

1.3 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Welding Qualifications: Qualify procedures and personnel in accordance with SDI QA/QC and the following welding code:
 - a. AWS D1.3/D1.3M.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store products in accordance with SDI MOC3. Stack steel deck on platforms or pallets and slope to provide drainage. Protect with a waterproof covering and ventilate to avoid condensation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. AISI Specifications: Comply with calculated structural characteristics of steel deck in accordance with AISI S100.

2.2 ROOF DECK

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Epic Metals Corporation.
 - 2. New Millennium Building Systems, LLC.
 - 3. Nucor Corporation.
 - 4. Vulcraft; Nucor Corporation, Verco Group.
- B. Roof Deck: Fabricate panels, without top-flange stiffening grooves, to comply with SDI RD and with the following:
 - 1. Galvanized- and Shop-Primed Steel Sheet: ASTM A653/A653M, Structural Steel (SS), Grade 80, G60 zinc coating; cleaned, pretreated, and primed with manufacturer's standard baked-on, rust-inhibitive primer.
 - a. Color: Gray top surface with white underside.
 - 2. Deck Profile: As indicated.
 - 3. Profile Depth: As indicated .
 - 4. Design Uncoated-Steel Thickness: As indicated .
 - 5. Span Condition: As indicated.
 - 6. Side Laps: Overlapped.

2.3 ACCESSORIES

- A. Miscellaneous Sheet Metal Deck Accessories: Steel sheet, minimum yield strength of 33,000 psi, not less than 0.0359-inch design uncoated thickness, of same material and finish as deck; of profile indicated or required for application.
- B. Pour Stops and Girder Fillers: Steel sheet, minimum yield strength of 33,000 psi, of same material and finish as deck, and of thickness and profile recommended by SDI standards for overhang and slab depth.
- C. Column Closures, End Closures, Z-Closures, and Cover Plates: Steel sheet, of same material, finish, and thickness as deck unless otherwise indicated.
- D. Galvanizing Repair Paint: ASTM A780/A780M.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Install deck panels and accessories in accordance with SDI C, SDI NC, and SDI RD, as applicable; manufacturer's written instructions; and requirements in this Section.
- B. Install temporary shoring before placing deck panels if required to meet deflection limitations.
- C. Locate deck bundles to prevent overloading of supporting members.

- D. Place deck panels on supporting frame and adjust to final position with ends accurately aligned and bearing on supporting frame before being permanently fastened. Do not stretch or contract side-lap interlocks.
- E. Place deck panels flat and square and fasten to supporting frame without warp or deflection.
- F. Cut and neatly fit deck panels and accessories around openings and other work projecting through or adjacent to deck.
- G. Provide additional reinforcement and closure pieces at openings as required for strength, continuity of deck, and support of other work.
- H. Comply with AWS requirements and procedures for manual shielded metal arc welding, appearance and quality of welds, and methods used for correcting welding work.

3.2 INSTALLATION OF ROOF DECK

- A. Fasten roof-deck panels to steel supporting members by arc spot (puddle) welds of the surface diameter indicated or arc seam welds with an equal perimeter that is not less than 1-1/2 inches long, and as follows:
 - 1. Weld Diameter: 5/8 inch, nominal.
 - 2. Weld Spacing: Weld edge and interior ribs of deck units with a minimum of two welds per deck unit at each support. Space welds as indicated.
- B. Side-Lap and Perimeter Edge Fastening: Fasten side laps and perimeter edges of panels between supports, at intervals not exceeding the lesser of one-half of the span or 18 inches, and as follows:
 - 1. Fasten with a minimum of 1-1/2-inch- long welds.
- C. End Bearing: Install deck ends over supporting frame with a minimum end bearing of 1-1/2 inches, with end joints as follows:
 - 1. End Joints: Lapped 2 inches minimum.

3.3 REPAIR

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on both surfaces of deck with galvanized repair paint in accordance with ASTM A780/A780M and manufacturer's written instructions.
- B. Repair Painting:
 - 1. Wire brush and clean rust spots, welds, and abraded areas on [both surfaces] [top surface] of prime-painted deck immediately after installation, and apply repair paint.
 - 2. Apply repair paint, of same color as adjacent shop-primed deck, to bottom surfaces of deck exposed to view.
 - 3. Wire brushing, cleaning, and repair painting of bottom deck surfaces are included in Section 099113 "Exterior Painting" and Section 099123 "Interior Painting."

3.4 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Tests and Inspections:
 - 1. Special inspections and qualification of welding special inspectors for cold-formed steel floor and roof deck in accordance with quality-assurance inspection requirements of SDI QA/QC.
 - a. Field welds will be subject to inspection.
 - 2. Steel decking will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports.

SECTION 055000 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Miscellaneous framing and supports.
 - 2. Metal ladders.
- B. Products furnished, but not installed, under this Section include the following:
 - 1. Anchor bolts, steel pipe sleeves, slotted-channel inserts, and wedge-type inserts indicated to be cast into concrete or built into unit masonry.

1.2 ACTION SUBMITTALS

- A. Product Data: For the following:
 - 1. Fasteners.
 - 2. Manufactured metal ladders.
- B. Shop Drawings: Show fabrication and installation details. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Structural Performance of Aluminum Ladders: Ladders are to withstand the effects of loads and stresses within limits and under conditions specified in ANS A14.3.

2.2 METALS

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.
- B. Steel Plates, Shapes, and Bars: ASTM A36/A36M.
- C. Aluminum Extrusions: ASTM B221, Alloy 6063-T6.

2.3 FASTENERS

- A. General: Unless otherwise indicated, provide Type 304 stainless steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, at exterior walls. Select fasteners for type, grade, and class required.
 - 1. Provide stainless steel fasteners for fastening .
 - 2. Provide bronze fasteners for fastening bronze.
- B. Post-Installed Anchors: Torque-controlled expansion anchors.
 - 1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, unless otherwise indicated.
 - 2. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 stainless steel bolts, ASTM F593, and nuts, ASTM F594.

2.4 MISCELLANEOUS MATERIALS

- A. Shop Primer for Galvanized Steel: Primer formulated for exterior use over zinc-coated metal and compatible with finish paint systems indicated.
- B. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

2.5 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
- B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- D. Form exposed work with accurate angles and surfaces and straight edges.
- E. Weld corners and seams continuously to comply with the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
- F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) fasteners unless otherwise indicated. Locate joints where least conspicuous.
- G. Fabricate seams and other connections that are exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

2.6 MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.
- B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.

2.7 METAL LADDERS

- A. General:
 - 1. Comply with ANSI A14.3.
- B. Aluminum Ladders:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. O'Keeffe's Inc.
 - b. Precision Ladders, LLC.
 - c. Royalite Manufacturing, Inc.
 - 2. Space siderails 18 inches apart unless otherwise indicated.
 - 3. Siderails: Continuous extruded-aluminum channels or tubes, not less than 2-1/2 inches deep, 3/4 inch wide, and 1/8 inch thick.
 - 4. Rungs: Extruded-aluminum tubes, not less than 3/4 inch deep and not less than 1/8 inch thick, with ribbed tread surfaces.

2.8 MISCELLANEOUS STEEL TRIM

- A. Unless otherwise indicated, fabricate units from steel shapes, plates, and bars of profiles shown with continuously welded joints and smooth exposed edges. Miter corners and use concealed field splices where possible.
- B. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work.
- C. Galvanize exterior miscellaneous steel trim.

2.9 GENERAL FINISH REQUIREMENTS

A. Finish metal fabrications after assembly.

2.10 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A153/A153M for steel and iron hardware and with ASTM A123/A123M for other steel and iron products.

1. Do not quench or apply post galvanizing treatments that might interfere with paint adhesion.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
- B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.
- C. Field Welding: Comply with the following requirements:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag screws, wood screws, and other connectors.
- E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

3.2 INSTALLATION OF MISCELLANEOUS FRAMING AND SUPPORTS

A. Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.

3.3 INSTALLATION OF METAL LADDERS

- A. Secure ladders to adjacent construction with the clip angles attached to the stringer.
- B. Install brackets as required for securing of ladders welded or bolted to structural steel or built into masonry or concrete.

3.4 INSTALLATION OF PIPE AND DOWNSPOUT GUARDS

A. Provide pipe guards at exposed vertical pipes in at locations indicated on Drawings where not protected by curbs or other barriers. Install by bolting to wall or column with expansion anchors. Provide four 3/4-inch bolts at each pipe guard. Mount pipe guards with top edge 26 inches above driving surface.

3.5 REPAIRS

- A. Touchup Painting:
 - 1. Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Wood blocking and nailers.

1.2 ACTION SUBMITTALS

- A. Product Data:
 - 1. For each type of process and factory-fabricated product.
 - 2. For preservative-treated wood products.

1.3 INFORMATIONAL SUBMITTALS

- A. Material Certificates:
 - 1. For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
 - 2. For preservative-treated wood products. Indicate type of preservative used and net amount of preservative retained.
- B. Evaluation Reports: For the following, from ICC-ES:
 - 1. Wood-preservative-treated wood.
 - 2. Power-driven fasteners.
 - 3. Post-installed anchors.
 - 4. Engineered Metal Blocking System and Fasteners

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: Comply with DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Dress lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content:

1. Dimension Lumber: 19 percent unless otherwise indicated.

2.2 PRESERVATIVE TREATMENT

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2[for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground].
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat all rough carpentry located within the drainage plane of the roof unless otherwise indicated. Wood blocking on the top of curbs, roof hatches and other locations elevated from the drainage plane are not required to have preservative treatment

2.3 MISCELLANEOUS LUMBER

- A. Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 - 1. Blocking.
 - 2. Nailers.
- B. Dimension Lumber Items: Construction or No. 2 grade lumber of any species.

2.4 FASTENERS

- A. General: Fasteners are to be of size and type indicated and comply with requirements specified in this article for material and manufacture. Provide nails or screws, in sufficient length, to penetrate not less than 1-1/2 inches into wood substrate.
 - 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A153/A153M or ASTM F2329 of Type 304 stainless steel.
- B. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- C. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC01 ICC-ES AC193 as appropriate for the substrate.

2.5 ROOF WOOD NAILER ALTERNATIVE

A. Engineered Metal Blocking System:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Hickman Edge Systems "EdgeBox RI" (Basis of Design)
 - b. GAF "EverGuard EdgeBox RI"
- 2. Height: As indicated in the drawings.
- 3. Width: As indicated in the drawings.
- 4. Box Material: 20 ga. galvanized steel (2 pieces).
- 5. Spine Material: 16 ga. galvanized steel.
- 6. Fastener Holes: Pre-Punched
- 7. Lengths: 12'-0"
- 8. Accessories: Materials same as product
 - a. End Cap Left and Right
- 9. Fasteners: As recommended by manufacturer for intended substrate to meet ES-1 requirements.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- C. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
- D. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- E. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).
 - 2. ICC-ES evaluation report for fastener.

3.2 **PROTECTION**

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

END OF SECTION

SECTION 070150.19 - PREPARATION FOR REROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Full tear-off of roof system at areas indicated on Drawings.
 - 2. Re-cover preparation of roof areas indicated on Drawings.
 - 3. Removal of flashings and counterflashings.

1.2 UNIT PRICES

A. Work of this Section is affected by Section .

1.3 PREINSTALLATION MEETINGS

A. Preliminary Roofing Conference: Before starting removal Work, conduct conference at Project site.

1.4 INFORMATIONAL SUBMITTALS

- A. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by reroofing operations.
 - 1. Submit before Work begins.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Approved by warrantor of roofing system to work on existing roofing.

1.6 FIELD CONDITIONS

- A. Existing Roofing System: Built-up coal-tar roofing with broadcast aggregate.
- B. Owner will occupy portions of building immediately below reroofing area.
 - 1. Conduct reroofing so Owner's operations are not disrupted.
 - 2. Provide Owner with not less than 72 hours' written notice of activities that may affect Owner's operations.
 - 3. Coordinate work activities daily with Owner so Owner has adequate advance notice to place protective dust and water-leakage covers over sensitive equipment and furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below work area.
 - 4. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below affected area.

- a. Verify that occupants below work area have been evacuated before proceeding with work over impaired deck area.
- C. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- E. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
 - 1. The results of an analysis of test cores from existing roofing system are available for Contractor's reference.
- F. Limit construction loads on existing roof areas to remain, and existing roof areas scheduled to be reroofed to 300 lb for rooftop equipment wheel loads and 20 psf for uniformly distributed loads.
- G. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.
 - 1. Remove only as much roofing in one day as can be made watertight in the same day.

PART 2 - EXECUTION

2.1 **PREPARATION**

- A. Seal or isolate windows that may be exposed to airborne substances created in removal of existing materials.
- B. Shut off rooftop utilities and service piping before beginning the Work.
- C. Test existing roof drains to verify that they are not blocked or restricted.
 - 1. Immediately notify Architect of any blockages or restrictions.
- D. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work.
 - 1. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- E. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- F. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday.
 - 1. Prevent debris from entering or blocking roof drains and conductors.
 - a. Use roof-drain plugs specifically designed for this purpose.
 - b. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.

- 2. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding.
 - a. Do not permit water to enter into or under existing roofing system components that are to remain.

2.2 ROOF TEAR-OFF

- A. Notify Owner each day of extent of roof tear-off proposed for that day and obtain authorization to proceed.
- B. Lower removed roofing materials to ground and onto lower roof levels, using dust-tight chutes or other acceptable means of removing materials from roof areas.
- C. Remove aggregate ballast from roofing.
- D. Remove loose aggregate from aggregate-surfaced, built-up bituminous roofing using a power broom.
- E. Full Roof Tear-off: Where indicated on Drawings, remove existing roofing and other roofing system components down to the existing roof deck.
 - 1. Remove roof insulation.
 - 2. Remove base flashings and counter flashings.
 - 3. Remove perimeter edge flashing and gravel stops.
 - 4. Remove flashings at pipes, curbs, mechanical equipment, and other penetrations.
 - 5. Remove portion of roof drains indicated on Drawings to be removed.
 - 6. Remove wood blocking, curbs, and nailers down to top of existing roof deck unless noted otherwise.
 - 7. Remove excess asphalt from steel deck.
 - a. A maximum of 15 lb/100 sq. ft. of asphalt is permitted to remain on steel decks.
 - 8. Remove fasteners from deck or cut fasteners off slightly above deck surface for roof materials anchored to deck.

a.

2.3 DECK PREPARATION

- A. Inspect deck after tear-off of roofing system.
- B. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Architect.
 - 1. Do not proceed with installation until directed by Architect.
- C. If deck surface is unsuitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect.
- D. Provide additional deck securement as indicated on Drawings.

- E. Replace steel deck as indicated on Drawings.
- F. Prepare and paint steel deck surface.
 - 1. Painting and preparation for painting is specified in Section 099113 "Exterior Painting."

2.4 BASE FLASHING REMOVAL

- A. Remove existing base flashings.
 - 1. Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage metal counterflashings that are to remain.
 - 1. Replace metal counterflashings damaged during removal with counterflashings specified in Section 076200 "Sheet Metal Flashing and Trim."

END OF SECTION

SECTION 075500 SBS-MODIFIED BITUMEN MEMBRANE ROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. Work shall include, but is not limited to, the following:
 - 1. Styrene-butadiene-styrene (SBS)-modified bituminous membrane roof system
 - 2. Preparation of Substrate to Receive Roofing Materials
 - 3. Roof Insulation Application to Prepared Substrate
 - 4. Roof Membrane Application
 - 5. Roof Flashing Application
 - 6. Incorporation of Sheet Metal Flashing Components and Roofing Accessories into the Roof System
- B. Products installed but not furnished under this Section:
 - 1. Sheet Metal Flashing and Trim
 - 2. Sheet Metal Roofing Specialties
- C. Roof Assembly, unless noted otherwise:
 - 1. Structural Deck (existing). Refer to drawings for deck type and location.
 - 2. Two (2) layers Polyisocyanurate Insulation with upper layer providing 1/4" slope achieving the thicknesses shown on the drawings with $\frac{1}{2}$ " slope Tapered Crickets
 - 3. ¹/₂" Gypsum Cover Board Adhered in Insulation Adhesive
 - 4. Two (2) Ply SBS Field membranes in Cold Adhesive
 - 5. Two (2) Ply SBS Flashing membranes Heat Welded
- D. Related Work
 - 1. Internal Roof Drain: Contractor shall verify that all existing internal roof drains are open and are functional for drainage. Contractor shall engage a plumber to clean roof drain piping up to first elbow fitting.
 - 2. New Perimeter Blocking: Provide and install multiple layers of new blocking, as required to meet the height of new insulation system. All blocking must have a minimum dimension of 1.5"-inch by 5.5"-inch. Install and anchor all blocking layer(s) in strict accordance with the guidelines set forth in FM 1-49 Loss Prevention and/or ANSI-SPRI ES-1 requirements.
 - 3. Waste Stack Vents: Flash all vents using roofing manufacturers liquid resin flashing system as shown in the drawings. Provide lead cap at each waste stack. Cap length shall overlap termination of resin flashing by a minimum of 1-inch

1.2 RELATED SECTIONS

- A. Division 6 Section "Rough Carpentry"
- B. Division 7 Section "Sheet Metal Flashing and Trim"
- C. Division 7 Section "Roof Specialties"

D. Division 7 Section "Roof Accessories"

1.3 **REFERENCE STANDARDS**

- A. References in these specifications to standards, test methods and codes, are implied to mean the latest edition of each such standard adopted. The following is an abbreviated list of associations, institutions, and societies which may be used as references throughout these specifications.
 - 1. ASTM American Society for Testing and Materials Philadelphia, PA
 - 2. FM Factory Mutual Engineering and Research Norwood, MA
 - 3. NRCA National Roofing Contractors Association Rosemont, IL
 - 4. OSHA Occupational Safety and Health Administration Washington, DCSMACNA Sheet Metal and Air Conditioning Contractors National Association Chantilly, VA
 - 5. UL Underwriters Laboratories Northbrook, IL

1.4 ACTION SUBMITTALS

- A. Product Data Sheets: Submit manufacturer's product data sheets, installation instructions and/or general requirements for each component.
- B. Safety Data Sheets: Submit manufacturer's Safety Data Sheets (SDS) for each component.
- C. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other Work.
- D. Samples: For the following products:
 - 1. Two (2) 3 inch by 5 inch samples of the primary roofing and flashing membrane sheets
 - 2. Two (2) representative samples of liquid-applied flashing system, inclusive of all components.
 - 3. 12-by12-inch square of roof insulation.
- E. Evidence of Independent Accredited Testing for the proposed membrane system.
 - 1. The roof system assembly (*including fastening of base sheet, adhering of insulation*) shall meet wind pressure minimums shown in the drawings. Contractor shall submit evidence of the manufacturer's accredited testing by an Independent Agency recognized as a testing agency.
 - 2. The roof membrane configuration shall be approved by FM for Class 1-SH (severe hail) exposure.
- F. Warranties: Sample State of Louisiana Warranty from the manufacturer and contractor.

1.5 SUBMITTALS PRIOR TO CONTRACT AWARD

- A. Installer Certificates: Letter from the proposed primary roofing manufacturer certifying that the bidder is an acceptable Contractor authorized to install the proposed system.
- B. Manufacturer Certificates: Letter from the primary roofing manufacturer certifying that the proposed application will comply with the manufacturer's requirements in order to qualify the project for the specified guarantee.

C. Sample Warranties: Submit draft manufacturer's roof warranty specified herein prior to the scheduled pre-construction conference.

1.6 CLOSE-OUT SUBMITTALS

- A. Manufacturer's printed recommendations for proper maintenance of the specified roof system including inspection frequencies, penetration addition policies, temporary repairs, and leak call procedures.
- B. State of Louisiana Warranty/Contractor Warranty: Provide manufacturer's signed State of La warranty and contractor's warranties upon project completion.

1.7 QUALITY ASSURANCE

- A. Acceptable Products: Primary roofing products, including each type of sheet, all manufactured in the United States, shall be supplied by a single manufacturer which has been successfully producing the specified types of primary products for not less than 10 years. The primary roofing products shall have maintained a consistent composition for a minimum of five years.
- B. Contractor Qualifications: Contractor shall have a minimum of 2 years experience in successfully installing the same or similar roofing materials.
 - 1. Contractor shall be certified in writing by the manufacturer to install specified materials prior to the bidding period through satisfactory project completion.
 - 2. Applicators shall have completed projects of similar scope using same or similar materials specified.
 - 3. Contractor shall provide full time, on-site superintendent or foreman experienced with the specified roofing from beginning through satisfactory project completion.
 - 4. Applicators shall be skilled in the application methods for all materials.
 - 5. Contractor shall maintain a daily record, on-site, documenting material installation and related project conditions.
- C. Local Regulations: Conform to regulations of public agencies, including any specific requirements of the city and/or state of jurisdiction.
- D. Manufacturer Requirements: The roofing materials manufacturer must provide a field technical inspector directly trained by the company to attend necessary job meetings, perform at minimum an inspection at the start of the project, prior to the cap sheet application and conduct a final roof inspection upon successful completion of the project. The inspector is required to provide a field inspection report for any and all job visit during the application of the roofing project. The roofing manufacture shall provide a copy of this report to the contractor and project designer within a week of the date of the inspection.
- E. Representatives of the Designer, User Agency, the General Contractor, the Roofing Contractor and Roofing Manufacturer's technical representative shall make inspections of the roofing system toward the end of the one (1) year warranty period and toward the end of the Roofing Contractor's two (2) year guarantee period. Further, the Roofing System Manufacturer's authorized technical representative shall inspect the roofing system near the close of the Manufacturer's Guarantee. A written report shall be submitted to Architect , with a copy to the User, by the Roof System Manufacturer's representative within seven days of each site visit.

- F. The Roofing Contractor or Roofing Systems Manufacturer, as applicable, shall make approved repairs and/or replacements covered by the Guarantee. State that the project will not be accepted until the Roofing Contractor's Guarantee and the Roofing Manufacturer's Guarantee are both executed in strict accordance with the Contract Documents and data from "Paragraph G" below in these Instructions and have been submitted to and accepted by the Owner.
- G. "The roofing system product supplier shall furnish the Roofing Contractor with Material Safety Data Sheet/Sheets (MSDS), incorporating OHSA approved form, current edition." State that "Said sheets shall be available at the site at all times until project completion." A copy shall be filed in the project file with FP&C.

1.8 PRODUCT DELIVERY STORAGE AND HANDLING

- A. Delivery: Deliver materials in the manufacturer's original sealed and labeled containers and in quantities required to allow continuity of application.
- B. Storage: Store materials out of direct exposure to the elements.
 - 1. Protect and store materials in a dry, well-vented, and weatherproof location. Only materials to be used the same day shall be removed from this location. During cold weather, store materials in a heated location, removed only as needed for immediate use.
 - 2. When materials are to be stored outdoors, store away from standing water, stacked on raised pallets or dunnage, at least 4 in or more above ground level. Carefully cover storage with "breathable" tarpaulins to protect materials from precipitation and to prevent exposure to condensation. Polyethylene or other non-breathable plastic coverings are not acceptable.
 - 3. Carefully store roof membrane materials delivered in rolls on-end with selvage edges up. Store and protect roll storage to prevent damage.
 - 4. Materials stored on the roof shall be stored in a manner so as to preclude overloading of deck and building structure.
- C. Handling: Handle all materials in such a manner as to preclude damage and contamination with moisture or foreign matter. Handle rolled goods to prevent damage to edges or ends.
- D. Damaged Material: All damaged materials shall be removed from job site and replaced with new, suitable materials. Any materials that are found to be damaged or stored in any manner other than stated above will be automatically rejected, removed and replaced at the Contractor's expense.

1.9 **PROJECT/SITE CONDITIONS**

- A. Requirements Prior to Job Start
 - 1. Notification: Give a minimum of 5 days notice to the Owner and manufacturer prior to commencing any work and notify both parties on a daily basis of any change in work schedule.
 - 2. Permits: Obtain all permits required by local agencies and pay all fees which may be required for the performance of the work.
 - 3. Safety: Familiarize every member of the application crew with all fire and safety regulations recommended by OSHA, NRCA and other industry or local governmental groups.

B. Environmental Requirements

- 1. Monitor substrate temperature and material temperature, as well as all environmental conditions such as ambient temperature, moisture, sun, cloud cover, wind, humidity, and shade. Ensure conditions are satisfactory to begin work and ensure conditions remain satisfactory during the installation of specified materials. Materials and methods shall be adjusted as necessary to accommodate varying project conditions. Materials shall not be installed when conditions are unacceptable to achieve the specified results.
- 2. Cold Adhesive Application: Primer, where used, shall be fully dry before proceeding. During cold weather, store the specified membrane adhesives, flashing cements and mastics in heated storage areas. Take all necessary measures and monitor application conditions, to ensure the adhesive and cement materials are no less than 70°F (21°C) at the point of contact with the membrane.
- 3. Precipitation and Dew Point: Monitor weather to ensure the project environment is dry before, and will remain dry, during the application of roofing materials. Ensure all roofing materials and substrates remain above the dew point temperature as required to prevent condensation and maintain dry conditions.
- 4. Heat-Welding Application: Take all necessary precautions and measures to monitor conditions to ensure all environmental conditions are safe to proceed with the use of torches and hot-air welding equipment. Combustibles, flammable liquids and solvent vapors that represent a hazard shall be eliminated. Flammable primers and cleaners shall be fully dry before proceeding with heat-welding operations. Prevent or protect wood, paper, plastics and other such combustible materials from direct exposure to open flames from roof torches. Refer to NRCA CERTA recommendations.
- C. Protection Requirements
 - 1. Membrane Protection: Provide protection against staining and mechanical damage for newly applied roofing and adjacent surfaces throughout this project.
 - 2. Limited Access: Prevent access by the public to materials, tools and equipment during the course of the project.
 - 3. Debris Removal: Remove all debris daily from the project site and take to a legal dumping area authorized to receive such materials.
 - 4. Site Condition: Complete, to the owner's satisfaction, all job site clean-up including building interior, exterior and landscaping where affected by the construction.

1.10 PREINSTALLATION MEETINGS

- A. Preliminary Roofing Conference: Conduct conference at Project site.
 - 1. Purpose: Establish a direct line of communication, answer initial questions regarding the project and to review project submittal requirements.
 - 2. Timing: The meeting shall be held shortly after award of the Contract and at least six weeks prior to the anticipated start of roofing.
- B. Pre-Application Roofing Conference: Conduct conference at Project site.
 - 1. Purpose: To verify readiness of the project structure, review assignments of Preliminary Conference, review details, changes or corrections, and to review anticipated schedule of progress.
 - 2. Timing: Within one week prior to roofing application.

1.11 WARRANTY

- A. Roof Membrane/System Guarantee: State of Louisiana's 20 Year No Dollar Limit (NDL) Warranty signed by roofing manufacturer. The manufacturer shall provide the owner with the signed warranty providing labor and materials for 20 years from the date the warranty is issued.
 - 1. 20 year State of Louisiana Guarantee, see guarantee at the end of this Section.
- B. The contractor shall guarantee the workmanship and shall provide the owner with the contractor's warranty covering workmanship for a period of 2 years from completion date.

PART 2 - PRODUCTS

2.1 ROOFING SYSTEM ASSEMBLY/PRODUCTS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. SOPREMA, Inc. (Basis-of-Design)
 - 2. Certainteed Commercial Roofing
 - 3. Johns Manville Corporation
 - 4. Polyglass U.S.A., Inc.
 - 5. Siplast, Inc.
 - 6. U.S. Ply, Inc.
- B. SINGLE SOURCE MANUFACTURER: All SBS modified bitumen membrane and flashing sheets shall be manufactured by a single supplier. Comply with the Manufacturer's requirements as necessary to provide the specified warranty.
- C. SBS-Modified Bitumen Membrane Materials:
 - 1. SOPREMA, Inc. (Basis-of-Design)
 - a. Field Plies:
 - 1) Cap Sheet: Sopralene 180 Granules FR; (160 mils/4.0 mm thick, weight 108 lbs per square; polyester reinforced).
 - 2) Interply: Sopralene 180 sanded 2.2, polyester reinforced (90 mils/2.2 mm thick, 58 lbs. per square).
 - b. Heat Fused Granular Flashing Plies:
 - 1) Cap Ply: Sopralene Flam 180 FR GR; (157 mils/4.0mm thick, weight 118 lbs. per one square roll; with a non-woven polyester mat)
 - 2) Stripping Ply: Sopralene Flam 180; (118 mils/3.0mm thick, weight 81 lbs. per one square roll; with a non-woven polyester mat)
 - c. Cold Adhesive: Colply
 - 2. Certainteed Commercial Roofing
 - a. Field Plies:

- 1) Cap Sheet: Flintlastic FR-P Cap Sheet (168 mils; weight 100 lbs. per one square roll; with a polyester mat)
- 2) Interply: Flintlastic Ultra Poly SMS Base Sheet (148 mils; weight 89 lbs. per one square roll; with a polyester mat)
- b. Heat Fused Granular Flashing Plies:
 - 1) Cap Ply: Flintlastic GTS-FR (160 mils; weight 103 lbs. per one square roll; with a polyester mat)
 - 2) Stripping Ply: Flintlastic Ultra Poly SMS Base Sheet (148 mils; weight 89 lbs. per one square roll; with a polyester mat)
- c. Cold Adhesive: Flintbond SBS Modified Bitumen Adhesive, Brush Grade
- 3. Johns Manville Corporation:
 - a. Field Plies:
 - 1) Cap Sheet: DynaGlas FR (3.8 mm thick, weight 95 lbs per square; with Fiberglas Mat).
 - Interply: DynaLastic 180 S (3.0 mm thick; weight 90 lbs per square; with Polyester reinforcement).
 - b. Heat Fused Granular Flashing Plies:
 - 1) Cap Ply: Dynaweld Cap FR (165 mils/4.2 mm thick; weight 106 lbs. per one square roll; with fiberglass reinforcement mat).
 - Stripping Ply: Dynaweld 180S (118 mils/3.0 mm thick; weight 86 lbs. per one square roll; with polyester mat with bidirectional glass-scrim reinforcement)
 - c. Cold adhesive: MBR
- 4. Polyglass U.S.A. Inc.:
 - a. Field Plies:
 - 1) Cap Sheet: Elastoflex S6G FR (157 mils/4.0 mm thick; weight 102 lbs. per roll; with reinforced polyester reinforcement).
 - 2) Interply: Elastoflex V (120 mils/3.0 mm thick; weight 84 lbs. per roll; with glass fiber reinforcement).
 - b. Heat Fused Granular Flashing Plies:
 - 1) Cap Ply: Elastoflex S6 FR (157 mils/4.0 mm thick; weight 102 lbs. per roll; with a reinforced polyester reinforcement).
 - Stripping Ply (Non-combustible substrates): Elastoflex V (120 mils/3.0 mm; weight 84 lbs. per roll; with glass fiber reinforcement).
 - 3) Stripping Ply (Combustible substrates): Elastoflex SA V (80 mils/2.0mm; weight 95 lbs. per roll; with a glass fiber reinforcement).
 - c. Cold adhesive: PG 350 or PolyPlus 35 Modified Bitumen Adhesive
- 5. Siplast, Inc.:

- a. Field Plies:
 - 1) Cap Sheet: Paradiene 30 FR (98 mils/2.5mm thick; weight 90 lbs. per square; with fiberglass mat).
 - 2) Interply: Paradiene 20 EG (3.0 mm thick; weight 84 lbs. per square; with fiberglass scrim/fiberglass mat).
- b. Heat Fused Granular Flashing Plies:
 - 1) Cap Ply: Parafor 30 TG (161 mils/ 4.1 mm thick; weight 114 lbs. per square; with a fiberglass scrim/polyester mat composite).
 - 2) Stripping Ply (Non-combustible substrates): Paradiene 20 TG (114 mils/2.9mm; weight 76 lbs. per square; with fiberglass mat).
 - 3) Stripping Ply (Combustible substrates): Paradiene 20 SA (102 mils/2.6mm; weight 72 lbs. per square; with a fiberglass mat).
- c. Cold adhesive: PA-311
- 6. U. S. Ply, Inc.
 - a. Field Plies:
 - 1) Cap Sheet: Duraflex 190FR SBS (170 mils/4.3 mm thick; weight 105 lbs per square; with a non-woven polyester mat).
 - 2) Interply: Duraflex 190S SBS (120 mils/3.0 mm thick; weight 88 lbs per square; with a non-woven polyester mat).
 - b. Mopped Granular Flashing Plies:
 - 1) Cap Ply: Duraflex 190FR SBS (170 mils/4.3 mm thick; weight 105 lbs. per square; with a non-woven polyester mat).
 - 2) Stripping Ply: Duraflex 190S SBS (120 mils/3.0 mm thick; weight 88 lbs. per square; with a non-woven polyester mat).
 - c. Cold Adhesive: 901 Premium Modified Adhesive
- D. Liquid-Applied Flashing System: A specialty flashing system consisting of a liquid-applied, fully reinforced, multi-component acrylic membrane installed over a prepared or primed substrate. The flashing system consists of a primer, basecoat and topcoat, combined with a non-woven polyester fleece. The use of the specialty flashing system shall be specifically approved in advance by the roofing membrane system manufacturer for each application and shall be applied in accordance with the manufacturer's written requirements.
 - 1. Soprema, Inc.; Alsan RS 230 Field
 - 2. Certainteed Commercial Roofing; SmartFlash One Resin
 - 3. Polyglass U.S.A., Inc.; PolyFlash 1C
 - 4. Siplast, Inc.; Parapro Roof Membrane Resin
 - 5. Johns Manville Corporation; JM PMMA Flashing Resin
 - 6. Firestone Building Products; Firestone AC Fast FR
- E. Waterproof Vertical Repair Paste: Mixture of two-component liquid resin made from PMMA and microfibers used as a waterproof paste in locations where it is difficult to install membrane system with reinforcement.
 - 1. Soprema, Inc.; Basis of Design Alsan RS Detailer

- 2. Certainteed Commercial Roofing
- 3. Polyglass U.S.A., Inc.
- 4. Siplast, Inc.
- 5. Johns Manville Corporation
- 6. Firestone Building Products

2.2 THERMAL INSULATION SYSTEM

- A. Composite Polyisocyanurate Board Insulation: Closed cell polyisocyanurate foam core bonded on each side to a glass fiber-reinforced felt facer.
 - 1. Taper: 1/4" in per foot unless shown otherwise. Insulation, crickets and saddles provided with 1/2" in per foot taper as required for positive roof slope.
 - 2. Dimensions: 48-inch by 48-inch boards
 - 3. Meets or exceeds ASTM C1289, Type II, Class 1, Grade 2 (20 psi)
- B. Cover Board
 - 1. Gypsum Glass Mat Roof Board: A panel composed of a gypsum based, non-structural water resistant core material integrally bonded with fiberglass mats on both sides and approved for use by roofing system manufacturer.
 - a. Thickness: 1/2 inch (nominal) and 5/8 inch where indicated on the drawings.
 - b. Size: 48-inch by 48-inch
 - c. Meets or exceeds ASTM C1177
 - 2. Acceptable Manufacturers:
 - a. Georgia Pacific Corp; DensDeck Prime Gypsum Roof Board
 - b. US Gypsum Corp; Securock Gypsum Roof Panel
 - c. National Gypsums Corp; DEXcell Gypsum Roof Panel
- C. Insulation Cant and Tapered Strip
 - 1. Cant Strip: Expanded perlite of size required for flashing conditions. Meets or exceeds ASTM C728.
 - 2. Perlite Tapered Edge Panels: A tapered panel composed of expanded volcanic minerals combined with waterproofing binders. Meets or exceeds ADTM C728. The top surface shall be pre-treated with an asphalt based coating. The panels shall have a dimension sufficient to provide for a smooth transition and provide proper support for the membrane layer or subsequent layer of insulation when there are transitions of 1/4 inch or greater.

2.3 DESCRIPTION OF SYSTEMS

A. Roofing Membrane Assembly: A roof membrane assembly consisting of two plies of a prefabricated, reinforced, homogeneous Styrene-Butadiene-Styrene (SBS) block copolymer modified asphalt membrane, applied over a prepared substrate. Reinforcement mats shall be impregnated/saturated and coated each side with SBS modified bitumen blend. The cross sectional area of the sheet material shall contain no oxidized or non-SBS modified bitumen. The roof system shall pass 500 cycles of ASTM D 5849 Resistance to Cyclic Joint Displacement (fatigue) at 14 deg F (-10 deg C). Passing results shall show no signs of membrane cracking or interply delamination after 500 cycles. The roof system shall pass 200 cycles of ASTM D 5849 after heat conditioning performed in accordance with ASTM D 5147. The assembly shall possess waterproofing capability, such that a phased roof application, with only the modified bitumen base ply in place, can be achieved for prolonged periods of time without detriment to the watertight integrity of the entire roof system.

2.4 ROOFING COMPONENTS AND ACCESSORIES

- A. All Roofing components and accessories are to be approved by the selected manufacturer.
- B. Insulation Adhesive
 - 1. Polyurethane Foam insulation Adhesive: Two-component, polyurethane foam insulation adhesive provided by roofing system manufacturer and applied in ribbons from cartridges or two-component bulk packaging with pump-driven delivery system.
 - a. Ribbon Size: As required by manufacturer to properly install system.
 - b. Ribbon Spacing: As required to meet specified wind uplift resistance performance.
 - c. Acceptable Manufacturers:
 - 1) Soprema, Inc.; Duotack Insulation Adhesive
 - 2) Siplast, Inc.; Parafast Insulation Adhesive
 - 3) Johns Manville Corporation; Urethane Adhesive RSUA
- C. Sealant: A moisture-curing, non-slump elastomeric sealant designed for roofing applications where horizontial slopes are less than 1/4-inch per foot. The sealant shall be approved by the roof membrane manufacturer for use in conjunction with the roof membrane materials.
 - 1. Supplied by the roofing manufacturer.
- D. Sealant: A moisture-curing, non-slump elastomeric sealant designed for roofing applications where horizontial slopes exceed ¼-inch per foot. The sealant shall be approved by the roof membrane manufacturer for use in conjunction with the roof membrane materials and/or for setting extruded anchor bar flanges. Acceptable types are as follows:
 - 1. Supplied by the roofing manufacturer.
- E. Ceramic Granules: No. 11 grade specification ceramic granules of color scheme matching the granule surfacing of the finish ply.
- F. Loose laid fiberglass asphalt coated base sheet for placement on top of light weight insulated concrete and meeting ASTM D4601 Type II requirements:
 - 1. Soprema, Inc,

- 2. Siplast, Inc.
- 3. Johns Manville Corporation
- 4. Polyglass, Inc.
- 5. Certainteed Commercial Roofing
- 6. U.S. Plv. Inc.
- 7. Firestone Building Products
- G. Lightweight Insulated Concrete Patch and Repair:
 - 1. Siplast, Inc.: Zonopatch
 - 2. USG: Securock Brand Gypsum-Concrete Patch
- H. Walkway Protection:
 - 1. Soprema, Inc.: Soprawalk
 - 2. Siplast, Inc.: Paratread
 - 3. Johns Manville Corporation: DynaTred

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examination includes visual observations, qualitative analysis, and quantitative testing measures as necessary to ensure conditions remain satisfactory throughout the project.
- B. The contractor shall examine all roofing substrates including, but not limited to: insulation materials, roof decks, walls, curbs, rooftop equipment, fixtures, and wood blocking.
- C. The applicator shall not begin installation until conditions have been properly examined and determined to be clean, dry and, otherwise satisfactory to receive specified roofing materials.
- D. During the application of specified materials, the applicator shall continue to examine all project conditions to ensure conditions remain satisfactory to complete the specified roofing system.

3.2 PREPARATION

- A. Before commencing work each day, the contractor shall prepare all roofing substrates to ensure conditions are satisfactory to proceed with the installation of specified roofing materials. Preparation of substrates includes, but is not limited to, substrate repairs, securement of substrates, eliminating all incompatible materials, and cleaning.
- B. Where conditions are found to be unsatisfactory, work shall not begin until conditions are made satisfactory to begin work. Commencing of work shall indicate contractor's acceptance of conditions.

3.3 INSULATION SYSTEM APPLICATION

A. Follow roof manufacturers requirements, insulation system component product data sheets, published general requirements and submittals.

- B. Install all insulation system components on clean, dry, uniform and, properly prepared substrates.
- C. All insulation system boards shall be carefully installed and fitted against adjoining sheets to form tight joints.
- D. Insulation system boards that must be cut to fit shall be saw-cut or knife-cut in a straight line, not broken. Chalk lines shall be used to cut insulation components. Uneven or broken edges shall not be accepted. Remove dust and debris that develops during cutting operations.
- E. Stagger successive layers of insulation 12 in vertically and laterally to ensure board joints do not coincide with joints from the layers above and below.
- F. Crickets, saddles, and tapered edge strips shall be installed before installing Cover-boards.
- G. Install tapered insulation, saddles and crickets as required to ensure positive slope for complete roof drainage.
- H. Cover-boards shall be installed to fit tight against adjacent boards. When required by the Cover-board manufacturer, a uniform gap shall be provided between Cover-boards using a uniform guide placed between board joints to form a gap between all boards during installation.
- I. The finished insulation system surface shall be tight to, and flush with, adjacent substrates to form a satisfactory substrate to install specified roof membrane and flashings.
- J. Install specified cants where required for membrane flashing transitions

3.4 INSULATION ADHESIVE APPLICATION

- A. Apply the specified two-component insulation adhesive to adhere to the deck and insulation substrate(s).
- B. Follow insulation adhesive product data sheets and published general requirements for installation requirements.
- C. Apply insulation adhesive in uniform ribbons, 1/2 in to 3/4 in wide.
- D. Immediately install insulation components into insulation adhesive, and apply weight to ensure the materials maintain full contact with all ribbons for complete adhesion. Do not allow insulation adhesive to skin-over before placing the insulation materials into the adhesive.
- E. Adhere the insulation system to meet the specified wind uplift resistance performance and specified warranty requirements. Minimum adhesive ribbon spacing shall be as follows:
 - 1. Field of Roof (Zone 1): 12 in on-centers.
 - 2. Perimeter of Roof (Zone 2): 6 in on-centers.
 - 3. Corners of Roof (Zone 3): 4 in on-centers.
- F. For insulation and Cover-boards located partially within the defined perimeter and/or corners, install fastening for the entire board as specified herein.
- G. The Insulation Base Layer and Cover Board must be staggered a minimum of 6"

3.5 PRIMER APPLICATION

- A. Examine all substrates, and conduct adhesion peel tests as necessary, to ensure satisfactory adhesion is achieved.
- B. Apply the appropriate specified primer to dry, compatible substrates as required to enhance adhesion of new specified roofing materials.
- C. Apply primer using brush, roller, or sprayer at the rate published on the product data sheet. Lightly prime for uniform coverage, do not apply heavy or thick coats of primer.
- D. Asphalt Primer: Apply primer to dry compatible masonry, metal, wood and other required substrates before applying asphalt and heat-welded membrane plies. Primer is optional for solvent based solvent-based SBS adhesives and cements. Refer to product data sheets.
- E. Project conditions vary throughout the day. Monitor changing conditions, monitor the drying time of primers, and monitor the adhesion of the membrane plies. Adjust primer and membrane application methods as necessary to achieve the desired results.

3.6 MEMBRANE ADHESIVE APPLICATION

- A. The ambient temperature shall be above 50°F (10°C), and the adhesive temperature shall be a minimum of 70°F (21°C) at the point of membrane application.
- B. To ensure the adhesive is applied at 70°F (21°C), during cold weather, drums and 5 gallon pails shall be stored in heated areas. Drums and 5 gallon pails exposed to cold temperature on the roof shall be provided with heaters when necessary to ensure the minimum application temperature is maintained.
- C. Priming substrates is optional when solvent-based membrane adhesives are used. Primer may be applied to reduce adhesive consumption rates for some absorptive substrates.
- D. Adhesive may be applied using a 3/16 3/8 inch notched squeegee, brush or spray equipment.
- E. Follow the adhesive product data sheet requirements for application rates.
- F. Apply a uniform application of membrane adhesive at the application rate published on the product data sheet.
- G. Apply 1-1/2 to 2 gallons per square between membrane plies. The application rate is 2 to 3 gallons per square or more over absorptive substrates and over granule surfaces. Refer to manufacturer's product data sheet, and adjust application rate based upon surface conditions.
- H. Install the SBS membrane ply before the adhesive begins to skin over. Once adhesive skins over, the membrane ply will not adhere.
- I. CONTRACTOR TO HEAT WELD ALL LAPS OF MEMBRANE.

3.7 FLASHING APPLICATION, HEAT WELDED

A. Refer to SBS manufacturer's membrane application instructions, flashing detail drawings, and follow product data sheets and other published requirements for installation instructions. Refer to manufacturer's membrane flashing detail drawings.

- B. The contractor is responsible for project safety. Refer to NRCA CERTA recommendations and building owner requirements for hot work operations.
- C. Where required to seal substrates for fire safety, install specified adhered, self-adhered or fastened backer ply to the substrate. Ensure backer-ply covers and seals all substrates requiring protection from exposure to torch operations.
- D. Ensure all flashing substrates that require primer are primed, and the primer is fully dry.
- E. Unroll the flashing base ply and flashing cap sheet onto the roof surface to their complete length. Once relaxed, cut the membrane to the required working lengths to accommodate the flashing height, cants and the required over-lap onto the horizontal roof surface.
- F. Cut the flashing membrane from the end of the roll in order to always install flashings to the side-lap line or selvage edge line.
- G. Lay out the flashing base ply and flashing Cap Sheet to offset all side-laps a minimum of 12 inches so that side-laps are never aligned on top of the ply beneath. Shingle the flashing ply laps to prevent back-water laps.
- H. Install non-combustible cant strips at transitions where required.
- I. Ensure correct membrane and flashing sequencing to achieve redundant, multi-ply, watertight flashings.
- J. ROOF MEMBRANE BASE PLY: Before installing flashings, install the roof membrane base ply in the horizontal field of the roof, and extend the base ply up to the top of the cant, where present, at roof terminations, transitions and penetrations.
- K. FLASHING BASE PLY: Install the flashing base ply starting at the top leading edge of the vertical flashing substrate, down over the cant and onto the horizontal surface of the roof a minimum of 3 inches beyond the of base of the cant onto the roof. Cut the base ply at corners to form 3 inch side-laps. Install gussets to seal corner transitions.
- L. Install one or more flashing base ply(s) at all roof terminations, transitions and penetrations.
- M. ROOF MEMBRANE CAP SHEET:
 - 1. Install the roof membrane Cap Sheet in the horizontal field of the roof over the flashing base ply up to the roof termination, transition or penetration, and up to the top of cants where present.
 - 2. Using a chalk line, mark a line on the membrane cap sheet a minimum of 4 inches from the base of the cant onto the roof. Where granules are present, embed the cap sheet granules using a torch and trowel or granule embedder to prepare the surface to receive the flashing cap sheet.
- N. FLASHING CAP SHEET:
 - 1. Install the flashing Cap Sheet starting at the top leading edge on the vertical substrate, over the cant and onto the roof surface 4 inches from the base of the cant onto the roof.
 - 2. Install the flashing Cap Sheet to ensure a minimum two (2) ply flashing system is present at all roof terminations, transitions and penetrations.
 - 3. During the membrane and flashing installation, ensure all plies are completely adhered into place, with no bridging, voids or openings. Ensure bitumen or flashing cement bleed-out is present at all flashing side and end-laps.

- 4. Use a damp sponge float or damp rag to press-in the heat-welded flashing plies during installation.
- 5. Where sufficient bitumen bleed-out is not present, and for all self-adhered plies, apply specified gun-grade sealant or mastic to seal the membrane termination along all roof terminations, transitions and penetrations. These include gravel stop edge metal, pipe penetrations, along the top edge of curb and wall flashing, and all other flashing terminations where necessary to seal flashings watertight.
- 6. Fasten the top leading edge of the flashing 8 in o.c. with manufacturer required fasteners. Seal fastener penetrations watertight using specified sealant or mastic.

3.8 LIQUID-APPLIED FLASHING SYSTEM APPLICATION

- A. Install the liquid-applied primer and flashing system in accordance with the membrane system manufacturer's printed installer's guidelines and other applicable written recommendations as provided by the manufacturer.
- B. Refer to manufacturer's details drawings, product data sheets and published general requirements for application rates and specific installation instructions.
- C. Pre-cut polyester reinforcing fleece to conform to roof terminations, transitions and penetrations being flashed. Ensure a minimum 2 in overlap of fleece at side and end-laps. Ensure the completed liquid-applied flashing membrane is fully reinforced.
- D. Apply the base coat of catalyzed resin onto the substrate using a brush or roller, working the material into the surface for complete coverage and full adhesion.
- E. Immediately apply the reinforcing into the wet base coat of resin. Using a brush or roller, work the reinforcing fabric into the wet resin while applying the second coat of catalyzed resin to completely encapsulate the fleece.

3.9 WALKWAYS

- A. At areas outlined on the drawings, and around the perimeter of all rooftop equipment and at all door and stair landings, install walkway protection.
- B. Cut walkway from end of rolls. No piece shall be less than 24 in.
- C. Spot adhere walkway protection with general purpose sealant or heat welding.
- D. Provide a 2 in space between sheets for drainage

3.10 CLEAN-UP

A. Clean-up and properly dispose of waste and debris resulting from these operations each day as required to prevent damages and disruptions to operations.

3.11 FIELD QUALITY CONTROL AND INSPECTIONS

A. Site Condition: Leave all areas around job site free of debris, roofing materials, equipment and related items after completion of job.

- B. Notification Of Completion: Notify the manufacturer by means of manufacturer's printed Notification of Completion form of job completion in order to schedule a final inspection date.
- C. Final Inspection
 - 1. Post-Installation Meeting: Hold a meeting at the completion of the project, attended by all parties that were present at the pre-application conference. A punch list of items required for completion shall be compiled by the Contractor and the manufacturer's representative. Complete, sign, and mail the punch list form to the manufacturer's headquarters.
- D. Issuance Of The Guarantee: Complete all post installation procedures and meet the manufacturer's final endorsement for issuance of the specified guarantee.

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Sheet metal materials.
 - 2. Miscellaneous materials.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Shop Drawings: For sheet metal flashing and trim.
 - 1. Details of roof-penetration flashing.
 - 2. Details of edge conditions, including eaves, ridges, valleys, rakes, crickets, flashings, and counterflashings.
 - 3. Formed flashing and trim at scale of not less than 1-1/2 inches per 12 inches.
- B. Samples: For each exposed product and for each color and texture specified, 12 inches long by actual width.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, are to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim are not to rattle, leak, or loosen, and are to remain watertight.
- B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual: Architectural Metal Flashing, Condensation and Air Leakage Control, and Reroofing"and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
- C. SPRI Wind Design Standard: Manufacture and install roof edge flashings and copings tested in accordance with ANSI/SPRI/FM 4435/ES-1 and capable of resisting the following design pressure:
 - 1. Design Pressure: As indicated on Drawings.

- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.
 - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 SHEET METAL MATERIALS

- A. Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.
- B. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with minimum ASTM A653/A653M, G90 coating designation, or aluminum-zinc alloy-coated steel sheet complying with minimum ASTM A792/A792M, Class AZ50 coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A755/A755M.
 - 1. Nominal Thickness: 24 gage.
 - 2. Surface: Smooth, flat.
 - 3. Exposed Coil-Coated Finish:
 - a. Two-Coat Fluoropolymer: Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions for seacoast and severe environments.
 - 4. Color: As selected by Architect from manufacturer's full range.
- C. Lead Sheet: ASTM B749 lead sheet.
 - 1. Thickness: 4 lb

2.3 UNDERLAYMENT

- A. Self-Adhering, High-Temperature Sheet Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 30 mils thick, specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer when recommended by underlayment manufacturer.
 - 1. Thermal Stability: Stable after testing at 240 deg F; ASTM D1970/D1970M.
 - 2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F or lower; ASTM D1970/D1970M.
 - 3. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. ATAS International, Inc.
 - b. Henry Company; a Carlisle company.
 - c. Owens Corning.
 - d. Polyglass U.S.A., Inc.

2.4 MISCELLANEOUS MATERIALS

- A. Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal.
 - 1. Fasteners for Zinc-Coated (Galvanized) or Aluminum-Zinc Alloy-Coated Steel Sheet: Series 300 stainless steel or hot-dip galvanized steel in accordance with ASTM A153/A153M or ASTM F2329/F2329M.
- C. Elastomeric Sealant: ASTM C920, elastomeric polyurethane polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- D. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.
- E. Bituminous Coating: Cold-applied asphalt emulsion in accordance with ASTM D1187/D1187M.
- F. Asphalt Roofing Cement: ASTM D4586/D4586M, asbestos free, of consistency required for application.
- G. Reglets: Units of type, material, and profile required, formed to provide secure interlocking of separate reglet and counterflashing pieces, and compatible with flashing indicated with factory-mitered and -welded corners and junctions.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Cheney Flashing Company.
 - b. Fry Reglet Corporation.
 - c. Heckmann Building Products, Inc.
 - d. Hohmann & Barnard, Inc.
 - e. Keystone Flashing Company, Inc.
 - f. Metal-Era, Inc.
 - g. OMG Roofing Products; a Division of OMG, Inc.
 - 2. Material: Galvanized steel, 24 gage.
 - 3. Masonry Type: Provide with offset top flange for embedment in masonry mortar joint.
 - 4. Accessories:
 - 5. Finish: With manufacturer's standard color coating.

2.5 FABRICATION, GENERAL

A. Custom fabricate sheet metal flashing and trim to comply with details indicated and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required.

- 1. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
- 2. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
- 3. Verify shapes and dimensions of surfaces to be covered and obtain field measurements for accurate fit before shop fabrication.
- 4. Form sheet metal flashing and trim to fit substrates without excessive oil-canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
- 5. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Fabrication Tolerances:
 - 1. Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 ft. on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
 - 2. Fabricate sheet metal flashing and trim that is capable of installation to tolerances specified.
- C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
 - 1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
 - 2. Use lapped expansion joints only where indicated on Drawings.
- D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal in accordance with cited sheet metal standard to provide for proper installation of elastomeric sealant.
- E. Fabricate cleats and attachment devices from compatible, noncorrosive metal.
- F. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard and by FM Global Property Loss Prevention Data Sheet 1-49 for application, but not less than thickness of metal being secured.
- G. Seams:
 - 1. Fabricate nonmoving seams with flat-lock seams. .
 - 2. Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use. Rivet joints where necessary for strength.

2.6 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Roof Edge Flashing (Gravel Stop) and Fascia Cap: Fabricate in minimum 96-inch- long, but not exceeding 12 ft. long sections. Furnish with 6-inch- wide, joint cover plates. Shop fabricate interior and exterior corners.
 - 1. Fabricate from the following materials:
 - a. Galvanized Steel: 24 gage thick.

- B. Base Flashing: Shop fabricate interior and exterior corners. Fabricate from the following materials:
 - 1. Galvanized Steel: 24 gage thick.
- C. Counterflashing: Shop fabricate interior and exterior corners. Fabricate from the following materials:
 - 1. Galvanized Steel: 24 gage thick.
- D. Roof-Drain Flashing: Fabricate from the following materials:
 - 1. Lead: 4 lb

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrates, and other conditions affecting performance of the Work.
 - 1. Verify compliance with requirements for installation tolerances of substrates.
 - 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
 - 3. Verify that air- or water-resistant barriers have been installed over substrate to prevent air infiltration or water penetration.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF UNDERLAYMENT

- A. Self-Adhering, High-Temperature Sheet Underlayment:
 - 1. Install self-adhering, high-temperature sheet underlayment; wrinkle free.
 - 2. Prime substrate if recommended by underlayment manufacturer.
 - 3. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures.
 - 4. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses.
 - 5. Overlap side edges not less than 3-1/2 inches. Roll laps and edges with roller.
 - 6. Cover underlayment within 14 days.

3.3 INSTALLATION OF SHEET METAL FLASHING AND TRIM, GENERAL

- A. Install sheet metal flashing and trim to comply with details indicated and recommendations of cited sheet metal standard that apply to installation characteristics required unless otherwise indicated on Drawings.
 - 1. Install fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.

- 2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of sealant.
- 3. Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement.
- 4. Install sheet metal flashing and trim to fit substrates and to result in watertight performance.
- 5. Install continuous cleats with fasteners as noted in drawings.
- 6. Space individual cleats not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
- 7. Install exposed sheet metal flashing and trim with limited oil-canning, and free of buckling and tool marks.
- 8. Do not field cut sheet metal flashing and trim by torch.
- 9. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
 - 1. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.
 - 1. Space movement joints at maximum of 10 ft. with no joints within 24 inches of corner or intersection.
 - 2. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
 - 3. Use lapped expansion joints only where indicated on Drawings.
- D. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction.
 - 1. Use sealant-filled joints unless otherwise indicated.
 - a. Embed hooked flanges of joint members not less than 1 inch into sealant.
 - b. Form joints to completely conceal sealant.
 - c. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way.
 - d. Adjust setting proportionately for installation at higher ambient temperatures.
 - 1) Do not install sealant-type joints at temperatures below 40 deg F.
 - 2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."
- G. Rivets: Rivet joints in uncoated aluminum where necessary for strength.

3.4 INSTALLATION OF SLOPED ROOF SHEET METAL FABRICATIONS

- A. Install sheet metal flashing and trim to comply with performance requirements and cited sheet metal standard.
 - 1. Provide concealed fasteners where possible, and set units true to line, levels, and slopes.
 - 2. Install work with laps, joints, and seams that are permanently watertight and weather resistant.
- B. Roof Edge Flashing:
 - 1. Install roof edge flashings in accordance with ANSI/SPRI/FM 4435/ES-1.
 - 2. Anchor to resist uplift and outward forces in accordance with recommendations in cited sheet metal standard unless otherwise indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate at staggered 3-inch centers.
- C. Counterflashing: Coordinate installation of counterflashing with installation of base flashing.
 - 1. Insert counterflashing in reglets or receivers and fit tightly to base flashing.
 - 2. Extend counterflashing 4 inches over base flashing.
 - 3. Lap counterflashing joints minimum of 4 inches.

3.5 INSTALLATION TOLERANCES

A. Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 ft. on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.6 CLEANING

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.

3.7 **PROTECTION**

- A. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures, as determined by Architect.

END OF SECTION

SECTION 077100 - ROOF SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Manufactured units for the following applications:
 - 1. Roof-edge drainage systems.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product data.
- B. Shop Drawings: For roof specialties.
 - 1. Plans, expansion-joint locations, keyed details, and attachments to other work. Distinguish between factory pre manufactured- and field-assembled installation.
 - 2. Details for expansion and contraction; locations of expansion joints, including direction of expansion and contraction.
 - 3. Indicate profile and pattern of seams and layout of fasteners, cleats, clips, and other attachments.
 - 4. Details of special conditions.
- C. Samples: For each type of roof specialty indicated with factory-applied color finishes.

1.4 INFORMATIONAL SUBMITTALS

A. Product certificates.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.6 WARRANTY

- A. Roofing-System Warranty: Roof specialties are included in warranty provisions in Section 075500 "SBS-Modified Bitumen Membrane Roofing."
- B. Special Warranty on Painted Finishes: Manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.

- 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Delta E units when tested in accordance with ASTM D2244.
 - b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
- 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Roof specialties to withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.
- B. FM Approvals' Listing: Manufacture and install roof-edge specialties that are listed in FM Approvals' "Approval Guide" and approved for windstorm classification, as indicated in the drawings. Identify materials with FM Approvals' markings.
- C. SPRI Wind Design Standard: Manufacture and install roof-edge specialties tested in accordance with ANSI/SPRI/FM 4435/ES-1 and capable of resisting the following design pressures:
 - 1. Design Pressure: As indicated on Drawings.
- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
 - а. .

2.2 ROOF-EDGE DRAINAGE SYSTEMS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. ATAS International, Inc.
 - 2. EXCEPTIONAL Metals.
 - 3. Metal-Era, Inc.
 - 4. Soprema, Inc. (Basis of Design).
 - 5. Siplast, Inc.
 - 6. Polyglass, Inc.
 - 7. Johns Manville, Inc.
 - 8. Certainteed Commercial Roofing
 - 9. Firestone Building Products Company
 - 10. U.S. Ply, Inc.

- B. Gutters: Manufactured in uniform section lengths not exceeding 12 ft., with matching corner units, ends, outlet tubes, and other accessories. Elevate back edge at least 1 inch above front edge. Furnish flat-stock gutter straps, gutter brackets, expansion joints, and expansion-joint covers fabricated from same metal as gutters.
 - 1. Formed Aluminum Sheet: 0.032 inch thick.
 - 2. Gutter Profile: As indicated in accordance with SMACNA's "Architectural Sheet Metal Manual."
 - 3. Corners: Factory mitered and continuously welded.
 - 4. Gutter Supports: Gutter brackets Straps with finish matching the gutters.
 - 5. Gutter Accessories: Flat ends.
- C. Downspouts: Plain round complete with elbows, manufactured from the following exposed metal. Furnish with metal hangers, from same material as downspouts, and anchors.
 - 1. Formed Aluminum Sheet: 0.032 inch thick.
 - 2. Size: As indicated on Drawings.
- D. Finishes:
 - 1. Aluminum: Two-coat fluoropolymer.
 - a. Color: As selected by Architect from manufacturer's full range.

2.3 UNDERLAYMENT

- A. Self-Adhering, High-Temperature Sheet Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum 30 mils thick, specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer when recommended by underlayment manufacturer.
 - 1. Thermal Stability: Stable after testing at 240 deg F; ASTM D1970/D1970M.
 - 2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F or lower; ASTM D1970/D1970M.
 - 3. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ATAS International, Inc.
 - b. Carlisle WIP Products; a brand of Carlisle Construction Materials.
 - c. Henry Company; a Carlisle company.
 - d. Polyglass U.S.A., Inc.

2.4 MISCELLANEOUS MATERIALS

- A. Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.
- B. Fasteners: Roof specialty manufacturer's recommended fasteners, designed to meet performance requirements, suitable for application and metals being fastened. Match finish of exposed fasteners with finish of material being fastened. Provide nonremovable fastener heads to exterior exposed fasteners. Furnish the following unless otherwise indicated:

- 1. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
- 2. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.
- C. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, PVC, or silicone or a flat design of foam rubber, sponge neoprene, or cork.
- D. Elastomeric Sealant: ASTM C920, elastomeric polyurethane polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.
- E. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type joints with limited movement.
- F. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.
- G. Asphalt Roofing Cement: ASTM D4586, asbestos free, of consistency required for application.

2.5 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM/NOMMA AMP 500, "Metal Finishes Manual for Architectural and Metal Products," for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 INSTALLATION OF UNDERLAYMENT

- A. Self-Adhering, High-Temperature Sheet Underlayment:
 - 1. Install self-adhering, high-temperature sheet underlayment; wrinkle free.
 - 2. Prime substrate if recommended by underlayment manufacturer.
 - 3. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures.
 - 4. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses.
 - 5. Overlap side edges not less than 3-1/2 inches. Roll laps and edges with roller.
 - 6. Roll laps and edges with roller.
 - 7. Cover underlayment within 14 days.

3.2 INSTALLATION, GENERAL

A. Install roof specialties in accordance with manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, protective coatings, separators, underlayments, sealants, and other miscellaneous items as required to complete roof-specialty systems.

- 1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
- 2. Provide uniform, neat seams with minimum exposure of solder and sealant.
- 3. Install roof specialties to fit substrates and to result in weathertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
- 4. Torch cutting of roof specialties is not permitted.
- 5. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer's written installation instructions.
 - 1. Coat concealed side of uncoated aluminum roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
 - 2. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof specialties for waterproof performance.
- C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.
 - 1. Space movement joints at a maximum of 12 ft. with no joints within 18 inches of corners or intersections unless otherwise indicated on Drawings.
 - 2. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
- D. Fastener Sizes: Use fasteners of sizes that penetrate substrate not less than recommended in writing by fastener manufacturer to achieve maximum pull-out resistance.
- E. Seal concealed joints with butyl sealant as required by roof specialty manufacturer.
- F. Seal joints as required for weathertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F.

3.3 INSTALLATION OF ROOF-EDGE SPECIALTIES

- A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

3.4 INSTALLATION OF ROOF-EDGE DRAINAGE SYSTEMS

- A. Install components to produce a complete roof-edge drainage system in accordance with manufacturer's written instructions. Coordinate installation of roof perimeter flashing with installation of roof-edge drainage system.
- B. Gutters: Join and seal gutter lengths. Allow for thermal expansion. Attach gutters to firmly anchored gutter supports spaced not more than 30 inches apart. Attach ends with rivets and seal with sealant to make watertight. Slope to downspouts.

- 1. Install gutter with expansion joints at locations indicated but not exceeding 50 ft. apart. Coordinate locations so that a downspout occurs on both sides of assembly. Install expansion-joint caps.
- C. Downspouts: Join sections with manufacturer's standard telescoping joints. Provide hangers with fasteners designed to hold downspouts securely to walls and 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c.
 - 1. Provide elbows at base of downspouts at grade to direct water away from building.
 - 2. Connect downspouts to underground drainage system indicated.

3.5 CLEANING AND PROTECTION

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing in accordance with ASTM A780/A780M.
- B. Touch up factory-primed surfaces with compatible primer ready for field painting in accordance with Section 099113 "Exterior Painting."
- C. Clean and neutralize flux materials. Clean off excess solder and sealants.
- D. Remove temporary protective coverings and strippable films as roof specialties are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain roof specialties in a clean condition during construction.
- E. Replace roof specialties that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures, as determined by Architect.

END OF SECTION

SECTION 077200 - ROOF ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Manufactured units for the following applications:
 - 1. Roof curbs.
 - 2. Roof hatches.
 - 3. Large pipe supports.
 - 4. Small pipe supports

1.2 ACTION SUBMITTALS

- A. Product data.
- B. Shop Drawings: For roof accessories.
 - 1. Include plans, elevations, keyed details, and attachments to other work. Indicate dimensions, loadings, and special conditions. Distinguish between plant- and field-assembled work.

1.3 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Roof plans, drawn to scale, and coordinating penetrations and roof-mounted items.

1.4 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

PART 2 - PRODUCTS

2.1 **PERFORMANCE REQUIREMENTS**

- A. General Performance: Roof accessories to withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.
- B. Wind-Restraint Performance: As indicated on Drawings.

2.2 ROOF CURB

- A. Internally reinforced roof-curb units capable of supporting superimposed live and dead loads, including equipment loads and other construction indicated on Drawings, bearing continuously on roof structure, and capable of meeting performance requirements; with welded or mechanically fastened and sealed corner joints, straight sides, and integrally formed deck-mounting flange at perimeter bottom.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. AES Industries, Inc.
 - 2. ATAS International, Inc.
 - 3. Greenheck Fan Corporation.
 - 4. Pate Company (The).
 - 5. Roof Products and Systems (RPS); Duravent Group.
 - 6. Thybar Corporation.
- C. Size: Coordinate dimensions with roughing-in information or Shop Drawings of equipment to be supported.
- D. Steel: Zinc-coated (galvanized) steel sheet, 0.052 inch thick.
 - 1. Finish: Mill phosphatized.
 - 2. Color: As selected by Architect from manufacturer's full range.
- E. Construction:
 - 1. Curb Profile: Profile as indicated on Drawings compatible with roofing system.
 - 2. Fabricate curbs to minimum height of 12 inches above roofing surface unless otherwise indicated.
 - 3. Insulation: Factory insulated with 1-1/2-inch- thick glass-fiber board insulation.
 - 4. Liner: Same material as curb, of manufacturer's standard thickness and finish.
 - 5. Nailer: Factory-installed wood nailer along top flange of curb, continuous around curb perimeter.
 - 6. Platform Cap: Where portion of roof curb is not covered by equipment, provide weathertight platform cap formed from 3/4-inch- thick plywood covered with metal sheet of same type, thickness, and finish as required for curb.
 - 7. Metal Counterflashing: Manufacturer's standard, removable, fabricated of same metal and finish as curb.

2.3 LARGE PIPE SUPPORTS

- A. Galvanized steel frame with clevix hangers for single tier multiple pipe and/or conduit support with polycarbonate base material when pipe or conduit is larger than 3" diameter.
- B. Manufacturers: Subject to compliance with the requirements, provide products by one of the following:
 - 1. Basis of Design: Miro Industries, Inc.
 - 2. Pate Company (The)
 - 3. Thybar Corporation

- C. Type and Size: Four single tier clevis supported conduits with 16" minimum clearance from roof surface to underside of pipe/conduit. Minimum spacing at 6'-0" on center.
- D. Support Frame: Galvanized frame with bracing
- E. Hanger Type: Clevis Hanger
- F. Support Base: Polycarbonate base and rubber support pads with maximum loading not to exceed 3.0 psi

2.4 SMALL PIPE SUPPORTS

- A. Polycarbonate resin roller with polycarbonate resin seat material when pipe or conduit is smaller than 3" diameter.
- B. Manufacturers: Subject to compliance with the requirements, provide products by one of the following:
 - 1. Basis of Design: Miro Industries, Inc.; Model 3-R-4
 - 2. Pate Company (The)
 - 3. Thybar Corporation
- C. Type and Size: Pillow block support with pipe roller support with 4" minimum clearance from roof surface to underside of pipe/conduit. 7.75" square by 4" high. Minimum spacing at 7'-0" on center.
- D. Support Base: Polycarbonate base with maximum loading not to exceed 118 pounds per pipestand.

2.5 ROOF HATCHES

- A. Metal roof-hatch units with lids and insulated double-walled curbs, welded or mechanically fastened and sealed corner joints, continuous lid-to-curb counterflashing and weathertight perimeter gasketing, straight sides, and integrally formed deck-mounting flange at perimeter bottom.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. ACUDOR Products, Inc.
 - 2. Architectural Specialties, Inc.
 - 3. Babcock-Davis.
 - 4. BILCO Company (The).
 - 5. J. L. Industries, Inc.; Activar Construction Products Group, Inc.
 - 6. Nystrom, Inc.
 - 7. O'Keeffe's Inc.
 - 8. Pate Company (The).
 - 9. Precision Ladders, LLC.
- C. Type and Size:
 - 1. Single-leaf lid, 30 by 36 inches .

- D. Loads: Minimum 40 lbf/sq. ft. external live load and 20 lbf/sq. ft. internal uplift load.
- E. Hatch Material, Steel: Zinc-coated (galvanized) steel sheet.
 - 1. Thickness: Manufacturer's standard thickness for hatch size indicated .
 - 2. Finish: Powder coat.
 - 3. Color: As selected by Architect from manufacturer's full range.
- F. Construction:
 - 1. Insulation: 2-inch- thick, polyisocyanurate board.
 - a. R-Value: 12.0 in accordance with ASTM C1363.
 - 2. Nailer: Factory-installed wood nailer continuous around hatch perimeter.
 - 3. Hatch Lid: Opaque, insulated, and double walled, with manufacturer's standard metal liner of same material and finish as outer metal lid.
 - 4. Curb Liner: Manufacturer's standard, of same material and finish as metal curb.
 - 5. Fabricate curbs to minimum height of 12 inches above roofing surface unless otherwise indicated.
- G. Hardware: Spring operators, hold-open arm, stainless steel spring latch with turn handles, stainless steel butt- or pintle-type hinge system, and padlock hasps inside and outside.
- H. Safety Railing System: Roof-hatch manufacturer's standard system, including rails, clamps, fasteners, safety barrier at railing opening, and accessories required for a complete installation; attached to roof hatch and complying with 29 CFR 1910.23 requirements and authorities having jurisdiction.
 - 1. Height: 42 inches above finished roof deck.
 - 2. Posts and Rails: Galvanized-steel pipe, 1-1/4 inches in diameter or galvanized-steel tube, 1-5/8 inches in diameter.
 - 3. Maximum Opening Size: System constructed to prevent passage of a sphere 21 inches in diameter.
 - 4. Self-Latching Gate: Fabricated of same materials and rail spacing as safety railing system. Provide manufacturer's standard hinges and self-latching mechanism.
 - 5. Post and Rail Tops and Ends: Weather resistant, closed or plugged with prefabricated end fittings.
 - 6. Provide weep holes or another means to drain-entrapped water in hollow sections of handrail and railing members.
 - 7. Fabricate joints exposed to weather to be watertight.
 - 8. Fasteners: Manufacturer's standard, finished to match railing system.
 - 9. Finish: Manufacturer's standard.
- I. Ladder-Assist Post: Roof-hatch manufacturer's standard device for attachment to roof-access ladder.
 - 1. Operation: Post locks in place on full extension; release mechanism returns post to closed position.
 - 2. Height: 42 inches above finished roof deck.
 - 3. Material: Steel tube.
 - 4. Post: 1-5/8-inch- diameter pipe.
 - 5. Finish: Manufacturer's standard.

2.6 METAL MATERIALS

- A. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheer complying with minimum ASTM A653/A653M, G90 coating designation or aluminum-zinc alloy-coated steel sheet complying with minimum ASTM A792/A792M, Class AZ50 coating designation; structural quality.
 - 1. Powder Coat Finish: After cleaning and pretreating, apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat to a minimum dry film thickness of 2 mils.
- B. Aluminum Extrusions and Tubes: ASTM B221, manufacturer's standard alloy and temper for type of use, finished to match assembly where used; otherwise mill finished.
- C. Stainless Steel Sheet and Shapes: ASTM A240/A240M or ASTM A666, Type 304.
- D. Galvanized-Steel Tube: ASTM A500/A500M, round tube, hot-dip galvanized in accordance with ASTM A123/A123M.

2.7 MISCELLANEOUS MATERIALS

- A. Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.
- B. Polyisocyanurate Board Insulation: ASTM C1289, thickness and thermal resistivity as indicated.
- C. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for aboveground use, acceptable to authorities having jurisdiction, containing no arsenic or chromium, and complying with AWPA C2; not less than 1-1/2 inches thick.
- D. Fasteners: Roof accessory manufacturer's recommended fasteners, designed to comply with performance requirements, suitable for application and metals being fastened. Match finish of exposed fasteners with finish of material being fastened. Provide nonremovable fastener heads to exterior exposed fasteners. Furnish the following unless otherwise indicated:
 - 1. Fasteners for Metallic-Coated Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel in accordance with ASTM A153/A153M or ASTM F2329/F2329M.
- E. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, PVC, or silicone or a flat design of foam rubber, sponge neoprene, or cork.
- F. Elastomeric Sealant: ASTM C920, elastomeric [polyurethane] [silicone] polymer sealant as recommended by roof accessory manufacturer for installation indicated; low modulus; of type, grade, class, and use classifications required to seal joints and remain watertight.
- G. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.
- H. Asphalt Roofing Cement: ASTM D4586/D4586M, asbestos free, of consistency required for application.

2.8 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM/NOMMA AMP 500, "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Install roof accessories in accordance with manufacturer's written instructions.
 - 1. Install roof accessories level; plumb; true to line and elevation; and without warping, jogs in alignment, buckling, or tool marks.
 - 2. Anchor roof accessories securely in place so they are capable of resisting indicated loads.
 - 3. Use fasteners, separators, sealants, and other miscellaneous items as required to complete installation of roof accessories and fit them to substrates.
 - 4. Install roof accessories to resist exposure to weather without failing, rattling, leaking, or loosening of fasteners and seals.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended in writing by manufacturer's written installation instructions.
 - 1. Coat concealed side of uncoated aluminum and stainless steel roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
 - 2. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof accessories for waterproof performance.

3.2 INSTALLATION OF ROOF ACCESSORIES

- A. Roof Curb: Install each roof curb so top surface is level.
- B. Equipment Support: Install equipment supports so top surfaces are level with each other.
- C. Roof-Hatch:
 - 1. Verify that roof hatch operates properly. Clean, lubricate, and adjust operating mechanism and hardware.
 - 2. Attach safety railing system to roof-hatch curb.
 - 3. Attach ladder-assist post in accordance with manufacturer's written instructions.
- D. Seal joints with elastomeric or butyl sealant as required by roof accessory manufacturer.

3.3 CLEANING AND PROTECTION

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing in accordance with ASTM A780/A780M.
- B. Touch up factory-primed surfaces with compatible primer ready for field painting in accordance with Section 099113 "Exterior Painting."
- C. On completion of installation, clean exposed surfaces in according with manufacturer's written instructions. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as roof accessories are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain roof accessories in a clean condition during construction.
- E. Replace roof accessories that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures, as determined by Architect.

END OF SECTION

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Nonstaining silicone joint sealants.
 - 2. Urethane joint sealants.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product data.
- B. Samples: Manufacturer's standard color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Joint-sealant schedule.

1.4 INFORMATIONAL SUBMITTALS

A. Field Quality-Control Reports: For field-adhesion-test reports, for each sealant application tested.

1.5 CLOSEOUT SUBMITTALS

- A. Warranty Documentation:
 - 1. Manufacturers' special warranties.

1.6 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified in accordance with ASTM C1021 to conduct the testing indicated.

1.7 WARRANTY

A. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Twenty years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, 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 joint-sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 NONSTAINING SILICONE JOINT SEALANTS

- A. Silicone, Nonstaining, S, NS, 100/50, T, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Uses T and NT.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. The Dow Chemical Company.
 - b. CRL.
 - c. Sika
 - d. Pecora

2.3 URETHANE JOINT SEALANTS

- A. Urethane, S, NS, 25, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, urethane joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Pecora Corporation.
 - b. Basis of Design: Sherwin-Williams Company (The); "Loxon S1".
 - c. Sika Corporation Building Components.
 - d. Tremco Incorporated.
 - 2. Location: Reglet joints cut into existing masonry and joints between existing structural steel and masonry and at aluminum storefront.

2.4 JOINT-SEALANT BACKING

A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Adfast.
 - b. Alcot Plastics Ltd.
 - c. Construction Foam Products; a division of Nomaco, Inc.
 - d. Master Builders Solutions.
- B. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- 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. Provide self-adhesive tape where applicable.

2.5 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. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 **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, 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 after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 - a. Concrete.
 - b. Brick.
 - 3. Remove laitance and form-release agents from concrete.

- 4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Existing PVC reglet shape
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by 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 or primer 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.

3.2 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 in ASTM C1193 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.
 - 3. Remove absorbent sealant backings that have become wet before sealant application, and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that 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 in 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 in accordance with requirements specified in subparagraphs 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 sealant from surfaces adjacent to joints.
 - 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 profile in accordance with Figure 8A in ASTM C1193 unless otherwise indicated.
- G. Clean off excess sealant 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.
- H. 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, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.3 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Tests and Inspections:
 - 1. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
 - a. Extent of Testing: Test completed and cured sealant joints as follows:
 - 1) Perform one test for each 1000 ft. of joint length thereafter or one test per each floor per elevation.
 - b. Test Method: Test joint sealants in accordance with Method A, Tail Procedure, in ASTM C1521.
 - For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 - c. Inspect tested joints and report on the following:
 - 1) Whether sealants filled joint cavities and are free of voids.
 - 2) Whether sealant dimensions and configurations comply with specified requirements.
 - 3) Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. Compare these results to determine if adhesion complies with sealant manufacturer's field-adhesion hand-pull test criteria.
 - d. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant material, sealant configuration, and sealant dimensions.
 - e. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.

- 2. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.
- C. Prepare test and inspection reports.

END OF SECTION

SECTION 099114 - EXTERIOR PAINTING (MPI STANDARDS)

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Surface preparation and application of paint systems on the following exterior substrates:
 - a. Steel and iron.
 - b. Galvanized metal.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each type of topcoat product.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Benjamin Moore & Co.
 - 2. PPG Paints.
 - 3. Rust-Oleum Corporation; a subsidiary of RPM International, Inc.
 - 4. Sherwin-Williams Company (The).
 - 5. Valspar Corporation (The).
- B. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to products listed in the Exterior Painting Schedule for the paint category indicated.

2.2 PAINT PRODUCTS

- A. MPI Standards: Provide products complying with MPI standards indicated and listed in its "MPI Approved Products List."
- B. Material Compatibility:
 - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. For each coat in a paint system, provide products recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

C. Colors: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
- B. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

3.3 INSTALLATION

- A. Apply paints in accordance with manufacturer's written instructions and recommendations in "MPI Manual."
- B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 CLEANING AND PROTECTION

- A. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- B. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, replacing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- C. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 EXTERIOR PAINTING SCHEDULE

A. Steel and Iron Substrates:

H/S PROJECT No. 24043 CONSTRUCTION DOCUMENTS

- 1. Water-Based Light Industrial Coating System MPI EXT 5.1B :
 - a. Zinc-Rich Prime Coat: Primer, zinc rich, inorganic, MPI #19.
 - b. Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
 - c. Semigloss Topcoat: Light industrial coating, exterior, water based, semigloss (MPI Gloss Level 5), MPI #163.
- B. Galvanized-Metal Substrates:
 - 1. Latex System MPI EXT 5.3H:
 - a. Water-Based Prime Coat: Primer, galvanized, water based, MPI #134.
 - b. Intermediate Coat: Latex, exterior, matching topcoat.
 - c. Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11.

END OF SECTION

SECTION 221423 - STORM DRAINAGE PIPING SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. General-purpose roof drains.
 - 2. Deck roof drains
 - 3. Miscellaneous storm drainage piping specialties.
- B. Related Requirements:
 - 1. Section 076200 "Sheet Metal Flashing and Trim" for penetrations of roofs.

1.2 ACTION SUBMITTALS

- A. Product Data:
 - 1. General-purpose roof drains.
 - 2. Miscellaneous storm drainage piping specialties.

PART 2 - PRODUCTS

2.1 GENERAL-PURPOSE ROOF DRAINS

- A. Cast-Iron Roof Drains.
 - 1. Cast-Iron, Large-Sump, General-Purpose Roof Drains: .
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Jay R. Smith Mfg Co; a division of Morris Group International.
 - 2) Wade; a subsidiary of McWane Inc.
 - 3) Watts Water Technologies; a Watts company.
 - 4) Zurn Industries, LLC.
 - b. Standard: ASME A112.6.4.
 - c. Body Material: Cast iron.
 - d. Dimension of Body: Nominal 14-to 16-inch diameter.
 - e. Dome Material: Cast iron.
 - f. Combination flashing ring and gravel stop.
 - g. Outlet: Bottom.
 - h. Outlet Type: Inside caulk.
 - i. Options:

- 1) Extension collars.
- 2) Underdeck clamp.
- 3) Sump receiver plate.
- 4) Vandal-proof dome.

2.2 MISCELLANEOUS STORM DRAINAGE PIPING SPECIALTIES

- A. Downspout Boots: .
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Jay R. Smith Mfg Co; a division of Morris Group International.
 - b. Wade; a subsidiary of McWane Inc.
 - c. Watts Water Technologies; a Watts company.
 - d. Zurn Industries, LLC. Basis of Design: Z191-24
 - 2. Description: Manufactured, ASTM A48/A48M, gray-iron casting, with strap or ears for attaching to building; NPS 4 outlet; and shop-applied bituminous coating.
 - 3. Size: Inlet size to match downspout and NPS 4 outlet.
 - 4. Height: Match existing downspout boot heights.
- B. Metal Downspout Nozzles: .
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Jay R. Smith Mfg Co; a division of Morris Group International.
 - b. Wade; a subsidiary of McWane Inc.
 - c. Watts Water Technologies; a Watts company.
 - d. Zurn Industries, LLC. Basis of Design: "Z199-DC"
 - 2. Description: Nozzle with wall flange and mounting holes to cover rough opening and serve as anchor.
 - 3. Size: Same as connected downspout.
 - 4. Material: Stainless steel nozzle and flange.
 - 5. Piping Connection Type: Threaded.
 - 6. Opening Protection: Birdscreen.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install roof drains in accordance with roof membrane manufacturer's written installation instructions at low points of roof areas.
 - 1. Install flashing collar or flange of roof drain to maintain integrity of waterproof membranes where penetrated.
 - 2. Install expansion joints, if indicated, in roof drain outlets.
 - 3. Position roof drains for easy access and maintenance.

- B. Install downspout adapters on outlet of back-outlet parapet roof drains and connect to sheet metal downspouts.
- C. Install downspout boots at grade with top at a height above grade that matches existing. Secure to building wall.
- D. Install downspout nozzles at exposed bottom of conductors where they spill onto grade.
- E. Install test tees in vertical conductors and near floor.
- F. Install wall cleanouts in vertical conductors. Install access door in wall if indicated.
- G. Install through-penetration firestop assemblies for penetrations of fire- and smoke-rated assemblies.

3.2 CONNECTIONS

A. Comply with International Plumbing Code requirements. Drawings indicate general arrangement of piping, fittings, and specialties.

3.3 INSTALLATION OF FLASHING

- A. Fabricate flashing from single piece of metal unless large pans, sumps, or other drainage shapes are required.
- B. Install sheet flashing on pipes, sleeves, and specialties passing through or embedded in floors and roofs with waterproof membrane.
- C. Set flashing on floors and roofs in solid coating of bituminous cement.
- D. Secure flashing into sleeve and specialty clamping ring or device.

3.4 CLEANING

A. Clean piping specialties during installation and remove dirt and debris as work progresses.

3.5 **PROTECTION**

- A. Protect piping specialties during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic and construction work.
- B. Place plugs in ends of uncompleted piping at end of each day and when work stops.

END OF SECTION

APPENDIX A SPECIFICATIONS FOR ASBESTOS ABATEMENT

SPECIFICATIONS FOR ASBESTOS ABATEMENT

FOR

HENRY THURMAN HALL - ROOF ASBESTOS ABATEMENT

Southern University Baton Rouge

Project Designed by;

Lee Ritter, C.I.E.C, C.E.O.P., FSRT, Journeyman Water Restorer



2014 West Pinhook Road Suite 200 Lafayette, LA 70508

April 4, 2025

RCE PROJECT NO.: 255059



INDEX TO SPECIFICATIONS

HENRY THURMAN HALL ROOF ASBESTOS ABATEMENT SOUTHERN UNIVERSITY

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SECTION 02 82 10 - SUMMARY OF THE WORK - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Project consists of asbestos removal and related activities at the facility as indicated on plans.
 - 1. Project Location: As Indicated on Plans
 - 2. Owner: Southern University
- B. Contract Documents, dated for April 4, 2025were prepared for the Project by Ritter Consulting Engineers Ltd., 2014 W. Pinhook Rd. Suite 200, Lafayette, LA 70508.
- C. The Work consists of asbestos removal and selected demolition work from the areas designated on the drawings. The erecting of barriers and the removal and disposal of building material coated with asbestos as indicated in the drawings.
 - 1. The Work, as indicated on the plans, may include any or all of the following:
 - a. The removal of asbestos-containing roofing material in areas indicated on the drawings.
 - b. The removal of asbestos-containing mastic sealant as indicated on the drawings.
 - c. The containment, transport and disposal of all waste in full accordance with all pertinent local, State and federal regulations.
 - d. A Schedule of Values shall be provided per work area (each floor and exterior work).
 - e. A Schedule of Work shall be submitted prior to the start of work to allow the Owner to review to gain portion access as needed.
- D. The Work will be done under a single prime contract.

1.3 WORK SEQUENCE

A. The Work will be conducted as indicated on the drawings. Abatement of asbestos will be performed concurrently or in sequence so that all abatement work is completed within the time specified.

1.4 ASBESTOS-CONTAINING MATERIALS

A. The Work of this contract involves activities that will disturb asbestos-containing materials (ACM) or presumed asbestos-containing materials (PACM). The location of ACM known to be present at the worksite is set forth in the drawings. If any other ACM or PACM is found, notify the owner, other employers and employees the about the location and quantity of the ACM or PACM within 24 hours of the discovery.

1.5 ASBESTOS HEALTH RISK

- A. The disturbance or dislocation of ACM may cause asbestos fibers to be released into the building's atmosphere, thereby creating a potential health risk to workers and building occupants. Apprise all workers, supervisory personnel, subcontractors and consultants who will be at the job site of the seriousness of the risk and of proper work procedures which must be followed.
- B. Where in the performance of the work, workers, supervisory personnel, subcontractors, or consultants may encounter, disturb, or otherwise function in the immediate vicinity of any identified ACM, take appropriate continuous measures as necessary to protect all building occupants from the risk of exposure to airborne asbestos. Such measures shall include the procedures and methods described herein, and compliance with regulations of applicable federal, state and local agencies.

C POTENTIAL LEAD HAZARD:

The disturbance or dislocation of lead-based painted materials may cause lead dust to be released into the building's atmosphere, thereby creating a potential health hazard to workers and building occupants. Apprise all workers, supervisory personnel, subcontractors and consultants who will be at the job site of the seriousness of the hazard and of proper work procedures which must be followed.

Where in the performance of the work, workers, supervisory personnel, subcontractors, or consultants may encounter, disturb, or otherwise function in the immediate vicinity of any identified lead-based paint, take appropriate continuous measures as necessary to protect all building occupants from the potential hazard of exposure to lead dust. Such measures shall include the procedures and methods described herein, and compliance with regulations and guidelines of applicable Federal, state and local agencies.

1.6 CONTRACTOR USE OF PREMISES

- A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated. The Owner will not have access to work area. An office area shall be provided with basic office amenities to include minimum of one desk, chair and 2 2 plug-110 outlets.
 - 1. Driveways and Entrances: Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- B. Use of the Existing Building: Maintain the existing building in a weather tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.
 - 1. Smoking: Smoking or open fires will not be permitted within the building enclosure or on the premises.
 - 2. Toilet Rooms: Use of existing toilets within the building, by the Contractor's personnel, will not be permitted.

1.7 AIR MONITORING BY THE OWNER

- A. The Owner will contract for air monitoring. Air monitoring will be conducted outside of the work area during the work, and for clearance sampling at the end of the project
 - 1. Outside of the Work Area: The Owner's air monitoring contractor will sample air outside of the work area to detect faults in the work area isolation such as:
 - a. Contamination of the building outside of the work area with airborne asbestos fibers.
 - b. Failure of filtration or rupture in the differential pressure system.
 - c. Contamination of air outside the building envelop with airborne asbestos fibers.
- B. Work area clearance: Clearance air sampling by the air monitoring contractor at the completion of asbestos abatement work is described in Section 02 82 81 Project Decontamination.

- C. Air monitoring required by OSHA is work of the Contractor and is not covered in this section.
- D. The following air monitoring firms are approved and acceptable. Use one of these approved firms:

1.	BBL Environmental	P. 337-793-6253
2.	Breathe Safe	P. 225-772-5103
3.	Partners Environmental	P. 337-250-7556
4.	RPM Environmental	P. 225-571-7062

1.8 SCHEDULE OF AIR SAMPLES BY AIR MONITORING CONTRACTOR

- A. Sample cassettes: Samples will be collected on 25 mm. cassettes as follows:
 - 1. PCM: 0.8 micrometer mixed cellulose ester.
 - 2. TEM: 0.45 micrometer mixed cellulose ester or 0.40 micrometer polycarbonate, with 5.0 micron mixed cellulose ester backing filter.
- B. Number and Volume of Samples: The number and volume of air samples given in the schedules is approximate. The exact number and volume of samples collected by the Contractor may vary depending upon job conditions and the analytical method used.
- C. Sample Volume and Sensitivity:
 - 1. PCM: The sample volumes collected by the Contractor's air monitoring firm will be determined by the following formula:

$$Volume \frac{\left(\frac{Number of \ Fibers}{Area of \ 100 \ fields}\right) X \ Total Filter Area}{\left(\frac{Limit Value}{4}\right)}$$

Where:

Number of fibers =	5 fibers/100 fields, based on a limit of detection
	(LOD) of 7 fibers/mm ² on the filter
Area of 100 fields	= 0.785mm ²
Total Filter Area =	385mm ²

=

Limit Value

- as specified in the schedules of samples below
- a. For purposes of this specification, the sample volume calculated above will be considered to be of sufficient size so that there is a 95 percent level of confidence that the value measured by each individual sample at the limit of detection (LOD) is less than or equal to the limit values specified below.
- b. For purposes of this specification, the Limit of Detection (LOD) is defined as 7 fibers/mm² on the filter or 5 fibers/100 fields.
- c. For purposes of this specification overloaded samples will be considered as exceeding the applicable limit value.
- 2. TEM: Analytical Sensitivity of 0.05 structures/cc as set forth in the AHERA regulation.
- B. Base Line:
 - 1. Before Start of Work: The Air Monitoring Contractor will secure air samples to establish a base line.

Sampled	Number of Samples	Limit Value (Fibers/cc)	Approx. Volume (Liters)	Rate (Liters/ Minute)
Outside Each Work Area	5	0.01	<1,000>	1-10
Outside Buildir	ng 5	0.01	<1,000>	1-10

2. PCM Samples: (guidelines for Air Monitoring Contractor)

3. TEM Samples: (guidelines for Air Monitoring Contractor)

Location Sampled	Numbe of		Analytical Sensitivity	Appro Volum	
Sampl	les	(Struct.	/cc.) (Lite	ers)	Minute)
Outside Each Work Area		1	0.005	1,300	1-10
Outside Build	ling	1	0.005	1,300	1-10

- 4. Base Line (PCM): a level expressed in fibers per cubic centimeter which is 25 percent greater than the largest of the following:
 - a. Average of the PCM samples collected outside each Work Area
 - b. Average of the PCM samples collected outside the building

- c. 0.01 fibers per cubic centimeter
- 5. Samples collected for TEM analysis will be held without analysis. These samples will be analyzed under the conditions and terms set forth in "Fibers Counted" and "Affect On Contract Sum".
- C. Daily
 - 1. From start of work of Section 02 82 61 Temporary Enclosures through the work of Section 02 82 81 Project Decontamination, the Air Monitoring Contractor must take samples outside of each work area.
 - 2. Sample volume and sensitivity: If samples are overloaded at the sample volume required for a limit value equal to the Stop Action Levels or Immediate Stop Action Levels given later in this section, the level is considered to have been exceeded.
 - Location Number Limit Rate Approx. Sampled Value Volume (LPM) of (Fibers/cc) Samples (Liters) **Outside Each** 1 0.01 <1.000> 1-10 Work Area at **Critical Barrier** Clean Room 1 0.01 < 1,0001 - 101 0.01 Equipment Decon <1.000> 1 - 10**Outside Building** 1 0.01 <1.000> 1 - 10Output of Pressure 1 0.01 <1,000> 1 - 10**Differential System**
 - 3. PCM Samples (guidelines for Air Monitoring Contractor):

- 4. Additional samples may be taken at the General Contractor's discretion. If airborne fiber counts exceed allowed limits additional samples may be taken as necessary to monitor fiber levels.
- 5. Additional air samples shall be taken for the determination of lead dust concentrations and PEL in each work area containment and adjacent to the entrance of the work area containment.
- 1.9 ANALYTICAL METHODS USED BY THE AIR MONITORING CONTRACTOR

- A. The following methods will be used by the Air Monitoring Contractor in analyzing filters used to collect air samples. Sampling rates may be varied from printed standards to allow for high volume sampling.
 - 1. Phase Contrast Microscopy (PCM) will be performed using the NIOSH 7400 method.
 - 2. Transmission Electron Microscopy (TEM) will be performed using the analysis method set forth in the AHERA regulation 40 CFR Part 763 Appendix A.
 - 3. Atomic Absorption Spectroscopy or Inductively Coupled Plasma Emission Spectroscopy will be used for the analysis of Surface Lead dust wipe samples, Air samples.

1.10 LABORATORY TESTING BY AIR MONITORING CONTRACTOR

- A. The services of a testing laboratory must be employed by the Air Monitoring Contractor to collect air samples and to perform laboratory analyses of the air samples. A microscope and technician will be set up at the job site, or samples will be sent overnight on a daily basis, so that verbal reports on air samples can be obtained within 24 hours. The Owner and Designer will have access to all air monitoring tests and results.
- B. The Owner and Designer will have access to all air monitoring tests and results upon request no later than 30 days from the completion of work.

1.11 FIBERS AND STRUCTURES

- A. Fibers Counted: The following procedure will be used to resolve any disputes regarding fiber types when a project has been stopped due to excessive airborne fiber counts.
 - 1. Large Fibers: "Airborne Fibers" referred to above include all fibers regardless of composition as counted by phase contrast microscopy (PCM), unless additional analysis by transmission or scanning electron microscopy demonstrates to the satisfaction of the Designer that nonasbestos fibers are being counted. "Airborne Fibers" counted in samples analyzed by transmission electron microscopy shall be asbestos fibers, greater than 5 microns in length. For purposes of stop action levels, subsequent to analysis by electron microscopy, the number of "Airborne Fibers" shall be determined by multiplying the number of fibers, regardless of composition, counted by PCM by the proportion of fibers that are asbestos as determined by TEM (a number equal to, asbestos fibers counted, divided by all fibers counted in the electron microscopy analysis).

2. Small Structures: "Airborne Fibers" referred to above include asbestos structures (fibers, bundles, clusters or matrices) of any diameter and any length greater than 0.5 microns.

1.12 ADDITIONAL TESTING

- A. The Owner may conduct air monitoring and laboratory testing. If he elects to do this the cost of such air monitoring and laboratory testing shall be at no additional cost to the General Contractor.
- PART 2 PRODUCTS (Not Applicable)

PART 3 - EXECUTION

- 3.1 STOP ACTION LEVELS
 - A. Outside Work Area: If any air sample taken outside of the Work Area exceeds the base line established in Part 1 of this section, immediately and automatically stop all work except corrective action. The Designer will evaluate the situation and advise the General Contractor in writing of the appropriate response.
 - 1. If the high reading was the result of a failure of Work Area isolation measures initiate the following actions:
 - a. Immediately erect new critical barriers as set forth in Section 02 82 61 Temporary Enclosures to isolate the affected area from the balance of the building. Erect Critical Barriers at the next existing structural isolation of the involved space (e.g. wall, ceiling, floor).
 - b. Decontaminate the affected area in accordance with Section 02 82 83 Cleaning & Decontamination Procedures.
 - c. Require that respiratory protection as set forth in Section 02 82 75 Respiratory Protection be worn in affected area until area is cleared for re-occupancy in accordance with Section 02 82 81 Project Decontamination.
 - d. Leave Critical Barriers in place until completion of work and insure that the operation of the pressure differential system in the Work Area results in a flow of air from the balance of the building into the affected area.
 - e. If the exit from the clean room of the personnel decontamination unit enters the affected area, establish a decontamination facility consisting of a Shower Room and Changing Room as set forth in Section 02 82 77 Decontamination Units at entry point to affected area.
 - f. After Certification of Visual Inspection in the Work Area remove critical barriers separating the work area from the affected area. Final air samples will be taken within the entire area as set forth in Section 02 82 81 Project Decontamination.

- 2. If the high reading was the result of other causes, initiate corrective action as determined by the Designer.
- B. Effect on Contract Sum: Complete corrective work with no change in the Contract Sum if high airborne fiber counts were caused by the General Contractor's activities. The General Contract Sum and schedule will be adjusted for additional work caused by high airborne fiber counts beyond the Contractor's control.

3.2 STOP WORK

- A. If the Owner or the Project Designer presents a written stop work order, immediately and automatically conform to that stop work order, while maintaining temporary enclosures and pressure differential. Do not recommence abatement work until authorized in writing by Owner or Project Designer.
- B. Immediately initiate the following actions: After being presented with a stop work order immediately:
 - 1. Cease all asbestos removal activities, or any other activities that disturbs ACM.
 - 2. Repair any fallen, ripped or otherwise failed work area isolation measures.
 - 3. Maintain in operation all work area isolation measures including those required by Sections 02 82 61 Temporary Enclosures, 02 82 60 Temporary Pressure Differential & Air Circulation System, and 02 82 77 Decontamination Units.
 - Maintain all worker protections including those required by Sections 02 82
 73 Worker Protection Asbestos Abatement, and 02 82 75 Respiratory Protection.
 - 5. Fog the air in the work area with a mist of amended water to reduce airborne fiber levels.
- C. Do not recommence work until authorized in writing by the Owner or Designer.

END OF SECTION 02 82 10

SECTION 02 82 12 - COORDINATION - ASBESTOS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:
 - 1. General project coordination procedures.
 - 2. Conservation.
 - 3. Contingency Plan.
 - 4. Project Directory.
 - 5. Notifications.
 - 6. Pre-Construction Inspection.
 - 7. Administrative and supervisory personnel.
 - 8. Pre-Construction Conference.
 - 9. Progress Meetings.
 - 10. Coordination meetings.
 - 11. Record Keeping.
 - 12. Special Reports.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. "Section 02 82 25 Submittals Asbestos Abatement" for administrative procedures regarding submittals.

- 2. "Section 02 82 78 Materials and Equipment Asbestos Abatement" for coordinating general installation.
- 3. "Section 02 82 80 Project/Contactor Closeout Asbestos Abatement" for coordinating contract closeout.

1.3 COORDINATION

- A. Owner Occupancy: Coordinate construction operations and scheduling with partial occupancy requirements of the Owner and the Owner's use of utilities.
- B. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly completion of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in the sequence required to obtain the best results where execution of one part of the Work depends on execution of other components, before or after its own execution.
 - 2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
 - 3. Make provisions to accommodate items scheduled for later installation.
- C. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
 - 1. Prepare similar memoranda for the Owner and separate contractors where coordination of their work is required.
- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of schedules.
 - 2. Installation and removal of temporary facilities.
 - 3. Delivery and processing of submittals.
 - 4. Progress meetings.

- 5. Project closeout activities.
- E. Conservation: Coordinate construction operations to assure 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 in, the Work.

1.4 PLAN OF ACTION

- A. Prepare a detailed plan of the procedures proposed for use in complying with the requirements of this specification. Include in the plan the location and layout of decontamination areas, the sequencing of asbestos work, the interface of trades involved in the performance of work, methods to be used to assure the safety of building occupants and visitors to the site, disposal plan including location of approved disposal site, and a detailed description of the methods to be employed to control pollution. Expand upon the use of portable HEPA ventilation system, closing out of the building's HVAC system, method of removal to prohibit visible emissions, and packaging of removed asbestos debris.
 - 1. Submit the Plan of Action to the Designer for information only, prior to the start of work.

1.5 CONTINGENCY PLAN

- A. Contingency Plan: Prepare a contingency plan for emergencies or any other event that may require breaching of work area containment or modification or abridgement of decontamination or work area isolation procedures. Include in this plan procedures for performing electrical and mechanical repairs inside containment after abatement work has begun. Include in plan specific procedures for decontamination or work area isolation. Note that nothing in this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency. Items to be addressed in the plan include, but are not limited to the following:
 - 1. Fire
 - 2. Accident
 - 3. Life threatening injury
 - 4. Non life threatening injury
 - 5. Rescue

- 6. Power Failure
- 7. Pressure differential system failure
- 8. Breach of containment
- 9. Electrical faults or shock
- 10. Excessive heat / cold (if/when such limits are specified)
- 11. Supplied air system failure
- 12. Water leaks
- 13. Waste spills
- 14. Unauthorized entry into work area
- 15. Elevated air samples outside of containment
- 16. Repairs inside containment
- 17. Toxic releases

1.6 PROJECT DIRECTORY

- A. Develop a directory of all entities involved in the project. Include the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site. Identify individuals, their duties and responsibilities. List business name, contact person, normal business and emergency telephone, pager and fax numbers and addresses of:
 - 1. Owner, Designer, and Project Administrator.
 - 2. Contractor's General Superintendent, supervisory personnel and Contractor's home office.
 - 3. Emergency services including but not limited to fire, ambulance, doctor, hospital, police, power company, telephone company.
 - 4. Local, state, and federal agencies with jurisdiction over the project.
- B. Post: Post copies of the Project Directory in the project meeting room, the temporary field office, each temporary telephone, and at entrance to clean room of Personnel Decontamination Unit

1.7 NOTIFICATIONS

- A. Notify other entities at the job site of the nature of the asbestos abatement activities, location of asbestos-containing materials (ACM), requirements relative to asbestos set forth in these specifications and applicable regulations. Advance notification will be made to:
 - 1. Owners of the building/facility;
 - 2. Employees who will perform asbestos abatement work or related activities, or who will be in the work area during the course of the work of this contract.
 - 3. Employers of employees who work and/or will be working in adjacent areas during the course of the work of this contract.
- B. Notify emergency service agencies including fire, ambulance, police or other agency that may service the abatement work site in case of an emergency. Notification is to include methods of entering work area, emergency entry and exit locations, modifications to fire notification or firefighting equipment, and other information needed by agencies providing emergency services.
- C. Notifications of Emergency: Any individual at the job site may notify emergency service agencies if necessary without effect on this Contract or the Contract Sum.

1.8 PRE-CONSTRUCTION INSPECTION

 A. Inspect areas in which work will be performed, prior to commencement of work. Prepare a listing of damage to structure, surfaces, equipment or of surrounding properties which could be misconstrued as damage resulting from the work. Photograph or videotape existing conditions as necessary to document conditions. Submit to Designer for record purposes prior to starting work.

1.9 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. Project Supervisor: Provide a full-time Project Supervisor at the work site who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, project scheduling, management, etc. This person is the Contractor's Representative, and will function as the "competent person" at the work site responsible for compliance with all applicable federal, state and local regulations, particularly those relating to ACM.
- B. Training: The General Superintendent must have a current certification from a state approved trainer for a course that meets the requirements of the EPA Model

Accreditation Plan for asbestos abatement contractor/supervisor (40 CFR part 763, Subpart E, Appendix C).

- C. Experience: The General Superintendent must have demonstrable experience in the successful management of asbestos abatement projects that are similar to the work of this contract.
 - 1. The General Superintendent must have a minimum of 2 years experience in the on-site management of asbestos abatement projects.
- D. Competent Person: The General Superintendent is to be a Competent Person as required by OSHA in 29 CFR 1926.
- E. Accreditation: The General Superintendent, Supervisors and Forepersons are to be accredited as an Asbestos Abatement Supervisor in accordance with the AHERA regulation 40 CFR Part 763, Subpart E, Appendix C.

1.10 PRE-CONSTRUCTION CONFERENCE

- A. An initial progress meeting, recognized as "Pre-Construction Conference" will be convened by the Designer prior to start of any work. The preconstruction conference will be scheduled before start of construction, at a time convenient to the Owner and the Designer. Meet at the project site, or as otherwise directed, with General Superintendent, Owner, Designer, Project Administrator, and other entities concerned with the asbestos abatement work.
- B. Attendees: Authorized representatives of the Owner, Designer, and their consultants will be in attendance. An authorized representative of the Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
 - 1. Seventy-two (72) hours advance notice will be provided to all participants prior to convening Pre-Construction Conference.
- C. Agenda: This is an organizational meeting, to review responsibilities and personnel assignments, to locate regulated areas and temporary facilities including power, light, water, etc. Items of significance that could affect progress will be discussed, including the following:
 - 1. Tentative construction schedule.
 - 2. Critical work sequencing.

- 3. Designation of responsible personnel.
- 4. Procedures for processing field decisions and Change Orders.
- 5. Procedures for processing Applications for Payment.
- 6. Distribution of Contract Documents.
- 7. Submittal of Shop Drawings, Product Data, and Samples.
- 8. Preparation of record documents.
- 9. Use of the premises.
- 10. Parking availability.
- 11. Office, work, and storage areas.
- 12. Equipment deliveries and priorities.
- 13. Safety procedures.
- 14. First aid.
- 15. Security.
- 16. Housekeeping.
- 17. Working hours.

1.11 PROGRESS MEETINGS

- A. General: In addition to specific coordination and pre-installation meetings for each element of work, and other regular project meetings held for other purposes, the Designer will hold general progress meetings as required. These meeting will be scheduled, where possible, at time of preparation of payment request.
- B. Attendees: Representatives of the Owner and Designer will attend these meetings. In addition to representatives of the Contractor, each subcontractor, supplier, or 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 the Project and authorized to conclude matters relating to the work. Require each entity then involved in planning, coordination or performance of work to be properly represented at each meeting.

- C. Agenda: Be prepared to discuss the following items at the progress meetings. Review other items of significance that could affect progress.
- D. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to insure that current and subsequent activities will be completed within the Contract Time.
- E. Review the present and future needs of each entity present, including the following:
 - 1. Interface requirements.
 - 2. Time.
 - 3. Sequences.
 - 4. Status of submittals.
 - 5. Deliveries.
 - 6. Access.
 - 7. Site utilization.
 - 8. Temporary facilities and services.
 - 9. Hours of work.
 - 10. Hazards and risks.
 - 11. Housekeeping.
 - 12. Quality and work standards.
 - 13. Change Orders.
 - 14. Documentation of information for payment requests.

1.12 RECORD KEEPING

- A. Daily Log: Maintain a Daily Log (in an area accessible to the Owner, Designer and Project Administrator) as a bound, sequential, hand-written record carefully prepared daily that documents but is not limited to the following items:
 - 1. Meetings; purpose, attendees, brief discussion
 - 2. Special or unusual events, i.e. barrier breeching, equipment failures, accidents
- B. Documentation of Contractor's completion of the following:
 - 1. Inspection of work area preparation prior to start of removal and daily thereafter.
 - 2. Removal of any sheet plastic barriers
 - 3. Contractor's inspections prior to spray back, lock back, encapsulation, enclosure or any other operation that will conceal the condition of ACM or the substrate from which such materials have been removed.
 - 4. Removal of waste materials from work area
 - 5. Decontamination of equipment (list items)
 - 6. Contractors final inspection/final air test analysis.
- C. Entry/Exit Log: Maintain within the Decontamination Unit a daily log documenting the dates and time of but not limited to, the following items:
 - 1. Visitations; authorized and unauthorized with the following information:
 - a. Name
 - b. Organization
 - c. Entry time
 - d. Exit Time
 - e. Respiratory protection
 - 2. Personnel, by name, entering and leaving the work area with the following information:
 - a. Printed Name
 - b. Identification Number
 - c. Entry Time
 - d. Exit Time
 - e. Respiratory Protection

- D. Air Monitoring Results: Post personnel and area air monitoring results in Decontamination Unit within 24 hours of sample collection. Post the respiratory protection requirements for the work in progress.
- E. Records in Decontamination Unit: Maintain the following documentation in the Decontamination Unit, in a location accessible to workers.
 - 1. Documentation of inspections by OSHA, EPA or local authority
 - 2. Respiratory Protection Program.
- F. Other records: Maintain other documentation in a location that is accessible to the Owner, Designer, and Project Administrator including:
 - 1. Waste Manifests and shipping records.
 - 2. Landfill receipts.
 - 3. Accident reports.

1.13 SPECIAL REPORTS

- A. General: Except as otherwise indicated, submit special reports directly to Owner within one day of occurrence requiring special report, with copy to Designer and others affected by occurrence.
- B. Reporting Unusual Events: When an event of unusual and significant nature occurs at site (examples: failure of pressure differential system, rupture of temporary enclosures), prepare and submit report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise Owner in advance at earliest possible date.
- C. Reporting Accidents: Prepare and submit reports of significant accidents, at site and anywhere else work is in progress. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained, property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury, or where work was stopped for over 4 hours during a scheduled shift.
- D. Report Discovered Conditions: When an unusual condition of the building is discovered during the work (e.g. leaks, termites, corrosion) prepare and submit a special report indication condition discovered.

1.14 SUBMITTALS

- A. Before the Start of Work: Submit the following to the Designer in the same manner as product data. Do not begin work until these submittals are returned with designer's action stamp indicating that all submittals have been "received-not reviewed".
 - 1. Contingency Plans.
 - 2. Project Directory.
 - 3. Notifications: copy of notification sent to other entities at the work site, and to emergency service agencies.
 - 4. Pre-Construction Inspection: Report on inspection carried out as required by this section. Include copies of all photographs, video tapes, etc.
 - 5. Accreditation: Submit evidence in the form of training course certificates for the General Superintendent, Supervisors, and Forepersons as asbestos abatement supervisors in accordance with AHERA requirements. Submit evidence in the form of training course certificates that each worker is trained as an asbestos abatement worker in accordance with AHERA requirements.
 - 6. Resume: Submit resume of General Superintendent
 - 7. Schedule of Values
 - 8. OSHA Lead Awareness Training
 - 9. Asbestos Transporter License Number
 - 10. General Contractors License
 - 11. Asbestos Contractor License for State of Louisiana
- B. Submit daily: Provide wo (2) copies for information purposes of all documents indicated in the following sub-sections to Project Administrator by end of the next working day after the day they are received by Contractor.
 - 1. Section on Record Keeping.
 - 2. Section on Special Reports.
- C. Project Close-out: Submit wo (2) copies for information purposes of all documents indicated in the following sections at final closeout of project as a project close-out submittal.

- 1. Section on Record Keeping.
- 2. Section on Special Reports.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 02 82 12

SECTION 02 82 21 - REFERENCE STANDARDS AND DEFINITIONS - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

- A. General: Basic contract definitions are included in the Conditions of the Contract.
 - 1. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, or other paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the reader locate the reference. Location is not limited.
 - 2. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Designer, requested by the Designer, and similar phrases.
 - 3. "Approved": The term "approved," when used in conjunction with the Designer's action on the Contractor's submittals, applications, and requests, is limited to the Designer's duties and responsibilities as stated in the Conditions of the Contract.
 - 4. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
 - 5. "Furnish": The term "furnish" means supply and deliver to the Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.
 - 6. "Install": The term "install" describes operations at the Project Site including the actual unloading, unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
 - 7. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
 - 8. "Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.

- a. The term "experienced," when used with the term "installer," means having a minimum of five previous projects similar in size and scope to this Project, being familiar with the special requirements indicated, and having complied with requirements of authorities having jurisdiction.
- b. Trades: Using terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.
- 9. "Project Site" is the space available to the Contractor for performing construction activities, either exclusively or in conjunction, with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
- 10. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.
- 11. "Designer": This is the entity described as the "Architect" in AIA Document A201 "General Conditions of the Contract for Construction," or is the entity described as "Engineer" in Engineers Joint Contract Document Committee (EJCDC) Document 1910-8 "Standard General Conditions of the Construction Contract." All references to Architect or Engineer in the Contract Documents in all cases refer to the Designer. The Designer will represent the Owner during construction and until final payment is due. The Designer will advise and consult with the Owner. The Owner's instructions to the Contractor will be forwarded through the Designer.
- 12. "Project Administrator": This is the entity described as the "Project Representative" in AIA Document A201 "General Conditions of the Contract for Construction," or is the entity described as "Engineer" in Engineers Joint Contract Document Committee (EJCDC) Document 1910-8 "Standard General Conditions of the Construction Contract." The Project Administrator is a full time representative of the Owner at the job site with authority to stop the work upon written or verbal order if requirements of the Contract Documents are not met, or if in the sole judgment of the Project Administrator, Designer, or Owner, the interests of the Owner, safety of any person or the Owner's property are jeopardized by the work.
- 13. "Stop Work Order": is a written order to cease asbestos removal, encapsulation or enclosure activities. The Contractor must maintain work area enclosure, pressure differential isolation and ventilation of the work area, and decontamination units during the period that a Stop Work Order is in effect.

- 14. "General Superintendent": This is the Contractor's Representative at the work site. This person must be a Competent Person as defined by OSHA in 29 CFR 1926.
- 15. "Owners Rep": This is a person hired to oversee the work of the Contractor. This can include the Air Monitoring firm or others hired/employed by the Owner.
- B. Definitions Relative to Asbestos Abatement:
 - 1. "Adequately Wet" means to sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from the asbestos-containing material (ACM), then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wetted.
 - 2. "Asbestos": The asbestiform varieties of chrysolite (serpentine), amosite (cummingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite, actinolite, and any of these minerals that has been chemically treated and/or altered. For purposes of the contract documents materials described in the contract documents as asbestos are to be considered as asbestos.
 - 3. "Asbestos-Containing Material (ACM)": Any material containing more than 1 percent asbestos as determined using the methods specified in appendix A, subpart F, 40 CFR part 763, Section 1, Polarized Light Microscopy.
 - 4. "Asbestos-Containing Waste Material": any waste that contains asbestos. This term includes filters or other materials contaminated with asbestos. This term also includes regulated asbestos-containing material waste and materials contaminated with asbestos including disposable equipment and clothing.
 - 5. "Asbestos debris": pieces of ACM that can be identified by color, texture, or composition, or dust, if the dust is determined by an accredited inspector to be ACM.
 - 6. "Asbestos Designer": a person who determines how asbestos abatement work should be conducted and who prepares for purposes of an abatement project, plans, designs, procedures, work scope or other substantive direction or criteria.
 - 7. "Certified Industrial Hygienist (C.I.H.)": one certified in the practice of industrial hygiene by the American Board of Industrial Hygiene.
 - 8. "Competent person" : an individual who meets the requirements of OSHA as a "competent person" for the specific activity involved in the work. The "competent person" must meet the requirements of 29 CFR 1926.32(f), and 29 CFR 1926.1101.
 - 9. "Filter": A media component used to remove solid or liquid particles from air and water.

- 10. "Friable Asbestos": any asbestos-containing material that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.
- 11. "Grinding" : to reduce to powder or small fragments and includes manual or mechanical chipping or drilling.
- 12. "HEPA Filter": A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97 percent of all mono-dispersed particles of 0.3 microns in diameter.
- 13. "HEPA Filter Vacuum Collection Equipment (or vacuum cleaner)": High efficiency particulate air filtered vacuum collection equipment with a HEPA filter.
- 14. "Intact" : that the ACM has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix.
- 15. "Leak-tight" : that solids or liquids cannot escape or spill out. It also means dust-tight.
- 16. "Negative Pressure Enclosure (NPE) ": A pressure differential and ventilation system where the work area is maintained at a negative pressure relative to air pressure outside the work area.
- 17. "Nonfriable Material" : any material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure and has not been rendered friable.
- 18. "Personal Monitoring": Sampling of the asbestos fiber concentrations within the breathing zone of an employee.
- 19. "Surfacing material" : material that is sprayed, troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).
- 20. "Thermal system insulation (TSI)" : insulation applied to pipes, fittings, boilers, breeching, tanks, ducts or other components to prevent heat loss or gain.
- 21. "Time Weighted Average (TWA)": The average concentration of a contaminant in air during a specific time period as determined by the method prescribed in Appendix A of 29 CFR part 1926.1101.
- 21. "Visible Emissions": Any emissions containing particulate material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

22. "Working Day" : Monday through Friday and includes holidays that fall on any of the days Monday through Friday as indicated in the notification requirements.

1.3 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. Specification Format: These Specifications are organized into Divisions and Sections based on CSRF's 16-Division format and MasterFormat's numbering system.
- B. Specification Content: This Specification uses certain conventions regarding the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
 - 1. Abbreviated Language: Language used in Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.
 - 2. Streamlined Language: The Specifications generally use the imperative mood and streamlined language. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.

1.4 INDUSTRY STANDARDS

- A. Applicability of Standards: Except where 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 the standards in effect as of the date of the Contract Documents.
- C. Conflicting Requirements: Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer to the Designer before proceeding for a decision on requirements that are different but apparently equal, and where it is uncertain which requirement is the most stringent.
 - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum acceptable. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as

appropriate, for the context of the requirements. Refer uncertainties to the Designer for a decision before proceeding.

- D. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source.
- E. Standards: which apply to asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:
 - American National Standards Institute (ANSI) OPERATIONS 25 West 43rd Street Fourth Floor New York, New York 10036 p.(212) 642-4900 f. (212) 398-0023 www.ansi.org
 American National Standards Institute (ANSI) HEADQUARTERS 1819 L Street NW Sixth Floor Washington, DC 20036 p. (202) 293-8020 f. (202) 293-9287
 - a. Fundamentals Governing the Design and Operation of Local Exhaust Systems Publication Z9.2
 - b. Practices for Respiratory Protection Publication Z88.2
 - American Society for Testing and Materials (ASTM) 100 Bar Harbor Drive P.O. Box C700 West Conshohocken, PA 19428-2959 p. (610) 832-9500 f. (610) 832-9555 www.astm.org
 - a. Safety and Health Requirements Relating to Occupational Exposure to Asbestos E 849
 - b. ASTM Standard Practice for Encapsulants for Spray-or-Trowel-Applied Friable Asbestos-Containing Building Materials E1494
- F. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations, as referenced in the Contract Documents, are defined to mean the associated names. Names and addresses are subject to change and are believed, but are not assured, to be accurate and up-to-date as of the date of the Contract Documents.
 - 1. ACI American Concrete Institute P.O. Box 9094 38800 Country Club Drive Farmington Hills, MI 48333 Farmington Hills, MI 48331 p. (248) 848-3700 f. (248) 848-3701 www.concrete.org

- ACIL American Council of Independent Laboratories 1629 K St., NW Suite 400 Washington, DC 20006-1633 p. (202) 887-5872 f. (202) 887-0021 www.acil.org
- ACPA American Concrete Pipe Association 1303 West Walnut Hill Lane Suite 305 Irving, TX 75038-3008 p. (972) 506-7216 f. (972) 506-7682 www.concrete-pipe.org
- ACGIH American Conference of Governmental Industrial Hygienists
 1330 Kemper Meadow Dr. Cincinnati, OH 45240 p. (513) 742-2020 Customers/members p. (513) 742-6163 administrative f. (513) 742-3355
 www.acgih.org
- 5. AIA The American Institute of Architects 1735 New York Ave., NW Washington, DC 20006-5292 p. (202) 626-7300 f. (202) 626-7547 www.aia.org
- AIHA American Industrial Hygiene Assoc. 2700 Prosperity Ave Suite 250 Fairfax, VA 22031 p. (703) 849-8888 f. (703) 207-3561 www.aiha.org
- ANSI American National Standards Institute
 OPERATIONS HEADQUARTERS
 25 West 43rd Street 1819 L Street NW
 Fourth Floor Sixth Floor
 New York, New York 10036 Washington, DC 20036
 p.(212) 642-4900 f. (212) 398-0023 p. (202) 293-8020 f. (202) 293-9287
 www.ansi.org
- ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers 1791 Tullie Circle, NE Atlanta, GA 30329 p. (404) 636-8400 f. (404) 321-5478 www.ashrae.org9. ASME American Society of Mechanical Engineers

- 9. HEADQUARTERS WASHINGTON CENTER Three Park Avenue 1828 L. Street NW Suite 906 New York, NY 10016-5990 Washington, DC 20036-5104 p. (212) 591-7158 or (800) 843-2763 p. (202) 785-3756 f. (202) 429-9417 f. (212) 591-7739 www.asme.org
- 10. ASPE American Society of Plumbing Engineers 8614 Catalpa Avenue Suite 1007 Chicago, IL 60656-1116 p. (773) 693-2773 f. (773) 695-9007 www.aspe.org
- ASTM American Society for Testing and Materials 100 Bar Harbor Drive P.O. Box C700 West Conshohocken, PA 19428-2959 p. (610) 832-9500 f. (610) 832-9555 www.astm.org
- 12. CGA Compressed Gas Assoc. 4221 Walney Road Fifth Floor Chantilly, VA 20151-2923 p. (703) 788-2700 f. (703) 961-1831 www.cganet.com
- FM Factory Mutual Systems CORPORATE
 1301 Atwood Avenue
 P.O. Box 7500
 Johnston, RI 02919
 p. (401) 275-3000 f. (401) 275-3029
 www.fmglobal.com
- 14. GA Gypsum Association 810 First St., NE Suite 510 Washington, DC 20002 p. (202) 289-5440 f. (202) 289-3707 www.gypsum.org
- 15. IEEE Institute of Electrical and Electronic Engineers Three Park Avenue 17th Floor New York, NY 10016-5997 p. (212) 419-7900 f. (212) 752-4929 www.ieee.org

- 16. NETA InterNational Electrical Testing Assoc. 3050 Old Centre Avenue Suite 102 Portage, MI 49024 p. (269) 488-6382 f. (269) 488-6383 www.netaworld.org
- 17. IRI Industrial Risk Insurers P.O. Box 5010 85 Woodland St. Hartford, CT 06102-5010 (860) 520-7412
- 18. ISA Instrument Society of America P.O. Box 12277 67 Alexander Dr. Research Triangle Park, NC 27709 p. (919) 549-8411 f. (919) 549-8288 www.isa.org
- 19. ISO International Standards Organization 1 ch.de la Voie-Creuse Case Postale 56 Ch-1211 Geneva 20, Switzerland p. +41 22 749 0111 f. +41 22 733 3430 www.iso.org
- 20. NEC National Electrical Code (from NFPA) One Batterymarch Park P.O. Box 9101 Quincy, MA 02169-9101 p. (617) 770-3000 or (800) 344-3555 f. (617) 770-0700 www.nfpa.org
- 21. NECA National Electrical Contractors Assoc.
 3 Bethesda Metro Center Suite 1100 Bethesda, MD 20814 p. (301) 657-3110 f. (301) 215-4500 www.necanet.org
- NEMA National Electrical Manufacturers Association 1300 North 17th Street Suite 1752 Rosslyn, VA 22209 p. (703) 841-3200 f. (730) 841-5900 www.nema.org
- 23. NFPA National Fire Protection Association One Batterymarch Park

P.O. Box 9101 Quincy, MA 02169-9101 p. (617) 770-3000 or (800) 344-3555 f. (617) 770-0700 www.nfpa.org

- 24. NRCA National Roofing Contractors Assoc. 10255 W. Higgins Rd. Suite 600 Rosemont, IL 60018-5607 p. (847) 299-9070 f. (847) 299-1183 www.nrca.net
- 25. RFCI Resilient Floor Covering Institute 115 Broad Street Suite 201 LaGrange, GA 30240 p. (706) 882-3833 f. (706) 882-3880 www.rfci.com
- 26. UL Underwriters Laboratories 333 Pfingsten Rd. Northbrook, IL 60062 p. (847) 272-8800 f. (847) 272-8129 www.ul.com
- 27. White Lung Association PO Box 1483 Baltimore, MD 21203 p. (410) 243-5864 www.whitelung.org
- G. Federal Government Agencies: Names and titles of federal government standardor Specification-producing agencies are often abbreviated. The following acronyms or abbreviations referenced in the Contract Documents indicate names of standard- or Specification-producing agencies of the federal government. Names and addresses are subject to change and are believed, but are not assured, to be accurate and up-to-date as of the date of the Contract Documents.

1.	CE Corps of Engineers	
	(U.S. Department of the Army)	HEADQUARTERS
	New Orleans District Public Affairs Office	Public Affairs Office
	7400 Leake Avenue	441G Street
	P.O. Box 60267 (zip 70160)	Washington, DC 20314
	New Orleans, LA 70118	-
	p. (202) 761-0010 f. (202) 761-1803	p. (504) 862-2201
	www.usace.army.mil	f. (504) 862-1724

2. CFR Code of Federal Regulations (Available from the Government Printing Office) U.S. Government Printing Office 732 North Capitol Street NW
Washington, DC 20401
p. (202) 512-0000 or (202) 512-1957 f. (202) 512-2104
www.gpoaccess.gov
(Material is usually first published in the "Federal Register")

- CPSC Consumer Product Safety Commission U.S. Consumer Product Safety Commission 4330 East West Hwy Bethesda, MD 20814 p. (301) 504-7923 f. (301) 504-0124 www.cpsc.gov
- 4. CS Commercial Standard U.S. Government Printing Office 732 North Capitol Street NW Washington, DC 20401 p. (202) 512-0000 or (202) 512-1957 f. (202) 512-2104 www.gpoaccess.gov
- 5. DOC Department of Commerce U.S. Department of Commerce 1401 Constitution Ave., NW Washington, DC 20230 p. (202) 482-2000 www.commerce.gov
- DOT Department of Transportation
 U.S. Department of Transportation
 1200 New Jersey Ave., SE
 Washington, DC 20590
 p. (202) 366-4000
 www.dot.gov
- 7. EPA **Environmental Protection Agency REGIONAL DISTRICT 6 HEADOUARTERS** Fountain Place 12th Floor Ariel Rios Building 1200 Pennsylvania Ave., NW 1445 Ross Ave. Washington, DC 20460 Dallas, TX 75202-2733 p. (202) 272-0167 p. (214) 665-2200 or (800) 887-6063 (214) 665-7113 www.epa.gov/region6 www.epa.gov
- 8. FS Federal Specification (from GSA) HEADQUARTERS

10.

U.S. General Services Administration 1800 F Street NW Washington, DC 20405 www.gsa.gov **REGIONAL DISTRICT 6** Carol Sue Henry Larry P. Rexroat Supervisor Environmental Scientist Occupational Safety & Health Spec 12th Floor #425 12A 819 Taylor St (7PMV) 819 Taylor St Fort Worth, TX 76102 Fort Worth, TX 76102 p. (817) 978-4436 f. (817) 978-2577 p.(817) 978-7260 or (817) 822-6618 carol.henry@gsa.gov larry.rexroat@gsa.gov

 GSA General Services Administration U.S. General Services Administration 1800 F Street NW Washington, DC 20405 p. (202) 708-5082

www.gsa.gov

MILMilitary Standardization DocumentsDefense Automated Printing ServiceU.S. D700 Robbins Ave1400 DBuilding 4DWashinPhiladelphia, PA 19111-5094p. (702Attn: DODSSPp. (702(For all printed documents)f. (215) 697-1462www.defenselink.milMilitary Standardization Documents

U.S. Department of Defense 1400 Defense Pentagon Washington, DC 20301-1400 p. (703) 545-6700 or p. (703) 428-0711

- NIST National Institute of Standards and Technology 100 Bureau Drive Stop 1070 Gaithersburg, MD 20899-1070 p. (301) 975-6478 www.nist.gov
- 12. OSHA Occupational Safety and Health Administration HEADQUARTERS REGIONAL DISTRICT 6 200 Constitution Ave., NW 525 Griffin St., Room 602 Washington, DC 20210 Dallas, TX 75202 p. (202) 219-6091 or (800) 321-6742 p.(972) 850-4145 f.(972) 850-4149 www.osha.gov
- 13. PS Product Standard of NIST

100 Bureau Drive Stop 1070 Gaithersburg, MD 20899-1070 p. (301) 975-6478 www.nist.gov

- 14. USPS U.S. Postal Service 475 L'Enfant Plaza, SW Washington, DC 20260-0010 p. (202) 268-2000 www.usps.com 15. Louisiana Department of Environmental Quality LADEQ Galvez Building 602 N. Fifth Street P.O. Box 4301 (zip 70821) Baton Rouge, LA 70802 p. (225) 219-5337 or (225) 219-3953 f. (225) 219-3971 www.deq.louisiana.gov
- H. Trade Union Jurisdictions: The Contractor shall maintain, and require subcontractors to maintain, complete current information on jurisdictional matters, regulations and pending actions, as applicable to construction activities. The manner in which Contract Documents have been organized and subdivided is not intended to be indicative of trade union or jurisdictional agreements.
 - 1. Discuss new developments at project meetings at the earliest feasible dates. Record relevant information and actions agreed upon.
 - 2. Assign and subcontract construction activities, and employ tradesmen and laborers in a manner that will not unduly risk jurisdictional disputes that could result in conflicts, delays, claims and losses.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 02 82 21

SECTION 02 82 23 - CODES, REGULATIONS AND STANDARDS - ASBESTOS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This section sets forth governmental regulations which are included and incorporated herein by reference and made a part of the specification. This section also sets forth those notices and permits which are known to the Owner and which either must be applied for and received, or which must be given to governmental agencies before start of work.
 - 1. Requirements include adherence to work practices and procedures set forth in applicable codes, regulations and standards.
 - 2. Requirements include obtaining permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with codes, regulations, and standards.

1.3 CODES, REGULATIONS AND STANDARDS

- A. General Applicability of Codes, Regulations and Standards: Except to the extent that more explicit or more stringent requirements are written directly into the Contract Documents, all applicable codes and regulations have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the Contract Documents, or as if published copies are bound herewith.
- B. Contractor Responsibility: The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable Federal, State, and local regulations. The Contractor shall hold the Owner and Designer harmless for failure to comply with any applicable work, hauling, disposal, safety, health or other regulation on the part of the contractor, the contractor's employees, or subcontractors.

- C. Federal Requirements: which govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:
 - 1. OSHA: U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA), including but not limited to:
 - a. Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite;
 Final Rules Title 29, Part 1910, Section 1001 of the Code of Federal Regulations
 Final Rules Title 29, Part 1926, Section 1101 of the Code of Federal Regulations
 - b. Respiratory Protection Title 29, Part 1910, Section 134 of the Code of Federal Regulations Title 29, Part 1926, Section 103 of the Code of Federal Regulations
 - c. Personal Protective Equipment for General Industry Title 29, Part 1910, Section 132 of the Code of Federal Regulations Title 29, Part 1926, Sections 95 - 107 of the Code of Federal Regulations
 - d. Access to Employee Exposure and Medical Records Title 29, Part 1926, Section 33 of the Code of Federal Regulations
 - e. Hazard Communication Title 29, Part 1926, Section 59 of the Code of Federal Regulations
 - f. Specifications for Accident Prevention Signs and Tags Title 29, Part 1910, Section 145 of the Code of Federal Regulations
 - g. Permit Required Confined Space Title 29, Part 1910, Section 146 of the Code of Federal Regulations
 - h. Construction Industry Title 29, Part 1910, Section 1001 of the Code of Federal Regulations Title 29, Part 1926, Section 1101 of the Code of Federal Regulations
 - i. Construction Industry General Duty Standards Title 29, Part 1926, Sections 20 through 35 of the Code of Federal Regulations
 - 2. DOT: U. S. Department of Transportation, including but not limited to:
 - a. Hazardous Substances Title 49, Part 171 and 172 of the Code of Federal Regulations

- b. Hazardous Material Regulations General Awareness and Training Requirements for Handlers, Loaders and Drivers Title 49, Parts 171-180 of the Code of Federal Regulations
 c. Hazardous Material Regulations Editorial and Technical Revisions Title 49, Parts 171-180 of the Code of Federal Regulations
- 3. EPA: U. S. Environmental Protection Agency (EPA), including but not limited to:
 - a. Asbestos Hazard Emergency Response Act (AHERA) Regulation Title 40, Part 763, Sub-part E of the Code of Federal Regulations
 - b. EPA Model Accreditation Plan Asbestos Containing Materials Final Rule & Notice Title 40, Part 763, Sub-part E, Appendix C of the Code of Federal Regulations
 c. National Emission Standard for Hazardous Air Pollutants
 - (NESHAP)
 National Emission Standard for Asbestos
 Title 40, Part 61, Sub-part A, and Sub-part M (Revised Sub-part B)
 of the Code of Federal Regulations
- D. State Requirements: which govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:
 - 1. Louisiana Department of Environmental Quality
 - a. LAC 33:III. Chapter 51. Emission Standard for Asbestos
 - b. LAC 33:III. Chapter 27. Asbestos-Containing Materials in Schools and State Buildings.
 - c. LAC 33:VII Solid Waste
 - d. LAC 33:V Hazardous Waste

Abide by all local requirements which govern asbestos abatement work or hauling and disposal of asbestos waste materials.

1.4 NOTICES

A. LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)

1. Postmark or Deliver Written Notification as required by LAC 33:III.Chapter 51.Subchapter M.Asbestos to the LDEQ. Contact at least 10 working days prior to beginning any work on asbestos-containing materials (ACM). Send notification to the following address:

- a. Louisiana Department of Environmental Quality Air Quality Division
 P.O. Box 4314
 Baton Rouge, LA 70821
 Phone: (225) 219-3488
 Fax: (225) 219-3240
 Email: degairassess@LA.GOV
- 2. Notification: Include the following information in the notification sent to the LADEQ:
 - a. Indication whether the notification is the original or revised notification
 - b. Name, address, and telephone number of owner or operator.
 - c. Name, address, and telephone number of contractor.
 - d. Type of Operation (demolition or renovation).
 - e. Description of the facility or affected part of the facility being demolished or renovated, including the size (square feet [square meters], number of floors), age, present and prior use of the facility.
 - f. Estimate of the approximate amount of RACM to be removed from the facility in terms of linear meters [linear feet] of pipe, and surface area in square meters [square feet] of other facility components. Also estimate the approximate amount of Category I and Category II nonfriable ACM in the affected part of the facility that will not be removed before demolition.
 - g. For facilities in which the amount of friable asbestos materials less than 80 linear meters (260 linear feet) on pipes and less than 15 square meters (160 square feet) or 1 cubic meter (35 cubic feet) if the length and width could not be measured. On other facility components, explain techniques of estimation. The most current DEQ form and it's requirements shall be followed as outlined and requested from DEQ.
 - h. Location and street address (including building number or name and floor or room number, if appropriate), city county, and state, of the facility being demolished or renovated.
 - Scheduled starting and completion dates of asbestos removal work (or any other activity, such as site preparation that would break up, dislodge, or similarly disturb asbestos material) in a demolition or renovation; planned renovation operations involving individual nonscheduled operations shall only include the beginning and ending dates of the report period in Subsection F.1.d.i. of LAC 33:III.Chapter 51.Subchapter M.Asbestos.
 - j. Scheduled starting and completion dates of demolition or renovation.

- k. Nature of planned demolition or renovation and method(s) to be used, including demolition or renovation techniques to be used and description of affected facility components.
- 1. Procedures to be used to comply with the requirements of LAC 33:III.Chapter 51.Subchapter M.Asbestos.
- m. Name and location of the waste disposal site where the asbestos containing waste material will be deposited.
- n. A certification that at least one person trained and accredited as required by Subsection F.3.h of LAC 33:III.Chapter 51.Subchapter M.Asbestos will supervise the stripping and removal described by this notification.
- o. Description of procedures to be followed in the event that the unexpected RACM is found or Category II nonfriable ACM becomes crumbled, pulverized, or reduced to powder.
- p. Name, address, and telephone number of the waste transporter.

B. OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION

 Send a copy of evaluation and certification of alternative work procedures to the national office of OSHA, Office of Technical Support, Room N3653, 200 Constitution Avenue, NW, Washington, DC 20210 before work which involves the removal of more than 25 linear or 10 square feet (7.5 linear meters or 3 square meters) of thermal system insulation or surfacing material is begun using an alternative method.

C. STATE AND LOCAL AGENCIES:

1. Send written notification as required by state and local regulations prior to beginning any work on ACM.

1.5 PERMITS

- A. Permit: All asbestos containing waste is to be transported by an entity maintaining a current "Industrial waste hauler permit" specifically for ACM, as required for transporting of waste ACM to a disposal site.
- B. Contractor is responsible for obtaining any demolition, building, renovation or other permits, and for paying application fees, if any, where required by State or Local jurisdictions.

1.6 LICENSES

A. Licenses: Maintain current licenses as required by applicable state or local jurisdictions for the removal, transporting, disposal or other regulated activity relative to the work of this contract.

1.7 POSTING AND FILING OF REGULATIONS

A. Posting and Filing of Regulations: Post all notices required by applicable federal, state and local regulations. Maintain two (2) copies of applicable federal, state and local regulations and standard. Maintain one copy of each at job site. Keep on file in Contractor's office one copy of each.

1.8 SUBMITTALS

- A. Before Start of Work: Submit the following to the Designer for review. No work shall begin until these submittals are returned with Designer's action stamp indicating that the submittal is returned for unrestricted use or final-but-restricted use.
 - 1. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work including:
 - a. State and Local Regulations: Submit copies of codes and regulations applicable to the work.
 - 2. Notices: Submit notices required by federal, state and local regulations together with proof of timely transmittal to agency requiring the notice.
 - 3. Permits: Submit copies of current valid permits required by state and local regulations.
 - 4. Licenses: Submit copies of all State and local licenses and permits necessary to carry out the work of this contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 02 82 23

SECTION 02 82 24- SUBMITTALS CHECKLIST- ASBESTOS ABATEMENT

SUBMITTAL CHECKLIST

The following is a listing of the submittals required by each section.

02 82 10 Summary of Work - Asbestos Abatement

Before Start of Work: Plan of Action Pre-construction Inspection Schedule of Values Inventory of Disposed Items Schedule of Work

02 82 11 Application for Payment - Asbestos Abatement

Before Start of Work: Schedule of Values Periodically During Work: Refer to section for specific requirements for Payment Requests

02 82 12 Project Coordination - Asbestos Abatement

Before Start of Work: Contractors Construction Schedule Contingency Plans Telephone Numbers Notifications sent to other entities at the work site. Notifications sent to emergency service agencies. Resume: of general superintendent. Accreditation: Certificate of accreditation of general superintendent Staff Names: Periodically During Work: Daily Logs Event Reports Accident Reports Discovered Condition Reports

02 82 23 Codes, Regulations and Standards - Asbestos Abatement

Before Start of Work: State Regulations Licenses Notifications, AAC-2 Form Permits

02 82 40 Temporary Facilities - Asbestos Abatement

Before Start of Work: Scaffolding Hot water heater Decontamination Unit Sub-panel Ground Fault Circuit Interrupters (GFCI) Fire Extinguishers: product data, location schedule

02 82 60 Temporary Pressure Differential & Air Circulation System

Before Start of Work: Pressure Differential System Design HEPA Filtered Fan Units: Product data Monitoring Equipment: Product data Periodically During Work: Pressure Differential Monitoring Results

02 82 61 Temporary Enclosures

Before Start of Work: Spray Cement: Product data. Spray Cement: Manufacturer's installation instructions. Spray Cement: Safety Data Sheet. Sheet Plastic: Test reports on NFPA 701 test. Signs: Samples Caulking: Product Data Caulking: Safety Data Sheet

02 82 73 Worker Protection - Asbestos Abatement

Before Start of Work: AHERA Accreditation: for each worker. State and Local License: for each worker. Historic Airborne Fiber Data. Certificate Worker Acknowledgment: for each worker. Training Program: Training Certification Report from Medical Examination: of each worker. Notarized Certifications. Periodically During Work: Personnel Air Samples Analysis Area Air Samples Analysis

02 82 75 Respiratory Protection

Before Start of Work: Product Data. NIOSH and MSHA Certifications. Respiratory Protection Program: written manual. Respiratory Protection Program: form at end of section. Historic Airborne Fiber Data.

02 82 77 Decontamination Units

Before Start of Work: Personnel Decontamination Unit: shop drawing. Equipment Decontamination Unit: shop drawing. Filters: product data. Filters: shop drawing. Lumber: product data on fire resistance treatment. Sump Pump: product data. Signs: samples.

02 82 80 Project/Contractor Closeout - Asbestos Abatement

Periodically During Work: Refer to section

02 82 81 Project Decontamination

Periodically During Work: Fire Test on Lock Back Encapsulants used.

02 83 30 Removal of Asbestos-Containing Materials

Before Start of Work: Surfactant: product data. Removal Encapsulant: product data. NESHAP Certification: on surfactant or removal encapsulant. Safety Data Sheet: for each surfactant and encapsulant

02 83 32 Disposal of Regulated Asbestos-Containing Material

Before Start of Work: Waste Hauler State License Waste Hauler Local License

Name and address of landfill. Landfill contact person and telephone number. Waste Manifest Form. Disposal Bag: samples. Label Samples. Periodically During Work: On a weekly basis: copies of manifests and disposal site receipts.

END OF SUBMITTAL CHECKLIST

END OF SECTION 02 82 24

SECTION 02 82 25 – SUBMITTALS – ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including the following:
 - 1. Submittal schedule.
 - 2. Daily construction reports.
 - 3. Shop Drawings.
 - 4. Product Data.
 - 5. Samples.
 - 6. Quality Assurance Submittals
- B. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
 - 1. Permits
 - 2. Applications for payment
 - 3. Performance and payment bonds
 - 4. Insurance certificates
 - 5. List of Subcontractors
- C. RELATED SECTIONS
 - 1. The following Sections contain requirements that relate to this Section:

- a. Division 1 Section "Applications for Payment Asbestos Abatement" specifies requirements for submittal of the Schedule of Values.
- b. Division 1 Section "Coordination" specifies requirements governing submittal and distribution of meeting and conference minutes.
- c. Division 1 Section "Project Closeout-Asbestos Abatement" specifies requirements for submittal of Project Record Documents and warranties at project closeout.

1.3 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Designer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
- B. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.
 - 1. Allow one week for initial review. Allow additional time if the Designer must delay processing to permit coordination with subsequent submittals.
 - 2. If an intermediate submittal is necessary, process the same as the initial submittal.
 - 3. Allow one week for reprocessing each submittal.
 - 4. No extension of Contract Time will be authorized because of failure to transmit submittals to the Designer sufficiently in advance of the Work to permit processing.
- C. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

- 1. Provide a space approximately 4 by 5 inches (100 by 125 mm) on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
- 2. Include the following information on the label for processing and recording action taken.
 - a. Project name.
 - b. Date.
 - c. Name and address of the Designer.
 - d. Name and address of the Contractor.
 - e. Name and address of the subcontractor.
 - f. Name and address of the supplier.
 - g. Name of the manufacturer.
 - h. Number and title of appropriate Specification Section.
 - i. Drawing number and detail references, as appropriate.
- D. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Designer using a transmittal form. The Designer will not accept submittals received from sources other than the Contractor.
 - 1. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.
- E. Transmittal Form: Use AIA Document G810.

1.4 SUBMITTAL SCHEDULE

- A. Listing: At the end of this section is a listing of the principal submittals required for the work. This listing is not necessarily complete, nor does the listing reflect the significance of each submittal requirement. The listing is included only for the convenience of users of the Contract Documents.
- B. Submittal Schedule: After development and acceptance of the Contractor's Construction Schedule, prepare a complete schedule of submittals. Submit the schedule within 10 days of the date required for submittal of the Contractor's Construction Schedule.
 - 1. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values, and the list of products as well as the Contractor's Construction Schedule.

- 2. Prepare the schedule in chronological order. Provide the following information:
 - a. Scheduled date for the first submittal.
 - b. Related Section number.
 - c. Submittal category (Shop Drawings, Product Data, or Samples).
 - d. Name of the subcontractor.
 - e. Description of the part of the Work covered.
 - f. Scheduled date for resubmittal.
 - g. Scheduled date for the Designer's final release or approval.
- C. Distribution: Following response to the initial submittal, print and distribute copies to the Designer, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.
 - 1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- D. Schedule Updating: Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.5 SHOP DRAWINGS

- A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.
- B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Include the following information:
 - 1. Dimensions.
 - 2. Identification of products and materials included by sheet and detail number.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.

- 5. Notation of dimensions established by field measurement.
- C. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 36 by 48 inches (890 by 1220 mm).
- D. Initial Submittal: Submit two (2) blue- or black-line prints for the Designer's review. The Designer will return one print.
- E. Final Submittal: Submit three (3) blue- or black-line prints; submit five prints where required for maintenance manuals. The Designer will retain two (2) prints and return the remainder.
 - 1. One of the prints returned shall be marked up and maintained as a "Record Document."
 - 2. Do not use Shop Drawings without an appropriate final stamp indicating action taken.

1.6 PRODUCT DATA

- A. Collect Product Data into a single submittal. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."
 - 1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with recognized trade association standards.
 - c. 1w. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of coordination requirements.
 - 2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
- B. Preliminary Submittal: Submit a preliminary single-copy of Product Data where selection of options is required.

- C. Submittals: Submit three (3) copies of each required submittal. The Designer will retain two (2), and will return the one marked with action taken and corrections or modifications required.
 - 1. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
- D. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
 - 1. Do not proceed with installation until a final submittal is in the installer's possession.
 - 2. Do not permit use of unmarked copies of Product Data in connection with construction.

1.7 QUALITY ASSURANCE SUBMITTALS

- A. Submit quality-control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.
- B. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.
 - 1. Signature: Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the company.

1.8 MISCELLANEOUS SUBMITTALS

- A. Safety Data Sheets: Process Safety Data Sheets as "product data." These are submitted for information purposes only, they will be returned with the action stamp, "Received Not Reviewed."
- B. Records of Actual Work: Furnish four (4) copies of records of actual work, one will be returned for inclusion in the record documents as specified in section "Project Closeout".
- C. Closeout Submittals: Refer to section "Project Closeout" and to individual sections of these specifications for specific submittal requirements of project closeout information.

1.9 DESIGNER'S ACTION

- A. Except for submittals for the record or information, where action and return is required, the Designer will review each submittal, mark to indicate action taken, and return promptly.
 - 1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp: The Designer will stamp each submittal with a uniform, action stamp. The Designer will mark the stamp appropriately to indicate the action taken, as follows:
 - 1. Final Unrestricted Release: When the Designer marks a submittal "Approved," the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
 - 2. Final-But-Restricted Release: When the Designer marks a submittal "Approved as Noted," the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.
 - 3. Returned for Resubmittal: When the Designer marks a submittal "Not Approved, Revise and Resubmit," do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.
 - a. Do not use, or allow others to use, submittals marked "Not Approved, Revise and Resubmit" at the Project Site or elsewhere where Work is in progress.
 - 4. Received Not Reviewed: When the Designer marks a submittal "Received - Not Reviewed" this acknowledges that the submittal has been received. This action applies to materials that are to be submitted for information purposes only, and where no review or action by the Designer is required.
 - 5. Other Action: Where a submittal is for information or record purposes or special processing or other activity, the Designer will return the submittal marked "Action Not Required."
- C. Unsolicited Submittals: The Designer will return unsolicited submittals to the sender without action.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 02 82 25

SECTION 02 82 30 – AIR MONITORING – ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to work of this section.
 - Air Monitoring: during work area clearance is described in Section 02 82 84 Work Area Clearance.

1.2 DESCRIPTION OF THE WORK

- A. This section describes work being performed by the Contractor's representative.
- B. This section describes air monitoring carried out by the Contractor to verify that the building beyond the work area and the outside environment remains uncontaminated. This section also sets forth airborne fiber levels both inside and outside the work area as action levels, and describes the action required by the Contractor if an action level is met or exceeded.
- C. Industrial Hygienist will develop air sampling strategies for obtaining area baseline air samples prior to commencement of abatement work, area monitoring samples during removal work and final area clearance samples for releasing contractor. Each facility will be assigned a certified asbestos supervisor who will work under the direction of the Project's Industrial Hygienist. They will perform the area monitoring with high volume eclectic pumps. The contractor will conduct personal air monitoring of at least 25 percent of his employees working within enclosed work areas.
- D. Air monitoring required by OSHA is work of the Contractor and is not covered in this section.

1.3 AIR MONITORING

- A. Work Area Isolation: The purpose of the Contractor's air monitoring is to detect faults in the work area isolation such as:
- B. Contamination of the building outside of the work area with airborne asbestos fibers,
- C. Failure of filtration or rupture in the differential pressure system,
- D. Contamination of air outside the building envelope airborne asbestos fibers.

- E. Should any of the above occur immediately cease asbestos abatement activities until the fault is corrected. Do not recommence work until authorized by the Owner's Representative.
- F. Work Area Airborne Fiber Count: The contractor will monitor airborne fiber counts in the Work Area. The purpose of this air monitoring will be to detect airborne asbestos concentrations which may challenge the ability of the Work Area isolation procedures to protect the balance of the building or outside of the building from the contamination by airborne fibers. Contractor will also use personal air monitoring for 25 percent of workers to comply with OSHA regulations.
- G. Work Area Clearance: To determine if the elevated airborne fiber counts encountered during abatement operations have been reduced to an acceptable level, the Contractor will sample and analyze air per Section 02 82 84 Work Area Clearance.
- H. The Contractor will be conducting air monitoring throughout the course of the project.

1.4 STOP ACTION LEVELS

- A. Inside Work Area: Maintain an average airborne count in the Work Area of less than 0.1 fibers per cubic centimeter. If the fiber counts rise above this figure for any sample taken, revise work procedures to lower fiber counts. If the Time Weighted Average (TWA) fiber count for any work shift or 8 hour period exceeds 0.1 fibers per cubic centimeter, stop all work, leave Pressure Differential System in operation and notify Owner's Representative.
- B. If airborne fiber counts exceed 1.0 fibers per cubic centimeter for any period of time cease all work except corrective action until fiber counts fall below 0.5 fibers per cubic centimeter and notify Owner's Representative. After correcting cause of high fiber levels, do not recommence work for 24 hours unless otherwise authorized, in writing, by Owner's Representative.
- C. Inside Work Area: Maintain an average airborne count in the work area of less than the Stop Action Level given below for the type of respiratory protection in use. If the fiber counts rise above this figure for any sample taken, revise work procedures to lower fiber counts. If the Time Weighted Average (TWA) fiber count for any work shift or 8 hour period exceeds the Stop Action Level, stop all work except corrective action, leave pressure differential and air circulation system in operation and notify Owner's Representative. After correcting cause of high fiber levels, do not recommence work for 24 hours unless otherwise authorized, in writing, by Owner's Representative.

STOP ACTION LEVEL (f/cc)	IMMEDIATE STOP LEVEL (f/cc)	MINIMUM RESPIRATOR REQUIRED	MINIMUM PROTECTION FACTOR
0.1	1.0	Full Face	1000

If airborne fiber counts exceed Immediate Stop Level given above for type of respiratory protection in use for any period of time cease all work except corrective action. Notify Owner's Representative. Do not recommence work until fiber counts fall below AStop Action Level given above for the type of respiratory protection in use. After correcting cause of high fiber levels, do not recommence work for 24 hours unless otherwise authorized, in writing, by Owner's Representative.

- D. Outside Work Area: If any air sample taken outside of the Work Area exceeds the base line established below, immediately and automatically stop all work except corrective action. The Owner's Representative will determine the source of the high reading and so notify the Contractor in writing.
- E. If the high reading was the result of a failure of Work Area isolation measures initiate the following actions:
 - 1. Immediately erect new critical barriers as set forth in Section 02 82 61 Temporary Enclosures to isolate the affected area from the balance of the building. Erect Critical Barriers at the next existing structural isolation of the involved space (e.g. wall, ceiling, floor).
 - 2. Decontaminate the affected area in accordance with Section 02 83 83 Cleaning and Decontamination Procedures.
 - 3. Require that respiratory protection as set forth in Section 02 82 75 Respiratory Protection be worn in affected area until area is cleared for reoccupancy in accordance with Section 02 82 84 Work Area Clearance.
 - 4. Leave Critical Barriers in place until completion of work and insure that the operation of the pressure differential system in the Work Area results in a flow of air form the balance of the building into the affected area.
 - 5. If the exit from the clean room of the personnel decontamination unit enters the affected area, establish a decontamination facility consisting of a Shower Room and Changing Room as set forth in Section 02 82 77 Decontamination Units at entry point to affected area.
 - 6. After Certification of Visual Inspection in the Work Area remove critical barriers separating the work area form the affected area. Final air samples

will be taken within the entire area as set forth in Section 02 82 83 Work Area Clearance.

- F. Fibers Counted: The following procedure will be used to resolve any disputes regarding fiber types when a project has been stopped due to excessive airborne fiber counts.
- G. Large Fibers: "Airborne Fibers" referred to above include all fibers regardless of composition as counted by phase contrast microscopy (PCM), unless additional analysis by transmission or scanning electron microscopy demonstrates to the satisfaction of the Owner's Representative that non-asbestos fibers are being counted. "Airborne Fibers" counted in samples analyzed by scanning or transmission electron microscopy shall be asbestos fibers, greater than 5 microns in length and greater than 0.25 microns in diameter. For purposes of stop action levels, subsequent to analysis by electron microscopy, the number of "Airborne Fibers" shall be determined by multiplying the number of fibers, regardless of composition, counted by PCM by a number equal to asbestos fibers counted divided by all fibers counted in the electron microscopy analysis.
- H. Small Structures: "Airborne Fibers" referred to above include asbestos structures (fibers, bundles, clusters, or matrices) of any diameter and any length greater than 0.5 microns.

1.5 ANALYTICAL METHODS

The following methods will be used by the Contractor in analyzing filters used to collect air samples. Sampling rates may be varied from printed standards to allow for high volume sampling.

- A. Phase Contrast Microscopy (PCM): will be performed using the NIOSH 7400 method. This analysis may be carried out at the job site and/or accredited laboratory.
- B. Transmission Electron Microscopy will be performed using the analysis method set forth in the AHERA regulation 40 CFR Part 763 Subpart E Appendix A.

1.6 SAMPLE VOLUMES

A. General: The number and volume of air samples taken by the Contractor will be in accordance with the following schedule. Sample volumes given may vary depending upon the analytical method used.

1.7 SCHEDULE OF AIR SAMPLES

- A. Before Start of Work:
 - 1. The Contractor will secure the following Air Samples to establish a <u>base</u> <u>line</u> before start of work.
 - 2. Samples cassettes: Samples will be collected on 25 mm. cassettes as follows:

PCM: 0.8 micrometer mixed cellulose ester. TEM: 0.45 micrometer mixed cellulose ester or 0.40 micrometer polycarbonate, with 5.0 micron cellulose ester backing filter.

- B. Sampling sensitivity in the table below refers to:
 - 1. Detection Limit for PCM analysis as set forth in the analytical method used

Analytical Sensitivity for TEM analysis as set forth in the analytical method used or the AHERA regulation.

Location Sampled	Number of Samples	Analysis Method	Sampling Sensitivity Fibers/cc.		Rate LPM
Each Work Area*	1	РСМ	0.01	1,200	1-10
Each Work Area*	1	hold for TEM	0.005	1,300	1-10
Work Area*					
Outside Each	1	hold for TEM	0.005	1,300	1-10
Work Area*					
Outside Building	5	PCM	0.01	1,200	1-10
Outside Building	1	hold for TEM	0.005	1,300	1-10

*Work areas may have to be less than 3,000 square feet or 1,000 linear feet to comply with AHERA regulations for determining clearance requirements by PCM and not TEM.

- C. Base Line: an action level expressed in fibers per cubic centimeter which is 25 percent greater than the largest of the following:
- D. Average of the PCM samples collected outside each Work Area
- E. Average of the PCM samples collected outside the building

- F. 0.01 fibers per cubic centimeter
 Samples collected for TEM analysis will be held without analysis. These samples will be analyzed under the conditions and terms set forth in "Fibers Counted" and "Affect on Contract Sum." TEM Analysis may be required if clearance criteria is not officially met and there is some doubt as to the type and size of fibers in clearance samples.
- G. Daily: From start of work of Section 02 82 61 Temporary Enclosures through the work of Section 02 82 81 Project Decontamination, the Owner may be taking the following samples on a daily basis.
- H. Samples will be collected on 25 mm. cassettes with the following filter media: PCM: 0.8 micrometer mixed cellulose ester.

Location Sampled	Number of Samples	Analysis Method	Detection Limit Fibers/cc.	Minimum Volume (Liters)	Rate LPM
Each Work Area	2	РСМ	0.01	1,200	1-10
			OR AS REQUIRED BY CONDITIONS		
Outside Each Work Area at Critical Barrier	1	РСМ	0.01	1,200	1-10
Clean Room	1	PCM	0.01	1,200	1-10
Equip Decon	1	PCM	0.01	1,200	1-10
Outside Building Output Pressure	1	РСМ	0.01	1,200	1-10
Differential Syste	em 1	PCM	0.01	1,200	1-10

Additional samples may be taken at Owner's or Owner's Representatives discretion. If airborne fiber counts exceed allowed limits additional samples will be taken as necessary to monitor fiber levels.

1.8 LABORATORY TESTING

A. The services of a testing laboratory may be employed by the Contractor to perform laboratory analyses of the air samples. A technician will be at the job site, and samples will be sent daily by carrier for next day delivery, so that verbal reports on air samples can be obtained within 24 hours. Industrial Hygienist will coordinate and monitor this job function very closely to assess that maximum respiratory protection is being provided to personnel working at the Owner's Facility.

- B. A complete record of all air monitoring and results will be furnished to the Owner's Representative, the Owner, and the Contractor.
- C. The Owner will have access to all air monitoring tests and results, but will require excellent communication between all parties.
- D. Written Reports: of all air monitoring tests will be posted at the job site on a daily basis or verbally presented to the workers during the prework day staffing's or safety meetings.

PART 2 - PRODUCTS (NOT APPLICABLE)

- PART 3 EXECUTION
- 3.1 ADDITIONAL TESTING
 - A. The Owner may conduct his own air monitoring and laboratory testing. If he elects to do this the cost of such air monitoring and laboratory testing shall be at no additional cost to the Contractor.
- 3.2 PERSONAL MONITORING
 - A. Owner will not be performing air monitoring to meet Contractor's OSHA requirements for personnel sampling or any other purpose. It is the Contractor's responsibility to monitor the work area and his own personnel to assure compliance with OSHA and EPA requirements.

END OF SECTION 02 82 30

SECTION 02 82 40 – TEMPORARY FACILITIES – ASBESTOS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings, general provisions of Contract, including General and Supplementary Conditions, and other Division 1, and Division 2 Specification Sections apply to work of this section.

1.2 SUMMARY

- A. This Section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Water service and distribution
 - 2. Temporary electric power and light
 - 3. Temporary heat
 - 4. Ventilation
 - 5. Telephone service
 - 6. Sanitary facilities, including drinking water
 - 7. Storm and sanitary sewer.
- C. Support facilities include, but are not limited to, the following:
 - 1. Field offices, laboratories and storage sheds
 - 2. Temporary enclosures
 - 3. Hoists.
- D. Security and protection facilities include, but are not limited to, the following:
 - 1. Temporary fire protection.
 - 2. Barricades, warning signs, and lights.

1.3 DESCRIPTION OF REQUIREMENTS

A. General: Provide temporary connection to existing building utilities or provide temporary facilities as required herein or as necessary to carry out the work.

1.4 SUBMITTALS

- A. Before the Start of Work: Submit the following to the Owner's Asbestos Consultant for review. Begin no work until these submittals are returned with Owner's Asbestos Consultant's action stamp indicating that the submittal is returned for unrestricted use or final-but-restricted use.
 - 1. Scaffolding: Submit list of rolling and fixed scaffolding intended for use on the project. Submit sufficient detail to indicate compliance with applicable worker safety regulations or other requirements.
 - 2. Hot Water Heater: Submit manufacturer's name, model number, size in gallons, heating capacity, power requirements.
 - 3. Decontamination Unit Sub-panel: Submit product data.
 - 4. Ground Fault Circuit Interrupters (GFCI): Submit product data.
 - 5. Lamps and Light Fixtures: Submit product data.
 - 6. Temporary Heating Units: Provide product data.
 - 7. Temporary Cooling Units: Provide product data and installation instructions.
 - 8. First Aid Supplies: Provide list of contents of first aid kit. Submit in form of check list.
 - 9. Fire Extinguishers: Provide product data. Submit schedule indicating location at job site.
 - 10. Temporary Utilities: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.

1.5 QUALITY ASSURANCE

A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:

- 1. Building code requirements
- 2. Health and safety regulations.
- 3. Utility company regulations.
- 4. Police, fire department, and rescue squad rules.
- 5. Environmental protection regulations.
- B. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A 10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
- C. Electrical Services: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."
- D. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.6 **PROJECT CONDITIONS**

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

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. General: Provide new or used materials and equipment that are undamaged and in serviceable condition. Provide only materials and equipment that are recognized as being suitable for the intended use and are in compliance with appropriate standards.

B. Lumber and Plywood

1. For fences and vision barriers, provide minimum 3/8-inch thick exterior plywood.

2.2 SCAFFOLDING

- A. Provide all scaffolding, ladders and/or staging, etc. as necessary to accomplish the work of this contract. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. The type, erection and use of all scaffolding shall comply with all applicable OSHA provisions.
 - 1. Equip rungs of all metal ladders, etc. with an abrasive non-slip surface.
 - 2. Provide a non-skid surface on all scaffold surfaces subject to foot traffic.

2.3 WATER SERVICE

- A. Temporary Water Service Connection: All connections to the Owner's water system shall include backflow protection. Valves shall be rated for operation at the temperatures and pressures encountered. After completion of use, connections and fittings shall be removed without damage or alteration to existing water piping and equipment. Leaking or dripping valves shall be piped to the nearest drain or located over an existing sink or grade where water will not damage existing finishes or equipment.
- B. Water Hoses: Employ heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system to provide water into each work area and to each Decontamination Unit. Provide fittings as required to allow for connection to existing wall hydrants or spouts, as well as temporary water heating equipment, branch piping, showers, shut-off nozzles and equipment.
- C. Hot Water Heater: Provide UL rated 40 gallon electric hot water heater to supply hot water for the Decontamination Unit shower. Activate from 30 amp circuit breaker located within the Decontamination Unit subpanel. Provide with relief valve compatible with water heater operation; pipe relief valve down to drip pan on floor with type L copper. Drip pans shall consist of a 12 inches x 12 inches x 6 inches deep pan, made of 19 gauge galvanized steel, with handles. A 3-quart kitchen saucepan may be substituted for this purpose. Drip pan shall be securely fastened to the hot water heater with bailing wire or similar material. Wiring of the hot water heater shall be in compliance with NEMA, NECA, and UL standards.

2.4 ELECTRICAL SERVICE

- A. General: Comply with applicable NEMA, NECA and UL standards and governing regulations for materials and layout of temporary electric service.
- B. Temporary Power: Provide service to Decontamination Unit subpanel with minimum 60 amp, two pole circuit breaker or fused disconnect. Subpanel and disconnect shall be sized and equipped to accommodate all electrical equipment required for completion of the work.
- C. Voltage Differences: Provide identification warning signs at power outlets which are other than 110-120 volt power. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110-120 volt plugs into higher voltage outlets. Dry type transformers shall be provided where required to provide voltages necessary for work operations.
- D. Ground Fault Protection: Equip all circuits for any purpose entering Work Area with ground fault circuit interrupters (GFCI).
 - 1. Locate GFCI's exterior to Work Area so that all circuits are protected prior to entry to Work Area. Provide circuit breaker type ground fault circuit interrupters (GFCI) equipped with test button and reset switch for all circuits to be used for any purpose in work area, decontamination units, exterior, or as otherwise required by national electrical code, OSHA or other authority. Locate in panel exterior to Work Area.
- E. Electrical Power Cords: Use only grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Use single lengths or use waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas of work.
- F. Lamps and Light Fixtures: Provide general service incandescent lamps or fluorescent l amps of wattage indicated or required for adequate illumination as required by the work or this section. Protect lamps with guard cages or tempered glass enclosures, where fixtures are exposed to breakage by construction operations. Provide vapor tight fixtures in work area and decontamination units. Provide exterior fixtures where fixtures are exposed to the weather or moisture.

2.5 TEMPORARY STRUCTURES

 A. Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows, and serviceable finishes.
 Provide heated and air-conditioned units on foundation adequate for normal loading. B. Temporary Toilet Units: Provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar non-absorbent material.

2.6 FIRE EXTINGUISHERS

A. Fire Extinguishers: Provide Type "A" fire extinguishers for temporary offices and similar spaces where there is minimal danger of electrical or grease-oil-flammable liquid fires. In other locations provide type "ABC" dry chemical extinguishers, or a combination of several extinguishers of NFPA recommended types for the exposures in each case.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. General: Use qualified tradesmen for installation of temporary services and facilities. Locate temporary service and facilities where they will serve the entire project adequately and result in minimum interference with the performance of the Work.
 - 1. Require that tradesmen accomplishing this work be licensed as required by local authority for the work performed.
 - 2. Relocate, modify and extend services and facilities as required during the course of work so as to accommodate the entire work of the project.

3.2 SCAFFOLDING

- A. During the erection and/or moving of scaffolding, care must be exercised so that the polyethylene floor covering is not damaged.
- B. Clean as necessary debris from non-slip surfaces.
- C. At the completion of abatement work clean all construction aids within the work area, wrap in one layer of 6 mil polyethylene sheet and seal before removal from the Work Area.

3.3 TEMPORARY UTILITY INSTALLATION

A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.

- 1. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Water Service:
 - Water connection (without charge) to Owner's existing potable water system is limited to one 3/4 inch pipe-size connection, and a maximum flow of 10 gpm to cold water supply. Install using vacuum breakers or other backflow preventer as required by local authority. Supply hot and cold water to the Decontamination Unit in accordance with Section 02 82 77. Hot water shall be supplied at a minimum temperature of 100 degrees.
 - a. Maintain hose connections and outlet valve in leakproof condition. Where finish work below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size to minimize the possibility of water damage. Drain water promptly from pans as it accumulates.
- C. Electrical Service:
 - 1. Provide a weatherproof, grounded temporary electric power service and distribution system of sufficient size, capacity, and power characteristics to accommodate performance of work during the construction period. Install temporary lighting adequate for the work area.
 - 2. Lockout: Lockout all existing power to or through the work area as described below. Unless specifically noted otherwise existing power and lighting circuits to the Work Area are not to be used. All power and lighting to the Work Area and Decontamination facilities are to be provided from temporary electrical panel described below.
 - Lockout power to Work Area by switching off all breakers serving power or lighting circuits in work area. Label breakers with tape over breaker with notation "DANGER circuit being worked on". Lock panel and have all keys under control of Contractor's Superintendent or Owner's designated Asbestos Consultant.
 - b. Lockout power to circuits running through Work Area wherever possible by switching off all breakers serving these circuits. Label breakers with tape over breaker with notation "DANGER circuit being worked on". Sign and date danger tag. Lock panel and supply keys to Contractor, Owner and Owner's Asbestos Consultant. If circuits cannot be shut down for any reason, label at intervals 4 feet 0 inches on center with tags reading, "DANGER live electric circuit. Electrocution hazard."

- 3. Temporary Electrical Panel: Provide temporary electrical panel sized and equipped to accommodate all electrical equipment and lighting required by the work. Connect temporary panel to existing building electrical system. Protect with circuit breaker or fused disconnect. Locate temporary panel as directed by Owner or Owner's Asbestos Consultant.
- 4. Power Distribution System: Provide circuits of adequate size and proper characteristics for each use. In general run wiring overhead, and rise vertically where wiring will be at least exposed to damage from construction operations.
- 5. Circuit Protection: Protect each circuit with a ground fault circuit interrupter (GFCI) of proper size located in the temporary panel. Do not use outlet type GFCI devices.
- 6. Temporary Wiring: In the Work Area shall be type UF non-metallic sheathed cable located overhead and exposed for surveillance. Do not wire temporary lighting with plain, exposed (insulated) electrical conductors. Provide liquid tight enclosures or boxes for wiring devices.
- 7. Number of Branch Circuits: Provide sufficient branch circuits as required by the work. All branch circuits are to originate at temporary electrical panel. At minimum provide the following:
 - a. One (1) Circuit for each HEPA filtered fan unit.
 - b. For power tools and task lighting, provide on temporary 4-gang outlet in the following locations. Provide a separate 110-120 volt, 20 amp circuit for each 4-gang outlet (4 outlets per circuit).
 - c. One (1) outlet in the work area for each 2500 square feet of work area.
 - d. One (1) outlet at each decontamination unit, located in equipment room.
- 8. 110-120 volt 20 amp branch circuit with 4-gang outlet for Owner's exclusive use while conducting air sampling during the work as follows.
 - a. One (1) in each work area.
 - b. One (1) at clean side of each decontamination unit.
 - c. One (1) at each exhaust location found for HEPA filtered fan units.
- 9. 110-120 volt 20 amp branch circuits with 4-gang outlet for Owner's exclusive use for conducting final air sampling as set forth in Section 02 82 83 Work Area Clearance as follows:

- a. Five (5) inside work area.
- b. Two (2) outside work area in location designated by Contractor's Asbestos Consultant.
- D. Temporary Lighting
 - 1. Lockout: Lock out all existing power to lighting circuits in Work Area as described in Section 02 82 61 Temporary Enclosures. Unless specifically noted otherwise existing lighting circuits to the Work Area are not to be used. All lighting to the Work Area and Decontamination facilities is to be provided from temporary electrical panel described above.
 - 2. Provide the following or equivalent where natural lighting or existing building lighting does not meet the required light level:
 - a. One (1) 200-watt incandescent l amp per 1000 square feet of floor area, uniformly distributed, for general construction lighting, or equivalent illumination of a similar nature. In corridors and similar traffic areas provide one 100-watt incandescent lamp every 50 feet. In stairways and at ladder runs, provide one lamp minimum per story, located to illuminate each landing and flight. Provide sufficient temporary lighting to ensure proper workmanship everywhere; by combined use of daylight, general lighting, portable plug-in task lighting.
 - b. Provide adequate lighting in areas where work is being performed as required and to comply with OSHA and governing authority requirements.
 - c. Provide lighting in any area being subjected to a visual inspection as required.
 - d. Provide lighting in the decontamination unit as required to supply a 50 foot candle minimum light level.
 - 3. Number of Lighting Circuits: Provide sufficient lighting circuits as required by the work. All lighting circuits are to originate at temporary electrical panel.
 - 4. Circuit Protection: Protect each circuit with a ground fault circuit interrupter (GFCI) of proper size located in the temporary panel.

3.4 SUPPORT FACILITIES INSTALLATION

A. Construction Job Trailer: Contractor to provide construction job trailer suitable for storage of contractor's and air monitoring firm's equipment. Trailer must be lockable and secure. Trailer must also have a small office with counter for telephone and abatement documents.

3.5 TEMPORARY PHONE SERVICE

A. Contractor shall maintain a phone and active line telephone service during the duration of the project. Owner's phones shall not be utilized by any of the Contractor's or sub-contractor's employees. Phone shall be suitably located to be accessible for emergency use.

3.6 SANITARY FACILITIES

A. Toilets: Contractor shall supply portable toilet facilities and shall not use facility's toilets unless approved by the Owner's Asbestos Consultant.

3.7 FIRE EXTINGUISHERS

A. Fire Extinguishers: Comply with the applicable recommendations of NFPA Standard 10 "Standard for Portable Fire Extinguishers". Locate fire extinguishers where they are most convenient and effective for their intended purpose, but provide not less than on extinguisher in each work area in equipment room and one outside work area in clean room.

END OF SECTION 02 82 40

SECTION 02 82 60 - TEMPORARY PRESSURE DIFFERENTIAL AND AIR CIRCULATION SYSTEM ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1, and Division 2 Specification Section, apply to work of this section.

1.2 SUBMITTALS

- A. Before Start of Work: Submit design of pressure differential system to the Owner's Asbestos Consultant for review. So to begin work until submittal is returned with the Owner's Asbestos Consultant's action stamp indicating that the submittal is returned for unrestricted use. Include in the submittal at a minimum:
 - 1. Number of HEPA filtered fan units required and the calculations necessary to determine the number of machines
 - 2. Description of projected air flow within Work Area and methods required to provide adequate air flow in all portions of the work area
 - 3. Anticipated pressure differential across Work Area enclosures
 - 4. Description of methods of testing for correct air flow and pressure differentials
 - 5. Manufacturer's product data on the HEPA filtered fan units to be used
 - 6. Location of the machines in the Work Area
 - 7. Method of supplying adequate power to the machines and designation of building electrical panel(s) which will be supplying the power
 - 8. Description of work practices to insure that airborne fiber travel away from workers
 - 9. Manufacturer's product data on equipment used to monitor pressure differential between inside and outside of Work Area

PART 2 - PRODUCTS

2.1 HEPA FILTERED FAN UNITS

- A. General: Supply the required number of HEPA filtered fan units to the site in accordance with these specifications. Use units that meet the following requirements.
- B. Cabinet: Constructed of durable materials able to withstand damage from rough handling and transportation. The width of the cabinet should be less than 30 inches to fit through standard-size doorways. Provide units whose cabinets are:
 - 1. Factory-sealed to prevent asbestos-containing dust from being released during use, transport, or maintenance
 - 2. Arranged to provide access to and replacement of all air filters from intake end
 - 3. Mounted on casters or wheels
- C. Fans: Rate capacity of fan according to usable air-moving capacity under actual operating conditions.
- D. HEPA Filters: Provide units whose final filter is the HEPA type with the filter media (folded into closely pleated panels) completely sealed on all edges with a structurally rigid frame.
 - 1. Provide units with a continuous rubber gasket located between the filter and the filter housing to form a tight seal.
 - 2. Provide HEPA filters that are individually tested and certified by the manufacturer to have an efficiency of not less than 99.97 percent when challenged with 0.3 um dioctylphthalate (DOP) particles when tested in accordance with Military Standard Number 282 and Army Instruction Manual 136-300-175A. Provide filters that bear a UL586 label to indicate ability to perform under specified conditions.
 - 3. Provide filters that are marked with: the name of the manufacturer, serial number, air flow rating, efficiency and resistance, and the direction of test air flow.
 - 4. Prefilters, which protect the final filter by removing the larger particles, are required to prolong the operating life of the HEPA filter. Two (2) stages of prefiltration are required. Provide units with the following

prefilter:

- a. First-stage prefilter: low-efficiency type (e.g., for particles 100 um and larger)
- b. Second-stage (or intermediate) filter: medium efficiency (e.g., effective for particles down to 5 um).
- c. Provide units with prefilters and intermediate filters installed either on or in the intake grid of the unit and held in place with special housings or clamps.
- E. Safety and Warning Devices: Provide units with the following safety and warning devices:
 - 1. Electrical (or mechanical) lockout to prevent fan from operating without a HEPA filter
 - 2. Automatic shutdown system to stop fan in the event of a rupture in the HEPA filter or blocked air discharge
 - 3. Warning lights to indicate normal operation (green), too high a pressure drop across the filters (i.e., filter overloading) (yellow), and too low of a pressure drop (i.e., rupture in HEPA filter or obstructed discharge) (red)
 - 4. Audible alarm if unit fails to shut down due to operation of safety systems
- F. Electrical components: Provide units with electric components approved by the National Electrical Manufacturers Association (NEMA) and Underwriter's Laboratories (UL). Each unit is to be equipped with overload protection sized for the equipment. The motor, fan, fan housing, and cabinet are to be grounded.

PART 3 - EXECUTION

3.1 PRESSURE DIFFERENTIAL ISOLATION

- A. Isolate the Work Area form all adjacent areas or systems of the building with a Pressure Differential that will cause a movement of air from outside to inside at any breach in the physical isolation of the Work Area.
- B. Relative Pressure in Work Area: Continuously maintain the work area at an air pressure that is lower than that in any surrounding space in the building, or at any location in the immediate proximity outside of the building envelope. This pressure differential when measured across any physical or critical barrier must equal or exceed a static pressure of:

- 1. 0.02 inches of water.
- C. Accomplish the pressure differential by exhausting a sufficient number of HEPA filtered fan units from the work area. The number of units required will depend on machine characteristics, the seal at barriers, and required air circulation. The number of units will increase with increased make-up air or leaks into the Work Area. Determine the number of units required for pressure isolation by the following procedure:
 - 1. Establish required air circulation in the work area, personnel and equipment decontamination units.
 - 2. Establish isolation by increased pressure in adjacent areas or as part of seals where required.
 - 3. Exhaust a sufficient number of units from the work area to develop the required pressure differential.
 - 4. The required number of units is the number determined above plus one additional unit.
 - 5. Vent HEPA filtered fan units to outside of building unless authorized in writing by Owner's Asbestos Consultant.
 - 6. Mount units to exhaust directly or through disposable ductwork.
 - 7. Use only new ductwork except for sheet metal connections and elbows.
 - 8. Use ductwork and fittings of same diameter or larger than discharge connection on fan unit.
 - 9. Use inflatable, disposable flex duct in lengths not greater than 50 feet.
 - 10. Use spiral wire-reinforced disposable plastic ductwork in lengths not greater than 100 feet.
 - 11. Arrange exhaust as required to inflate duct to a rigidity sufficient to prevent flapping.
 - 12. If direction of discharge from fan unit is not aligned with duct use sheet metal elbow to change direction. Use 6 feet of spiral wire reinforced flex duct after direction change.

3.2 AIR CIRCULATION IN THE WORK AREA

- A. Air Circulation: For purposes of this section air circulation refers to either the introduction of outside air to the Work Area or the circulation and cleaning of air within the Work Area.
- B. Air circulation in the Work Area is a minimum requirement intended to help maintain airborne fiber counts at a level that does not significantly challenge the work area isolation measures. The Contractor may also use this air circulation as part of the engineering controls in his worker protection program.
- C. Determining the Air circulation Requirements: Provide a fully operational air circulation system supplying a minimum of the following air circulation rate:
 - 1. Four (4) air changes per hour. Provide additional air changes if it is determined that high fiber counts in the work area require it.
- D. Determine Number of Units needed to achieve required air circulation according to the following procedure:
 - 1. Determine the volume in cubic feet of the work area by multiplying floor area by ceiling height. Determine total air circulation requirement in cubic feet per minute (CFM) for the work area be dividing this volume by the air change rate and multiplying by 60.
 - 2. Air Circulation Required in Cubic Feet of Air per Minute (CFM) = <u>Volume of work area (cu. ft.)</u> X Number of air changes per hour 60 (minutes per hour)
 - 3. Divide the air circulation requirement (CFM) above by capacity of HEPA filtered fan unit(s) used. Capacity of a unit for purposes of this section is the capacity in cubic feet per minute with fully loaded filters (pressure differential which causes loaded filter warning light to come on) in the machines labeled operating characteristics. Number of Units Needed = <u>Air circulation Requirement (CFM)</u> Capacity of Unit with Loaded Filters (CFM)
 - 4. Add one additional unit as backup in case of equipment failure or machine shutdown for filter changing.

3.3 EXHAUST SYSTEM

A. Pressure differential isolation and air circulation in the Work Area are to be

accomplished by an exhaust system as described below.

- 1. Exhaust all units from the Work Area to meet air circulation requirement of this section.
- 2. Location of HEPA Filtered Fan Units: Locate fan unit(s) so that makeup air enters work area primarily through decontamination facilities and traverses Work Area as much as possible. This may be accomplished by positioning the HEPA filtered fan unit(s) at a maximum distance from the worker access opening or other makeup air sources.
- 3. Place End of Unit an intake duct or its exhaust duct through an opening in the plastic barrier or wall covering. Seal plastic around the unit or duct with tape.
- 4. Vent to Outside of Building, unless authorized in writing by the Owner's Project Designer.
- 5. Decontamination Units: Arrange Work Area and decontamination units so that the majority of make-up air comes through the Decontamination Units. Use only personnel or equipment Decontamination Unit at any time and seal the other so that make up air passes through unit in use.
- 6. Supplemental Makeup Air Inlets: Provide where required for prior air flow through the Work Area in location approved by the Owner's Asbestos Consultant by making openings in the plastic sheeting that allow clean air from outside the building into the Work Area. Locate auxiliary makeup air inlets as far as possible from the fan unit(s) (e.g., on an opposite wall), off the floor (preferably near the ceiling), and away from barriers that separate the Work Area from occupied clean areas. Cover with flaps to reseal automatically if the pressure differential system should shut down for any reason. Spray flap and around opening with spray adhesive so that if flap closes meeting surfaces are both covered with adhesive. Use adhesive that forms contact bond when dry. Filter these openings with HEPA Pre-Filter Material double taped to the opening.

3.4 RECIRCULATION SYSTEM

- A. Pressure differential isolation and air circulation in the Work Area are to be accomplished by a recirculation system as described below.
 - 1. Recirculate air in the Work Area through HEPA filtered fan units to accomplish air circulation requirements of this section.

2. Location of Fan Units: Locate HEPA filtered fan units so that air is circulated through all parts of the Work Area, and so that required pressure is maintained at all parts of Work Area geometry. Move units as necessary so that in any location where asbestos-containing materials are being disturbed the discharge from one HEPA filtered fan unit is blowing contamination away from workers. Direct air flow in these locations so that it is predominantly toward workers' backs at the breathing zone elevation.

3.5 AIR CIRCULATION IN DECONTAMINATION UNITS

- A. Pressure Differential Isolation: Continuously maintain the pressure differential required for the work area in the:
 - 1. Personnel Decontamination Unit: across the Shower Room with the Equipment room at a lower pressure than in the Clean Room.
 - 2. Equipment Decontamination Unit: Across the Holding Room with the Wash Room at a lower pressure than the Clean Room.
- B. Air Circulation: continuously maintain air circulation in Decontamination Units at same level as required for Work Area.
- C. Air Movement: Arrange air circulation through the Personnel Decontamination Unit so that it produces a movement of air from the Clean Room through the Shower Room into the Equipment Room. Maintain continuous minimum velocities of 60 feet per minute in the breathing zone area of the shower and 30 feet per minute in all other locations of the shower.

3.6 USE OF THE PRESSURE DIFFERENTIAL AND AIR CIRCULATION SYSTEM

- A. General: Each unit shall be serviced by a dedicated minimum 115V-20A circuit with ground fault circuit interrupter (GFCI) supplied from temporary power supply installed under requirements of Section 02 82 40 "Temporary Facilities."
- B. Air Flow Tests: The Contractor will check air flow patterns before removal operations begin, at least once per operating shift and any time there is a question regarding the integrity of the enclosure. The primary test for air flow is to trace air currents with smoke tubes or other visual methods. Flow checks will be made at each opening and at each doorway to demonstrate that air is being drawn into the enclosure and at each worker's position to show that air is being drawn away from the workers location and toward the HEPA filtration unit.

- C. Demonstrate Condition of Equipment for each HEPA filtered fan unit including proper operation of the following:
 - 1. Squareness of HEPA Filter
 - 2. Condition of Seals
 - 3. Proper operation of all lights
 - 4. Proper operation of automatic shut down if exhaust is blocked
 - 5. Proper operation of alarms
 - 6. Proper operation of Magnehelic gauge.
- D. Demonstrate Operation of the pressure differential system to the Designer prior to beginning abatement operations. The demonstration should include, but not be limited to, the following:
 - 1. Plastic barriers and sheeting move lightly in toward Work Area,
 - 2. Curtain of decontamination units move lightly in toward Work Area,
 - 3. There is noticeable movement of air through the Decontamination Unit.
 - 4. Use of a smoke tube to demonstrate air movement from Clean Room through Shower Room to Equipment Room.
 - 5. Use of a smoke tube to show a definite motion of air across all areas in which work is to be performed.
 - 6. Use of a manometer to demonstrate the required pressure differential at every barrier separating the Work Area from the balance of the building, equipment, ductwork or outside.
- E. Modify the Pressure Differential System as necessary to obtain the above.
- F. Use of System During Abatement Operations:
 - 1. Start fan units before beginning work (before any asbestos-containing material is disturbed). After abatement work has begun, run units continuously to maintain a constant pressure differential and air circulation until decontamination of the work area is complete. Do not turn off units at the end of the work shift or when abatement operations

temporarily stop.

- 2. Do not shut down air pressure differential system during encapsulating procedures, unless authorized by the Owner's Project Designer in writing. Supply sufficient pre-filters to allow frequent changes.
- 3. Start abatement work at a location farthest from the fan units and proceed toward them. If an electric power failure occurs, immediately stop all abatement work and do not resume until power is restored and fan units are operating again.
- 4. At completion of abatement work, allow fan units to run as specified under section 02 82 81, to remove airborne fibers that may have been generated during abatement work and cleanup and to purge the Work Area with clean makeup air. The units may be required to run for a longer time after decontamination, if dry or only partially wetted asbestos material was encountered during any abatement work.
- G. Dismantling the System:
 - 1. When a final inspection and the results of final air tests indicate that the area has been decontaminated, fan units may be removed from the Work Area, remove and properly dispose of pre-filter decontaminate exterior of machine and seal intake to the machine with 6 mil polyethylene to prevent environmental contamination from the filters. Clean all machine parts within the decontamination unit.

END OF SECTION 02 82 60

SECTION 02 82 61 – TEMPORARY ENCLOSURES - ASBESTOS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUBMITTALS

A. Before Start of Work submit the following to the Designer for review. Do not begin work until these submittals are returned with the Designer's action stamp indicating that the submittal is returned for unrestricted use.

PART 2 - PRODUCTS

2.1 SHEET PLASTIC

- A. Polyethylene Sheet: Provide flame-resistant polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-Resistant Textiles and Films. Provide largest size possible to minimize seams, 6.0 mil (0.15 mm) thick frosted or black as indicated.
- B. Reinforced Polyethylene Sheet: Where plastic sheet constitutes the only barrier between the work area and the building exterior, provide translucent, nylon reinforced or woven polyethylene, laminated, flame-resistant, polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 6.0 mil (0.15 mm) thick, frosted or black as indicated.

2.2 MISCELLANEOUS MATERIALS

- A. Duct Tape: Provide duct tape in 2 inch or 3 inch (50 mm or 75 mm) widths as indicated, with an adhesive which is formulated to stick aggressively to sheet polyethylene.
- B. Spray Cement: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.

PART 3 - EXECUTION

3.1 SEQUENCE OF WORK

- A. Carry out work of this section sequentially. Complete each of the following activities in accordance with requirements before proceeding to the next.
 - 1. Provide emergency exits and emergency lighting.
 - 2. Control access.
 - 3. Provide respiratory and worker protection.
 - 4. Provide Critical Barriers.
 - 5. Prepare Area.
 - 6. Provide Primary Barriers.
 - 7. Provide Isolation Areas as required.
 - 8. Provide Secondary Barrier.
- 3.2 GENERAL
 - A. Work Area: the location where asbestos abatement work occurs. The Work Area is a variable of the extent of work of the Contract. It may be a portion of a room, a single room, or a complex of rooms. A "Work Area" is considered contaminated during the work, and must be isolated from the balance of the building, and decontaminated at the completion of the asbestos control work.
 - B. Completely isolate the Work Area from other parts of the building so as to prevent asbestos-containing dust or debris from passing beyond the isolated area. Should the area beyond the Work Area(s) become contaminated with asbestos-containing dust or debris as a consequence of the work, clean those areas in accordance with the procedures indicated in Section 02 82 81. Perform all such required cleaning or decontamination at no additional cost to owner.
 - C. Construct enclosures to provide an air-tight seal around ducts and openings into existing ventilation systems and around penetrations for electrical conduits, telephone wires, water lines, drain pipes, etc. Construct enclosures to be both airtight and watertight except for those openings designed to provide entry and/or air flow control.
 - D. Size: Construct enclosure with sufficient volume to encompass all of the working surfaces yet allow unencumbered movement by the worker(s), provide

unrestricted air flow past the worker(s), and ensure walking surfaces can be kept free of tripping hazards.

- E. Shape: The enclosure may be any shape that optimizes the flow of ventilation air past the worker(s).
- F. Structural Integrity: The walls, ceilings and floors must be supported in such a manner that portions of the enclosure will not fall down during normal use.
- G. Barrier Supports: Provide frames as necessary to support all unsupported spans of sheeting.
- H. Openings: It is not necessary that the structure be airtight; openings may be designed to direct air flow. Such openings are to be located at a distance from active removal operations. They are to be designed to draw air into the enclosure under all anticipated circumstances. In the event that negative pressure is lost, they are to be fitted with either HEPA filters to trap dust or automatic trap doors that prevent dust from escaping the enclosure. Openings for exits are to be controlled by an airlock or a vestibule.
- I. Place all tools, scaffolding, staging, etc. necessary for the work in the area to be isolated prior to completion of Work Area isolation.
- J. Areas Within an Enclosure: Each enclosure consists of a work area, a decontamination area, and waste storage area. The work area where the asbestos removal operations occur are to be separated from both the waste storage area and the contamination control area by physical curtains, doors, and/or airflow patterns that force any airborne contamination back into the work area.
- K. Removing Mobile Objects: Clean movable objects and remove them from the work area before an enclosure is constructed unless moving the objects creates a hazard. Mobile objects will be assumed to be asbestos contaminated and are to be either cleaned with amended water and a HEPA vacuum and then removed from the area or wrapped and then disposed of as asbestos-contaminated waste.
- L. Disabling HVAC Systems: The power to the heating, ventilation, and air conditioning systems that service the regulated area must be deactivated and locked out. All ducts, grills, access ports, windows and vents must be sealed off with two (2) layers of plastic to prevent entrainment of contaminated air.
- M. Operating HVAC Systems in the regulated Area: If components of a HVAC system located in the regulated area are connected to a system that will service another zone during the project, the portion of the duct in the regulated area must be sealed and pressurized. Necessary precautions include caulking the duct joints, covering all cracks and openings with two (2) layers of sheeting, and pressurizing the duct throughout the duration of the project by restricting the return air flow.

The power to the fan supplying the positive pressure should be locked "on" to prevent pressure loss.

- If fan providing positive pressure fails for any reason, immediately stop asbestos removal work, mist the area to reduce airborne fiber levels. Notify the Owner. Do not re-start asbestos removal work until authorized by the Designer.
- N. Lockout power to Work Area by switching off all breakers serving power or lighting circuits in work area. A lock and tag shall be placed on each breaker used to de-energize circuits and equipment with notation "DANGER circuit being worked on". Lock panel and have all keys under control of authorized person who has applied the locks.
- O. Lockout power to circuits running through work area wherever possible by switching off all breakers or removing fuses serving these circuits. Label breakers with tape over breaker with notation "DANGER circuit being worked on". Lock panel and have all keys under control of authorized person who applied locks. If circuits cannot be shut down for any reason, label at intervals 4 feet (1.22 m) on center with signs reading, "DANGER live electric circuit. Electrocution hazard." Label circuits in hidden locations but which may be affected by the work in a similar manner.
- P. Inspection Windows: Install inspection windows in locations shown on the plans or as directed by the Designer. Each inspection window is to have a 24 inch by 24 inch (610 by 610 mm) viewing area fabricated from 1/4 inch (6.35 mm) acrylic or polycarbonate sheet. Install window with top at 6 feet-6 inches (1.98 m) above floor height in a manner that provides unobstructed vision from outside to inside of the Work Area. Protect window from damage from scratching, dirt or any coatings used during the work. A sufficient number of windows are to be installed to provide observation of all portions of the Work Area that can be made visible from adjacent areas. Inspection windows that open into uncontrolled area are to be covered with a removable plywood hatch secured by lock and key. Provide keys to Designer for all such locks.

3.3 EMERGENCY EXITS

- A. Provide emergency exits and emergency lighting as set forth below:
 - 1. Emergency Exits: At each existing exit door from the Work Area provide the following means for emergency exiting:
 - 2. Arrange exit door so that it is secure from outside the Work area but permits exiting from the Work Area.

- 3. Mark outline of door on Primary and Critical Barriers with luminescent paint at least 1 inch wide. Hang a razor knife on a string beside outline. Arrange Critical and Primary barriers so that they can be easily cut with one pass of razor knife. Paint words "EMERGENCY EXIT" inside outline with luminescent paint in letters at least 1 foot high and 2 inches wide.
- 4. Provide lighted EXIT sign at each exit.
- 5. Provide battery-operated emergency lighting that switches on automatically in the event of a power failure.

3.4 CONTROL ACCESS

- A. Isolate the Work Area to prevent entry by building occupants into Work Area or surrounding controlled areas. Accomplish isolation by the following:
 - 1. Submit to Designer a list of doors and other openings that must be secured to isolate Work Area. Include on list notation if door or opening is in an indicated exit route.
 - 2. After receiving written authorization from the Designer, construct partitions or closures across any opening into Work Area. Partitions are to be a minimum of 8 feet high.
 - 3. Fabricate partitions from 3-5/8 inch, 25 gauge metal studs with 1/2 inch gypsum board on both faces. Brace at intervals of 4 feet on center.
 - 4. Rigid-type folding partitions: remove operating bar and latch on clean side of folding partitions. Fasten down operating lever with hook and chain or other secure device on Work Area side. At completion of all abatement work reinstall bar and latch and adjust for proper operation.
- B. Locked Access: Arrange Work Area so that the only access into Work Area is through lockable doors to personnel and equipment decontamination units.
 - 1. Install temporary doors with entrance type locksets that are key lockable from the outside and always unlocked and operable from the inside. Do not use deadbolts or padlocks.
- C. Visual Barrier: Where the Work Area is immediately adjacent to or within view of occupied areas, provide a visual barrier of opaque polyethylene sheeting at least 6 mil (0.15 mm) in thickness so that the work procedures are not visible to building occupants. Where this visual barrier would block natural light, substitute frosted or woven rip-stop sheet plastic in locations approved by the Designer.

- D. Demarcation. Demarcate the regulated area in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne concentrations of asbestos. Where critical barriers or negative pressure enclosures are used, they may demarcate the regulated area.
- E. Access. Limit access to regulated areas to authorized persons as defined by OSHA, and to the Owner, Designer, Project Administrator or a representative authorized by one of these entities.
- F. Provide Warning Signs at each locked door leading to Work Area reading as follows:
 - 1. Provide Warning Signs at each locked door leading to Work Area reading as follows

Legend	Notation			
KEEP OUT	3 inch Sans Serif Gothic or Block			
CONSTRUCTION	1 inch Sans Serif Gothic or Block			
WORK AREA	1 inch Sans Serif Gothic or Block			
PROTECTIVE CLOTHING REQUIRED				
BEYOND THIS POINT	14 Point Gothic			

2. Immediately inside door and outside critical barriers post an approximately 20 inches by 14 inches manufactured caution sign displaying the following legend with letter sizes and styles of a visibility required by 29 CFR 1926:

Legend DANGER ASBESTOS CANCER AND LUNG DISEASE HAZARD AUTHORIZED PERSONNEL ONLY RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

3. Provide spacing between respective lines at least equal to the height of the respective upper line.

3.5 ALTERNATE METHODS OF ENCLOSURE

 A. Alternate methods of containing the Work Area may be submitted to the Designer for approval in accordance with procedures set forth in Section 02 82 79 Substitutions. Do not proceed with any such method(s) without prior written approval of the Designer.

- B. Notification: Before work which involves the removal of more than 25 linear or 10 square feet of thermal system insulation or surfacing material is begun using an alternative method which has been the subject of required evaluation and certification. Send a copy of such evaluation and certification to the national office of OSHA, Office of Technical Support, Room N3653, 200 Constitution Avenue, NW, Washington, DC 20210 and to the Designer.
- C. Use a control method that encloses, contains or isolates the processes or source of airborne asbestos dust, or otherwise captures or redirects such dust before it enters the breathing zone of employees.
- D. Certification: Submit a certification from a Certified Industrial Hygienist (CIH) or licensed professional engineer who is also qualified as a project designer, who has evaluated the work area, the projected work practices and the engineering controls and who certifies in writing that the planned control method is adequate to reduce direct and indirect employee exposure to below the PELs and any requirements of Section 02 82 75 "Respiratory Protection" under worst-case conditions of use, and that the planned control method will prevent asbestos contamination outside the regulated area, as measured by clearance sampling which meets the requirements of EPA's Asbestos in Schools rule issued under AHERA, or perimeter monitoring which meets the criteria of OSHA 1926.1101, and as determined in accordance with the portion of Section 02 82 10 "Summary of Work Asbestos Abatement" that describes the Owner's monitoring of the project.

3.6 RESPIRATORY AND WORKER PROTECTION

- A. Before proceeding beyond this point in providing Temporary Enclosures:
 - 1. Provide Worker Protection per Section 02 82 73
 - 2. Provide Respiratory Protection per Section 02 82 75
 - 3. Provide Personnel Decontamination Unit per Section 02 82 77

3.7 CRITICAL BARRIERS

- A. Completely Separate the Work Area from other portions of the building, and the outside by closing all openings with sheet plastic barriers at least 6 mil (0.15 mm) in thickness, or by sealing cracks leading out of Work Area with duct tape.
- B. Individually seal all ventilation openings (supply and exhaust), lighting fixtures, clocks, doorways, windows, convectors and speakers, and other openings into the Work Area with duct tape alone or with polyethylene sheeting at least 6 mil (0.15 mm) in thickness, taped securely in place with duct tape. Maintain seal until all work including Project Decontamination is completed. Take care in sealing of lighting fixtures to avoid melting or burning of sheeting.

- C. Provide Sheet Plastic barriers at least 6 mil (0.15 mm) in thickness as required to seal openings completely from the Work Area into adjacent areas. Seal the perimeter of all sheet plastic barriers with duct tape or spray cement.
- D. Mechanically Support sheet plastic independently of duct tape or spray cement seals so that seals do not support the weight of the plastic. Following are acceptable methods of supporting sheet plastic barriers. Alternative support methods may be used if approved in writing by the Designer.
 - 1. Plywood squares 6 inch by 6 inch by 3/8 inch held in place with one 6d smooth masonry nail or electro-galvanized common nail driven through center of the plywood and duct tape on plastic so that plywood clamps plastic to the wall. Locate plywood squares at each end, corner and at maximum 4 feet on centers.
 - 2. Nylon or polypropylene rope or wire with a maximum unsupported span of 10 feet, minimum 1/4 inch in diameter suspended between supports securely fastened on either side of opening at maximum 1 foot below ceiling. Tighten rope so that it has 2 inches maximum dip. Drape plastic over rope from outside Work Area so that a 2 foot long flap of plastic extends over rope into Work Area. Staple or wire plastic to itself 1 inch below rope at maximum 6 inches on centers to form a sheath over rope. Lift flap and seal to ceiling with duct tape or spray cement. Seal loop at bottom of flap with duct tape. Erect entire assembly so that it hangs vertically without a "shelf" upon which debris could collect.
- E. Provide Pressure Differential System per Section 02 82 60.
 - 1. Clean housings and ducts of all overspray materials prior to erection of any Critical Barrier that will restrict access.

3.8 PREPARE AREA

- A. Scaffolding: If fixed scaffolding is to be used to provide access HEPA vacuum and wet clean area prior to scaffolding installation.
- B. Remove all electrical and mechanical items, such as lighting fixtures, clocks, diffusers, registers, escutcheon plates, etc. which cover any part of the surface to be worked on with the work.
- C. Remove all general construction items such as cabinets, casework, door and window trim, moldings, ceilings, trim, etc., which cover the surface of the work as required to prevent interference with the work.
- D. Clean All Surfaces In Work Area with a HEPA filtered vacuum or by wet wiping

prior to the installation of primary barrier.

E. Cleaning and Sealing Surfaces: After cleaning with water and a HEPA vacuum, surfaces of stationary objects should be covered with two (2) layers of plastic sheeting. The sheeting should be secured with duct tape or an equivalent method to provide a tight seal around the object.

3.9 PRIMARY BARRIER

- A. Protect building and other surfaces in the Work Area from damage from water and high humidity or from contamination from asbestos-containing debris, slurry or high airborne fiber levels by covering with a primary barrier as described below.
- B. Sheet Plastic: Protect surfaces in the Work Area with two (2) layers of plastic sheeting on floor and walls, or as otherwise directed on the Contract Drawings or in writing by the Designer. Perform work in the following sequence.
 - 1. All seams in the sheeting should overlap, be staggered and not be located at corners or wall-to-floor joints.
 - 2. Cover Floor of Work Area with two (2) individual layers of clear polyethylene sheeting, each at least 6 mil (0.15 mm) in thickness, turned up walls at least 12 inches. Form a sharp right angle bend at junction of floor and wall so that there is no radius which could be stepped on causing the wall attachment to be pulled loose. Both spray-glue and duct tape all seams in floor covering. Locate seams in top layer 6 feet from, or at right angles to, seams in bottom layer. Install sheeting so that top layer can be removed independently of bottom layer.
 - 3. Stairs and Ramps: Do not cover stairs or ramps with unsecured sheet plastic. Where stairs or ramps are covered with plastic, provide 3/4 inch exterior grade plywood treads securely held in place, over plastic. Do not cover rungs or rails with any type of protective materials.
 - 4. Repair of Damaged Polyethylene Sheeting: Remove and replace plastic sheeting which has been damaged by removal operations or where seal has failed allowing water to seep between layers. Remove affected sheeting and wipe down entire area. Install new sheet plastic only when area is completely dry.

3.10 ISOLATION AREA

A. Maintain isolation areas between the Work Area and adjacent building area:

3.11 STOP WORK

A. If the Critical or Primary barrier falls or is breached in any manner stop asbestos removal work immediately and comply with "Stop Work requirements of Section 02 82 10 "Summary of Work - Asbestos Abatement". Do not start work until authorized in writing by the Designer.

3.12 EXTENSION OF WORK AREA

A. Extension of Work Area: If the Critical Barrier is breached in any manner that could allow the passage of asbestos debris or airborne fibers, then add affected area to the Work Area, enclose it as required by this Section of the specification and decontaminate it as described in Section 02 82 81 Project Decontamination.

3.13 SECONDARY BARRIER

A. Secondary layer of plastic as a drop cloth to protect the primary layer from debris generated by the asbestos abatement work is specified in the appropriate work sections.

END OF SECTION 02 82 61

SECTION 02 82 73 - WORKER PROTECTION - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DESCRIPTION OF WORK

A. This section describes the equipment and procedures required for protecting workers against asbestos contamination and other workplace hazards except for respiratory protection.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Respiratory Protection: is specified in Section 02 82 75.

1.4 WORKER TRAINING

- A. AHERA Accreditation: All workers are to be accredited as Abatement Workers as required by the EPA Model Accreditation Plan (MAP) asbestos abatement worker training (40 CFR Part 763, Subpart E, Appendix C).
- B. State and Local License: All workers are to be trained, certified and accredited as required by state or local code or regulation.
- C. Training Class I: Train in accordance with 29 CFR 1926.1101. Provide training for all workers who will perform Class I operations that is the equivalent in curriculum, training method and length to the EPA Model Accreditation Plan (MAP) asbestos abatement worker training (40 CFR Part 763, Subpart E, Appendix C).

1.5 MEDICAL SURVEILLANCE

- A. Provide a medical surveillance program for all employees who are:
 - 1. engaged in Class I, II and III work for a combined total of 30 or more days per year or,
 - a. For the purposes of this paragraph, any day in which a worker engages in Class II or Class III work or a combination thereof for

one hour or less (taking into account the entire time spent on the removal operation, including cleanup) and, while doing so, adheres fully to the work practices specified in the OSHA standard (29 CFR 1926.1101) is not counted.

- 2. are exposed at or above the permissible exposure limit or excursion limit or,
- 3. before an employee can be assigned to work requiring use of a respirator.
- B. Provide a medical surveillance program and physician's opinion before a respirator is assigned as required by 29 CFR 1910.134 and 29 CFR 1926.103(e)(10).
- C. Provide medical examination that as a minimum meets OSHA requirements as set forth in 29 CFR 1926.1101. In addition, require that the physician provide an evaluation of the individual's ability to work in environments capable of producing heat stress in the worker.

1.6 SUBMITTALS

- A. Before Start of Work: Submit the following to the Designer for review. Do not start work until these submittals are returned with Designer's action stamp indicating that the submittal is returned for unrestricted use.
 - 1. AHERA Accreditation: Submit copies of certificates from an EPAapproved AHERA Abatement Workers course for each worker as evidence that each asbestos Abatement Worker is accredited as required by the EPA Interim Final Model Accreditation Plan (MAP) asbestos abatement worker training (40 CFR Part 763, Subpart E, Appendix C).
 - 2. State and Local License: Submit evidence that all workers have been trained, certified and accredited as required by state or local code or regulation.
 - 3. Certificate Worker Acknowledgment: Submit an original signed copy of the Certificate of Worker's Acknowledgment found at the end of this section, for each worker who is to be at the job site or enter the Work Area.
 - 4. Report from Medical Examination: conducted within last 12 months as part of compliance with OSHA medical surveillance requirements for each worker who is to enter the Work Area. Submit, at a minimum, for each worker the following:

- a. Name and Social Security Number
- b. The physician's written opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to asbestos;
- c. Any recommended limitations on the employee or on the use of personal protective equipment such as respirators; and
- d. A statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos exposure.
- e. A statement that the employee has been informed by the physician of the increased risk of lung cancer attributable to the combined effect of smoking and asbestos exposure (29 CFR 1926.1101(m)).
- f. A legible typed version of the physician's name, the physician's signature, and date of examination.
- 5. Notarized Certifications: Submit certification signed by an officer of the abatement contracting firm and notarized that exposure measurements, medical surveillance, and worker training records are being kept in conformance with 29 CFR 1926.

PART 2 - EQUIPMENT

2.1 PROTECTIVE CLOTHING

- A. General. Provide and require the use of protective clothing, such as coveralls or similar whole-body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos that exceed the TWA and/or excursion limit prescribed by 29 CFR 1926.1101 or for which a required negative exposure assessment is not produced, and for any employee performing Class I operations which involve the removal of over 25 linear or 10 square feet of TSI or surfacing ACM or PACM.
- B. Coveralls: Provide disposable full-body coveralls and disposable head covers, and require that they be worn by all workers in the Work Area. Provide a sufficient number for all required changes, for all workers in the Work Area.
- C. Additional Protective Clothing: Provide each worker with the protective clothing as required by Federal State and local regulations. This includes, but is not necessary limited by hard hats, cold weather gear, gloves, boots and goggles.

2.2 ADDITIONAL PROTECTIVE EQUIPMENT

A. Disposable coveralls, head covers, and footwear covers shall be provided by the Contractor for the Owner, Designer, Project Administrator, and other authorized

representatives who may inspect the job site. Provide six complete coveralls per day.

PART 3 - EXECUTION

3.1 GENERAL

- A. Provide worker protection as required by the most stringent OSHA and/or EPA standards applicable to the work. The following procedures are minimums to be adhered to regardless of fiber count in the Work Area.
- B. Each time Work Area is entered remove all street clothes in the Changing Room of the Personnel Decontamination Unit and put on new disposable coverall, new head cover, and a clean respirator. Proceed through shower room to equipment room and put on work boots.

3.2 DECONTAMINATION PROCEDURES

- A. Require all workers to adhere to the following personal decontamination procedures whenever they leave the Work Area:
 - 1. Type C Supplied Air or Powered Air-Purifying Respirators: Require that all workers use the following decontamination procedure as a minimum requirement whenever leaving the Work Area:
 - a. When exiting area, remove disposable coveralls, disposable head covers, and disposable footwear covers or boots in the equipment room.
 - b. Still wearing respirators, proceed to showers. Showering is mandatory. Care must be taken to follow reasonable procedures in removing the respirator to avoid asbestos fibers while showering. The following procedure is required as a minimum:
 - c. Thoroughly wet body including hair and face. If using a Powered Air-Purifying Respirator (PAPR) hold blower unit above head to keep canisters dry.
 - d. With respirator still in place thoroughly wash body, hair, respirator face piece, and all parts of the respirator except the blower unit and battery pack on a PAPR. Pay particular attention to seal between face and respirator and under straps.
 - e. Take a deep breath, hold it and/or exhale slowly, completely wet hair, face, and respirator. While still holding breath, remove respirator and hold it away from face before starting to breath.
 - f. Carefully wash face piece of respirator inside and out.

- 2. If using PAPR: shut down in the following sequence, first cap inlets to filter cartridges, then turn off blower unit (this sequence will help keep debris which has collected on the inlet side of filter from dislodging and contaminating the outside of the unit). Thoroughly wash blower unit and hoses. Carefully wash battery pack with wet rag. Be extremely cautious of getting water in battery pack as this will short out and destroy battery.
 - a. Shower completely with soap and water.
 - b. Rinse thoroughly.
 - c. Rinse shower room walls and floor prior to exit.
 - d. Proceed from shower to Changing Room and change into street clothes or into new disposable work items.
- 3. Air Purifying-Negative Pressure Respirators: Require that all workers use the following decontamination procedure as a minimum requirement whenever leaving the Work Area with a half or full face cartridge type respirator:
 - a. When exiting area, remove disposable coveralls, disposable head covers, and disposable footwear covers or boots in the Equipment Room.
 - b. Still wearing respirators, proceed to showers. Showering is mandatory. Care must be taken to follow reasonable procedures in removing the respirator and filters to avoid asbestos fibers while showering. The following procedure is required as a minimum:
 - c. Thoroughly wet body from neck down.
 - d. Wet hair as thoroughly as possible without wetting the respirator filter if using an air purifying type respirator.
 - e. Take a deep breath, hold it and/or exhale slowly, complete wetting of hair, thoroughly wetting face, respirator and filter (air purifying respirator). While still holding breath, remove respirator and hold it away from face before starting to breath.
 - f. Dispose of wet filters from air purifying respirator.
 - g. Carefully wash face piece of respirator inside and out.
 - h. Shower completely with soap and water.
 - i. Rinse thoroughly.
 - j. Rinse shower room walls and floor prior to exit.
 - k. Proceed from shower to Changing Room and change into street clothes or into new disposable work items.
- B. Remote Shower: The procedures above are to be used if the decontamination facility is used as a remote shower. If a worker cannot gain direct access to the Equipment Room require that he enter Decontamination Unit and proceed directly through Shower Room to Equipment Room. Decontamination procedure is then completed as required above.

C. Within Work Area:

1. Require that workers NOT eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the Work Area. To eat, chew, drink or smoke, workers shall follow the procedure described above, then dress in street clothes before entering the non-Work Areas of the building.

3.3 CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

Following this section is a Certificate of Worker Training. After each worker has been included in the Contractor's Respiratory Protection Program, completed the training program and medical examination, secure a fully executed copy of this form.

END OF SECTION 02 82 73

SECTION 02 82 74 - CERTIFICATE WORKER PROTECTION - ASBESTOS ABATEMENT

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

PROJECT NAME_____ DATE_____

PROJECT ADDRESS

CONTRACTOR'S NAME

WORKING WITH ASBESTOS CAN BE DANGEROUS. INHALING ASBESTOS FIBERS HAS BEEN LINKED WITH VARIOUS TYPES OF CANCER. IF YOU SMOKE AND INHALE ASBESTOS FIBERS THE CHANCE THAT YOU WILL DEVELOP LUNG CANCER IS GREATER THAN THAT OF THE NON-SMOKING PUBLIC.

Your employer's contract with the Owner for the above project requires that: You be supplied with the proper respirator and be trained in its use. You be trained in safe work practices and in the use of the equipment found on the job. You receive a medical examination. These things are to have been done at no cost to you.

RESPIRATORY PROTECTION: You must have been trained in the proper use of respirators, and informed of the type respirator to be used on the above referenced project. You must be given a copy of the written respiratory protection manual issued by your employer. You must be equipped at no cost with the respirator to be used on the above project.

TRAINING COURSE: You must have been trained in the dangers inherent in handling asbestos and breathing asbestos dust and in proper work procedures and personal and area protective measures. This training must have been the equivalent in curriculum, training method and length to the EPA Model Accreditation Plan (MAP) asbestos abatement worker training (40 CFR Part 763, Subpart E, Appendix C).

MEDICAL EXAMINATION: You must have had a medical examination within the past 12 months at no cost to you. This examination must have included: health history, pulmonary function tests and may have included an evaluation of a chest x-ray.

By signing this document you are acknowledging only that the Owner of the building you are about to work in has advised you of your rights to training and protection relative to your employer.

Signature Social Security No

Printed Name

Witness	
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A CERTIFICATE WORKER PROTECTION -ASBESTOS ABATEMENT

SECTION 02 82 75 – RESPIRATORY PROTECTION - ASBESTOS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DESCRIPTION OF WORK

A. Instruct and train each worker involved in asbestos abatement or maintenance and repair of friable asbestos-containing materials (ACM) in proper respiratory use and require that each worker always wear a respirator, properly fitted on the face in the Work Area from the start of any operation which may cause airborne asbestos fibers until the Work Area is completely decontaminated. Use respiratory protection appropriate for the fiber level encountered in the work place or as required for other toxic or oxygen-deficient situations encountered.

1.3 DEFINITIONS

- A. "Negative Pressure Respirator": A respirator in which the air pressure inside the respiratory-inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.
- B. "Protection Factor": The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.
- C. "Respirator": A device designed to protect the wearer from the inhalation of harmful atmospheres.

1.4 STANDARDS

A. Except to the extent that more stringent requirements are written directly into the Contract Documents, the latest edition of the following regulations and standards have the same force and effect (and are made a part of the Contract Documents by reference) as if copied directly into the Contract Documents, or as if published copies were bound herewith. Where there is a conflict in requirements set forth in these regulations and standards, meet the more stringent requirement.

- 1. OSHA U.S. Department of Labor Occupational Safety and Health Administration, Safety and Health Standards Section 29 CFR 1910.1001, Section 1910.134, and Section 29 CFR 1926.1101.
- CGA Compressed Gas Association, Inc., New York, Pamphlet G-7, "Compressed Air for Human Respiration", and Specification G-7.1 "Commodity Specification for Air".
- 3. CSA Canadian Standard Association, Rexdal, Ontario, Standard Z180.1, "Compressed Breathing Air".
- 4. ANSI American National Standard Practices for Respiratory Protection, ANSI Z88.2.
- 5. NIOSH National Institute for Occupational Safety and Health
 NIOSH Respirator Decision Logic (May 1987) DHHS/NIOSH
 Publication No. 87-108;
 NIOSH/EPA, "A Guide to Respiratory Protection for the Asbestos
 Abatement Industry" EPA-560-OPTS-86-001 (September 1986);
 42 CFR 84, NIOSH Standard for Certification of Non-Powered Air
 Purifying Respirator filters;
 30 CFR 11, NIOSH Certification of Respirators
- 6. MSHA Mine Safety and Health Administration

1.5 SUBMITTALS

- A. Before Start of Work submit the following to the Designer for review. Do not begin work until these submittals are returned with the Designer's action stamp indicating that the submittal is returned for unrestricted use.
 - 1. Product Data: Submit manufacturer's product information for each component used, including NIOSH and MSHA Certifications for each component in an assembly and/or for entire assembly.
 - 2. System Diagram: When a supplied air respiratory system is required by the work, submit drawing showing assembly of components into a complete supplied air respiratory system. Include diagram showing location of compressor, filter banks, backup air supply tanks, hose line connections in Work Area(s), routing of air lines to Work Area(s) from compressor.
 - 3. Operating Instruction: Submit complete operating and maintenance instructions for all components and systems as a whole. Submittal is to be in bound manual form suitable for field use.

- 4. Respiratory Protection Program: Submit Contractor's written respiratory protection program manual as required by OSHA 1926.1101.
- 5. Initial Exposure Assessment: Submit level of respiratory protection intended for each operation required by the project. Base this selection on an Initial Exposure Assessment as required by OSHA 29 CFR 1926.1101. Submit information to support this "Initial Exposure Assessment on the form included at the end of this Section.
 - a. Submit data from exposure monitoring for the PEL and EL from prior asbestos jobs within 12 months;
 - b. Submit monitoring and analysis that were performed in compliance with the OSHA asbestos standard in effect;
 - c. Submit data that was obtained under workplace conditions "closely resembling" those that will exist during the Work;
 - d. Submit data from past asbestos jobs where the type of asbestos abatement and other work, material, control methods, work practices, and environmental conditions closely resemble those that will exist during the Work;
 - e. Submit exposure date from prior asbestos jobs where the work that was conducted by employees whose training and experience are no more extensive than that of employees performing the current job;
 - f. Based on the exposure data from the previous asbestos jobs, select respiratory protection for the Work that will, to a high degree of certainty, prevent worker exposures (inside the respirator) that exceed the Permissible Exposure Limits (PEL) set forth in this Section of the specifications.
- 6. Resume information: Submit resume and information on training for individual monitoring the operation of supplied air respiratory systems. Submit training certifications where applicable.

1.6 AIR QUALITY FOR SUPPLIED AIR RESPIRATORY SYSTEMS

A. Provide air used for breathing in supplied air respiratory systems that meets or exceeds standards set for C.G.A. Type 1 (Gaseous Air) Grade H or CSA Z180.1 whichever presents the more stringent quality standard.

1.7 ALLOWABLE CONTAMINANTS

- A. Supply air that has an asbestos concentration no greater than outside ambient conditions.
- B. Supply air that meets the level of contaminants allowed according to the air quality standard specified.

1.8 DELIVERY

A. Deliver replacement parts, etc., not otherwise labeled by NIOSH or MSHA to job site in manufacturer's containers.

PART 2 - EQUIPMENT

2.1 AIR PURIFYING RESPIRATORS

- A. Respirator Bodies: Provide half face or full face type respirators. Equip full face respirators with a nose cup or other anti-fogging device as would be appropriate for use in air temperatures less than 32 degrees Fahrenheit (0 degrees Celsius).
- B. Filter Cartridges: Provide, at a minimum, HEPA type filters labeled with NIOSH and MSHA Certification for "Radionuclides, Radon Daughters, Dust, Fumes, Mists including Asbestos-Containing Dusts and Mists" and color coded in accordance with 42 CFR Part 84 and ANSI Z228.2. Also, additional cartridge sections may be added, if required, for solvents, etc., in use. In this case, provide cartridges that have each section of the combination canister labeled with the appropriate color code and NIOSH/MSHA Certification.
- C. Non-permitted respirators. Do not use single use, disposable or quarter face respirators.

2.2 SUPPLIED AIR RESPIRATOR SYSTEMS

- A. Provide equipment capable of producing air of the quality and volume required by the above reference standards applied to the job site conditions and crew size. Comply with provisions of this specification if more stringent than the governing standard.
- B. Face piece and Hose: Provide full Face piece and hose by same manufacturer that has been certified by NIOSH/MSHA as an approved Type "C" respirator assembly operating in pressure demand mode with a positive pressure Face piece.
- C. Escape air supply: In atmospheres which are oxygen deficient (less than 19.5 percent oxygen) provide a pressure-demand full Face piece supplied air respirator incorporating an auxiliary self-contained breathing apparatus (SCBA) which automatically maintains an uninterrupted air supply in pressure demand mode with a positive pressure face piece.
- D. Backup air supply: Provide a reservoir of compressed air located outside the Work Area which will automatically maintain a continuous uninterruptible source of air automatically available to each connected Face piece and hose assembly in the event of compressor shut-down, contamination of air delivered by compressor,

power loss or other failure. Provide sufficient capacity in the back-up air supply to allow a minimum escape time of one-half hour times the number of connections available to the Work Area. Air requirement at each connection is the air requirement of the respirators in use plus the air requirement of an averagesized adult male engaged in moderately strenuous activity.

- E. Warning device: Provide a warning device that will operate independently of the building's power supply. Locate so that alarm is clearly audible above the noise level produced by equipment and work procedures in use, in all parts of the Work Area and at the compressor. Connect alarm to warn of:
 - 1. Compressor shut down or other fault requiring use of backup air supply
 - 2. Carbon Monoxide (CO) levels in excess of 5 PPM/V
- F. Carbon Monoxide (CO) Monitor: Continuously monitor and record on a strip chart recorder Carbon Monoxide (CO) levels. Place monitors in the air line between compressor and back-up air supply and between backup air supply and workers. Connect monitors so that they also sound an alarm as specified under "Warning Devices".
- G. Compressor Shut Down: Interconnect monitors, alarms and compressor so that compressor is automatically shut down and the alarms sound if any of the following occur:
 - 1. Carbon Monoxide (CO) concentrations exceed 5 PPM/v in the air line between the filter bank and backup air supply
 - 2. Compressor temperature exceeds normal operating range
- H. Compressor Location: Locate compressor outside of building in location that will not impede access to the building, and that will not cause a nuisance by virtue of noise or fumes to occupied portions of the building.
- I. Air Intake: Locate air intake remotely from any source of automobile exhaust or any exhaust from engines, motors, auxiliary generator or buildings.
- J. After-Cooler: Provide an after-cooler at entry to filter system which is capable of reducing temperatures to outside ambient air temperatures.
- K. Self Contained Breathing Apparatus (SCBA): Configure system to permit the recharging of 1/2 hour 2260 PSI (15.58 MPa) SCBA cylinders.

PART 3 - EXECUTION

3.1 GENERAL

- A. Respiratory Protection Program: Comply with ANSI Z88.2 "Practices for Respiratory Protection" and OSHA 29 CFR 1910.314 and 1926.103.
- B. Require that respirators be used in the following circumstances:
 - 1. During all Class I asbestos jobs.
 - 2. During all Class II work where the ACM is not removed in a substantially intact state,
 - 3. During all Class II and III work which is not performed using wet methods.
 - 4. During all Class II and III asbestos jobs where the employer does not produce a "negative exposure assessment".
 - 5. During all Class III jobs where TSI or surfacing ACM or PACM is being disturbed.
 - 6. During all Class IV work performed within regulated areas where employees performing other work are required to wear respirators.
 - 7. During all work covered by this section where employees are exposed above the OSHA PEL (TWA, or excursion limit).
 - 8. In emergencies. During emergencies where the airborne asbestos fiber concentration is not known, a self-contained breathing apparatus (SCBA) must be used.
- C. Require that respiratory protection be used at all times that there is any possibility of disturbance of ACM whether intentional or accidental.
- D. Require that a respirator be worn by anyone in a Work Area at all times, regardless of activity, during a period that starts with any operation which could cause airborne fibers until the area has been cleared for re-occupancy in accordance with Section 02 82 73.
- E. Regardless of Airborne Fiber Levels: Require that the minimum level of respiratory protection used be half-face air-purifying respirators with high efficiency filters.
- F. Do not allow the use of single-use, disposable, or quarter-face respirators for any purpose.

3.2 FIT TESTING

- A. Initial Fitting: Provide initial fitting of respiratory protection during a respiratory protection course of training set up and administered by an individual qualified to do fit testing. Fit types and sizes of respirator to be actually worn by each individual. Allow an individual to use only those respirators for which training and fit testing has been provided.
- B. On a Weekly Basis, check the fit of each worker's respirator by having irritant smoke blown onto the respirator from a smoke tube.
- C. Upon Each Wearing: Require that each time an air-purifying respirator is put on it be checked for fit with a positive and negative pressure fit test in accordance with the manufacturer's instructions or ANSI Z88.2.

3.3 TYPE OF RESPIRATORY PROTECTION REQUIRED

- A. General: After reducing airborne asbestos levels to the lowest feasible level with engineering controls and work practices, provide respiratory protection as necessary to ensure that workers are not exposed to an airborne concentration of asbestos in excess of the Specified Permissible Exposure Limits (SPEL) set forth in this Section.
- B. Level of Respiratory Protection: Determine the proper level of respiratory protection by dividing the expected or actual airborne fiber count in the Work Area by the "protection factors" given below. The level of respiratory protection which supplies an airborne fiber level inside the respirator, at the breathing zone of the wearer, at or below the Specified Permissible Exposure Limits (PEL) set forth in this Section is the minimum level of protection allowed.
- C. Specific Respiratory Protection Requirements: Provide respiratory protection as indicated below as a minimum requirement:
 - 1. Half-face or full face Negative Pressure Air-Purifying Respirators: Provide half-face or full face negative pressure air-purifying respirators during installation of Critical or Primary Barriers or other removal activities where there has been an "Initial Exposure Assessment" that has determined that airborne asbestos fiber levels will not exceed 0.1 fiber per cubic centimeter (0.1 f/cc). Provide a PAPR where a half-face negative pressure air-purifying respirator is allowed to any worker who so requests.
 - 2. Powered Air-Purifying Respirators (PAPR): Provide powered airpurifying respirators (PAPR) during removal of asbestos-containing thermal system insulation (TSI) or surfacing material where there has been an "Initial Exposure Assessment" that has determined that airborne

as bestos fiber levels will not exceed 1.0 fiber per cubic centimeter (1.0 f/cc).

- 3. Type "C" Supplied-air respirators: full Face piece pressure demand supplied air respirators may be used by all workers engaged in the removal of thermal system insulation (TSI) or surfacing materials, or demolition of pipes, structures, or equipment covered or insulated with asbestos, or in the removal or demolition of asbestos insulation or coverings, or any other activity which results in or may result in airborne asbestos fiber levels above 1.0 fibers per cubic centimeter (1.0 f/cc).
- D. Provide a full Face piece supplied air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus for all workers within a regulated area where Class I work is being performed and for which an initial exposure assessment has not been produced. After an initial exposure assessment is made, use the level of respiratory protection required by that assessment and requirements of this specification and the OSHA Asbestos Construction Standard 29 CFR 1926.1101.

3.4 SPECIFIED PERMISSIBLE EXPOSURE LIMITS (SPEL)

- A. Specified Permissible Exposure Limits (SPEL): Ensure that no worker is exposed to an airborne concentration of asbestos in excess of the Time-Weighted Average (TWA) limit, and Excursion Limit (EL) set forth below.
 - 1. Time Weighted Average (TWA) limit Concentration of airborne asbestos fibers to which any worker may be exposed as an eight hour time-weighted average (TWA) shall not exceed the following.
 - a. 0.01 fibers per cubic centimeter
 - 2. Excursion Limit (EL) Concentration of airborne asbestos fibers to which any worker may be exposed as averaged over a sampling period of 30 minutes shall not exceed the following.
 - a. 1.0 fibers per cubic centimeter
- B. Fibers: For purposes of this section, fibers are defined as all fibers regardless of composition as counted in the OSHA Reference Method (ORM), or NIOSH 7400 procedure.
 - 1. Electron Microscopy: If Electron Microscopy is used to determine airborne fiber levels, only asbestos fibers will be enumerated, but fibers of

А

any size detected by the testing of Section 02 82 81 Project Decontamination will be counted.

3.5 RESPIRATORY PROTECTION FACTOR

. .	Respi	rator Type	Protection Factor	
	1.	Air purifying: Negative pressure respirator High efficiency filter Half Face piece	10	
	2.	Air purifying: Negative pressure respirator High efficiency filter Full Face piece	50	
	3.	Powered Air Purifying (PAPR): Positive pressure respirator High efficiency filter Half Face piece	50	
	4.	Supplied air: Positive pressure respirator Pressure demand or other positive pressure n Full face piece Equipped with an auxiliary H Cartridge or positive pressure Self-contained apparatus (SCBA) for escape	EPA	

3.6 AIR PURIFYING RESPIRATORS

- A. Negative pressure half or full face mask: Supply a sufficient quantity of respirator filters approved for asbestos, so that workers can change filters during the work day. Require that respirators be wet-rinsed, and filters discarded, each time a worker leaves the Work Area. Require that new filters be installed each time a worker re-enters the Work Area. Store respirators and filters at the job site in the changing room and protect totally from exposure to asbestos prior to their use.
- B. Powered air purifying half or full face mask: Supply a sufficient quantity of high efficiency respirator filters approved for asbestos so that workers can change filters at any time that flow through the Face piece decreases to the level at which the manufacturer recommends filter replacement. Require that regardless of flow, filter cartridges be replaced after 40 hours of use. Require that HEPA elements in filter cartridges be protected from wetting during showering. Require entire

exterior housing of respirator, including blower unit, filter cartridges, hoses, battery pack, face mask, belt, and cords, be washed each time a worker leaves the Work Area. Caution should be used to avoid shorting battery pack during washing. Provide an extra battery pack for each respirator so that one can be charging while one is in use.

3.7 SUPPLIED AIR RESPIRATOR

A. Air Systems Monitor: Continuously monitor the air system operation including compressor operation, filter system operation, backup air capacity and all warning and monitoring devices at all times that system is in operation. Assign an individual, trained by manufacturer of the equipment in use or by a Certified Industrial Hygienist, in the operation and maintenance of the system to provide this monitoring. Assign no other duties to this individual which will take him away from monitoring the air system.

END OF SECTION 02 82 75

SECTION 02 82 76 - RESPIRATORY PROTECTION INITIAL ASSESSMENT - ASBESTOS ABATEMENT

INITIAL EXPOSURE ASSESSMENT

Project No:		Date:			
Project Name:					
Facility:					
Work Area(s):					
Reference Job :					
Description of Work:					
Asbestos Containing Materials			Asbestos/Type Percentage		
	Personal Mor	nitoring Level	Respirator	Comments	
Task	High Low	-	Worn		
Prep / Set up					
Removal of Surfacing	;				
Removal of TSI Removal of Misc Mat					
Bag Out					
Clean Up					
Other					
Experience Level of V	Work Force:				
Reference Job : Description of Work:					
Asbestos Containing I	Materials		Asbe	stos/Type Percentag	
	Personal Mor	nitoring Level	Respirator	Comments	
Prep / Set up					
Removal of Surfacing	•				
Removal of TSI					
Removal of Misc Mat	•				
Bag Out					
Clean Up Other					
Other					
Experience Level of	Work Force:				

Expected Conditions of This Job

Task Prep / Set up	Anticip	pated Level f/cc	Respirator	Comments
Removal of Surfacing	S	f/cc		
Removal of TSI		f/cc		
Removal of Misc Ma	t	f/cc		
Bag Out		f/cc		
Clean Up		f/cc		
Other		f/cc		

Experience Level of Work Force:

SECTION 02 82 77 – DECONTAMINATION UNITS - ASBESTOS

PART 1- GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DESCRIPTION OF WORK

A. Provide separate Personnel and Equipment Decontamination facilities. Require that the Personnel Decontamination Unit be the only means of ingress and egress for the Work Area. Require that all materials exit the Work Area through the Equipment Decontamination Unit.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Refer to Section 02 82 40 Temporary Facilities - Asbestos Abatement for electrical requirements and requirements relative to connection of decontamination facilities to building systems such as water, sewer, and electrical.

1.4 SUBMITTALS

- A. Before the Start of Work: Submit the following to the Designer for review. Do not begin work until these submittals are returned with Designer's action stamp indicating that the submittal is returned for unrestricted use or final-but-restricted use.
 - 1. Personnel Decontamination Unit: Provide shop drawing showing location and assembly of personnel decontamination units.
 - 2. Equipment Decontamination Unit: Provide shop drawing showing location and assembly of equipment decontamination units.
 - 3. Shower Pan: Provide shop drawing.
 - 4. Shower Walls: Provide product data.
 - 5. Shower Head and Controls: Provide product data.
 - 6. Filters: Provide product data and shop drawing of installation on decontamination unit.

- 7. Hose Bib: Provide product data.
- 8. Shower Stall: for Wash Down Station provide product data and shop drawing showing and modifications.
- 9. Lumber: Provide product data on fire resistance treatment.
- 10. Sump Pump: Provide product data.
- 11. Signs: Submit samples of signs to be used.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Polyethylene Sheet: Provide flame resistant polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 6.0 mil (0.15 mm) thick, frosted or black as indicated.
- B. Reinforced Polyethylene Sheet: Where plastic sheet is the only separation between the Work Area and building exterior, provide translucent, nylon reinforced, laminated, flame resistant, polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 6.0 mil (0.15 mm) thick, frosted or black as indicated.
- C. Duct Tape: Provide duct tape in 2 inch or 3 inch widths as indicated, with an adhesive which is formulated to stick aggressively to sheet polyethylene.
- D. Spray Adhesive: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.
- E. Shower Pan: Provide one piece waterproof shower pan.
- F. Shower Walls: Provide walls fabricated from rigid, impervious, waterproof material.
- G. Shower Head and Controls: Provide a factory-made shower head producing a spray of water which can be adjusted for spray size and intensity. Feed shower with water mixed from hot and cold supply lines. Arrange so that control of water temperature, flow rate, and shut off is from inside shower without outside aid.

- H. Filters: Provide cascaded filter units on drain lines from showers or any other water source carrying asbestos-contaminated water from the Work Area. Provide units with disposable filter elements as indicated below. Connect so that discharged water passes primary filter and output of primary filter passes through secondary filter.
 - 1. Primary Filter Passes particles 20 microns and smaller
 - 2. Secondary Filter Passes particles 5 microns and smaller
- I. Hose Bib: Provide heavy bronze angle type with wheel handle, vacuum breaker, and 3/4 inch National Standard male hose outlet.
- J. Shower Stall: For Wash Down Station provide leak tight shower enclosure with integrated drain pan fabricated from fiberglass or other durable waterproof material, approximately 3 feet by 3 feet square with minimum 6 feet high sides and back. Structurally support as necessary for stability. Equip with hose bib, as specified in this section, mounted at approximately 4 feet above drain pan. Connect drain to a reservoir, pump water from reservoir through filters to a drain or store and use for amended water. Mount filters inside shower stall on back wall beneath hose bib.
- K. Lumber: Provide kiln dried lumber of any grade or species.
- L. Sump Pump: Provide totally submersible waterproof sump pump with integral float switch. Provide unit sized to pump two times the flow capacity of all showers or hoses supplying water to the sump, through the filters specified herein when they are loaded to the extent that replacement is required. Provide unit capable of pumping debris, sand, plaster or other materials washed off during decontamination procedures without damage to mechanism of pump. Adjust float switch so that a minimum of 3 inches remains between top of liquid and top of sump pan.

PART 3 - EXECUTION

3.1 PERSONNEL DECONTAMINATION UNIT

A. Provide a Personnel Decontamination Unit consisting of a serial arrangement of connected rooms or spaces, Changing Room, Drying Room, Shower Room, and Equipment Room. Require all persons without exception to pass through this Decontamination Unit for entry into and exiting from the Work Area for any purpose. Do not allow parallel routes for entry or exit. Do not remove equipment or materials through Personnel Decontamination Unit. Provide temporary lighting within Decontamination Units as necessary to reach a lighting level of 100 foot candles (1076 lumens / sq meter).

- B. Changing Room (clean room): Provide a room that is physically and visually separated from the rest of the building for the purpose of changing into protective clothing.
 - 1. Construct using polyethylene sheeting, at least 6 mil in thickness, to provide an airtight seal between the Changing Room and the rest of the building.
 - 2. Locate so that access to Work Area from Changing Room is through Shower Room.
 - 3. Separate Changing Room from the building by a sheet plastic flapped doorway.
 - 4. Require workers to remove all street clothes in this room, dress in clean, disposable coveralls, and don respiratory protection equipment. Do not allow asbestos-contaminated items to enter this room. Require Workers to enter this room either from outside the structure dressed in street clothes, or naked from the showers.
 - 5. An existing room may be utilized as the Changing Room if it is suitably located and of a configuration whereby workers may enter the Changing Room directly from the Shower Room. Protect all surfaces of room with sheet plastic as set forth in Section 02 82 61 Temporary Enclosures. Authorization for this must be obtained from the Designer in writing prior to start of construction. Submit written request in accordance with Section 02 82 79 "Substitutions" detailing layout and protective measures proposed.
 - 6. Maintain floor of changing room dry and clean at all times. Do not allow overflow water from shower to wet floor in changing room.
 - 7. Damp wipe all surfaces twice after each shift change with a disinfectant solution.
 - 8. Provide posted information for all emergency phone numbers and procedures.
 - 9. Provide one storage locker per employee.
- C. Drying Room: Provide a drying room as an airlock and a place for workers to dry after showering.
 - 1. Construct room by providing a pan continuous with or draining to Shower Room pan. Install a freely draining wooden or non-skid metal floor in pan at elevation of top of pan.

- 2. Separate this room from the rest of the building with airtight walls fabricated of 6 mil (0.15 mm) polyethylene.
- 3. Separate this room from the Changing Room and Shower Room with airtight walls fabricated of 6 mil (0.15 mm) polyethylene.
- 4. Separate from Changing Room by a sheet plastic flapped doorway.
- 5. Provide a continuously adequate supply of disposable bath towels.
- D. Shower Room: Provide a completely watertight operational shower to be used for transit by cleanly dressed workers heading for the Work Area from the Changing Room, or for showering by workers headed out of the Work Area after undressing in the Equipment Room.
 - 1. Construct room by providing a shower pan and two (2) shower walls in a configuration that will cause water running down walls to drip into pan. Install a freely draining wooden floor in shower pan at elevation of top of pan.
 - 2. Separate this room from the rest of the building with airtight walls fabricated of 6 mil (0.15 mm) polyethylene.
 - 3. Separate this room from the Drying Room and Airlock with airtight walls fabricated of 6 mil (0.15 mm) polyethylene.
 - 4. Provide splashproof entrances to Drying Room and Airlock.
 - 5. Provide shower head and controls.
 - 6. Provide temporary extensions of existing hot and cold water and drainage, as necessary for a complete and operable shower.
 - 7. Provide a soap dish and a continuously adequate supply of soap and maintain in sanitary condition.
 - 8. Arrange so that water from showering does not splash into the Changing or Equipment Rooms.
 - 9. Arrange water shut off and drain pump operation controls so that a single individual can shower without assistance from either inside or outside of the Work Area.
 - 10. Provide flexible hose shower head.

- 11. Pump waste water to drain or to storage for use in amended water. If pumped to drain, provide 20 micron and 5 micron waste water filters in line to drain or waste water storage. Change filters daily or more often if necessary. Locate filters inside shower unit so that water lost during filter changes is caught by shower pan.
- 12. Provide hose bib.
- E. Airlock: Provide an airlock between Shower Room and Equipment Room. This is a transit area for workers. Separate this room from Equipment Room by a sheet plastic flap doorway.
 - 1. Separate this room from the rest of the building with airtight walls fabricated of 6 mil (0.15 mm) polyethylene.
 - 2. Separate this room from the Equipment Room and Shower Room with airtight walls fabricated of 6 mil (0.15 mm) polyethylene.
 - 3. Separate from Equipment Room by a sheet plastic flapped doorway.
- F. Equipment Room (contaminated area): Require work equipment, footwear and additional contaminated work clothing to be left here. This is a change and transit area for workers.
 - 1. Separate this room from the Work Area by a 6 mil (0.15 mm) polyethylene flapped doorway.
 - 2. Separate this room from the rest of the building with airtight walls fabricated of 6 mil (0.15 mm) polyethylene.
 - 3. Separate this room from the Shower Room and Work Area with airtight walls fabricated of 6 mil (0.15 mm) polyethylene.
 - 4. Provide a drop cloth layer of sheet plastic on floor in the Equipment Room for every shift change expected. Roll drop cloth layer of plastic from Equipment Room into Work Area after each shift change. Replace before next shift change. Provide a minimum of two (2) layers of plastic at all times. Use only clear plastic to cover floors.
- G. Work Area: Separate Work Area from the Equipment Room by polyethylene barriers. If the airborne asbestos level in the Work Area is expected to be high, as in dry removal, add an intermediate cleaning space between the Equipment Room and the Work Area. Damp wipe clean all surfaces after each shift change. Provide one additional floor layer of 6 mil (0.15 mm) polyethylene per shift change and remove contaminated layer after each shift.

- H. Decontamination Sequence: Require that all workers adhere to the following sequence when entering or leaving the Work Area.
 - 1. Entering Work Area: Worker enters Changing Room and removes street clothing, puts on clean disposable overalls and respirator, and passes through the Shower Room into the Equipment Room.
 - 2. Any additional clothing and equipment left in Equipment Room needed by the worker are put on in the Equipment Room.
 - 3. Worker proceeds to Work Area.
- I. Exiting Work Area:
 - 1. Before leaving the Work Area, require the worker to remove all gross contamination and debris from overalls and feet.
 - 2. The worker then proceeds to the Equipment Room and removes all clothing except respiratory protection equipment.
 - 3. Extra work clothing such as boots, hard hats, goggles, gloves are to be stored in contaminated end of the Equipment Room.
 - 4. Disposable coveralls are placed in a bag for disposal with other material.
 - 5. Require that Decontamination procedures found in Section 02 82 73 be followed by all individuals leaving the Work Area.
 - 6. After showering, the worker moves to the Changing Room and dresses in either new coveralls for another entry or street clothes if leaving.

3.2 EQUIPMENT DECONTAMINATION UNIT

- A. Provide an Equipment Decontamination Unit consisting of a serial arrangement of rooms, Clean Room, Holding Room, Wash Room for removal of equipment and material from Work Area. Do not allow personnel to enter or exit Work Area through Equipment Decontamination Unit.
- B. Arrange with airlocks between rooms as required below.
- C. Wash Down Station: Provide an enclosed Shower Unit located in Work Area just outside Wash Room as an equipment, bag and container cleaning station.
 - 1. Fabricate waterproof floor extending 6 feet beyond Wash Down station in all directions. Install seamless waterproof membrane over area and extend

over curbs on all four sides. Form curbs from 2 inch by 4 inch lumber laid on the flat.

- 2. Waterproof membrane is to be fabricated from minimum 10 mil (.254 mm) polyethylene.
- 3. Do not allow water to collect on waterproof membrane. Remove continuously with a wet vacuum or mops.
- D. Wash Room: provide wash room for cleaning of bagged or containerized asbestos-containing waste materials passed from the Work Area.
 - 1. Construct wash room of metal stud and polyethylene sheeting, at least 6 mil (0.15 mm) in thickness and located so that packaged materials, after being wiped clean, can be passed to the Holding Room.
 - 2. Separate this room from the Work Area by a single flapped door of 6 mil (0.15 mm) polyethylene sheeting.
 - 3. Provide a drop cloth layer of plastic on floor in the Wash Room for every load-out operation. Roll this drop cloth layer of plastic from Wash Room into Work Area after each load-out. Provide a minimum of two (2) layers of plastic at all times. Use only clear plastic to cover floors.
- E. Airlock: Provide an airlock between Wash Room and Holding Room. This is a transit area.
 - 1. Separate this room from adjacent spaces by a sheet plastic flapped doorway.
 - 2. Separate this room from the rest of the building and adjacent spaces with airtight walls fabricated of 6 mil (0.15 mm) polyethylene.
- F. Holding Room: Provide Holding Room as a drop location for bagged asbestoscontaining materials passed from the Wash Room. Construct Holding Room of nominal 2 inch by 4 inch wood framing and polyethylene sheeting, at least 6 mil (0.15 mm) in thickness and located so that bagged materials cannot be passed from the Wash Room through the Holding Room to the Clean Room.
 - 1. Separate this room from the adjacent rooms by flap doors fabricated from 6 mil (0.15 mm) sheet plastic.
- G. Airlock: Provide an airlock between Holding Room and Clean Room. This is a transit area.

- 1. Separate this room from adjacent spaces by a sheet plastic flap doorway.
- 2. Separate this room from the rest of the building and adjacent spaces with airtight walls fabricated of 6 mil (0.15 mm) polyethylene.
- H. Clean Room: provide Clean Room to isolate the Holding Room from the building exterior. If possible locate to provide direct access to the Holding Room from the building exterior.
 - 1. Erect Critical and Primary Barriers as described in Section 02 82 61 "Temporary Enclosures" in an existing space. If no space exists construct Clean Room of 2 inch by 4 inch wood framing and polyethylene sheeting, at least 6 mil (0.15 mm) in thickness.
 - 2. Separate this room from the exterior by a single flap door of 6 mil (0.15 mm) polyethylene sheeting.
- I. Load-out Area: The load-out area is the transfer area from the building to a truck or dumpster. It may be the Clean Room of the Equipment Decontamination unit or a separate room or loading dock area. Erect Critical and Primary barriers as described in Section 02 82 61 "Temporary Enclosures" in load-out area.
 - 1. During transfer of material from load-out area erect primary barriers as described in Section 02 82 61 "Temporary Enclosures" as necessary to seal path from load-out area to truck or dumpster.
- J. Decontamination Sequence: Take all equipment or material from the Work Area through the Equipment Decontamination Unit according to the following procedure:
 - 1. At washdown station, thoroughly wet clean contaminated equipment or sealed polyethylene bags and pass into Wash Room.
 - 2. When passing equipment or containers into the Wash Room, close all doorways of the Equipment Decontamination Unit, other than the doorway between the Washdown Station and the Wash Room. Keep all outside personnel clear of the Equipment Decontamination Unit.
 - 3. Once inside the washroom, wet clean the bags and/or equipment.
 - 4. When cleaning is complete pass items into Holding Room. Close all doorways except the doorway between the Holding room and the Clean Room.

- 5. Workers from the building exterior enter Holding Area and remove decontaminated equipment and/or containers for disposal.
- 6. Require these workers to wear full protective clothing and appropriate respiratory protection.
- 7. At no time is a worker from an uncontaminated area to enter the enclosure when a removal worker is inside.

3.3 CONSTRUCTION OF THE DECONTAMINATION UNITS

- A. Walls and Ceiling: Construct airtight walls and ceiling using polyethylene sheeting, at least 6 mil (0.15 mm) in thickness. Attach to existing building components or a temporary framework.
- B. Floors: Use two (2) layers (minimum) of 6 mil (0.15 mm) polyethylene sheeting to cover floors in all areas of the Decontamination Units. Use only clear plastic to cover floors.
- C. Flap Doors: Fabricated from three (3) overlapping sheets with openings a minimum of 3 feet wide. Configure so that sheeting overlaps adjacent surfaces. Weights at bottom of sheets as required so that they quickly close after being released. Put arrows on sheets to indicate direction of overlap and/or travel. Provide a minimum of 6 feet between entrance and exit of any room. Provide a minimum of 3 feet between doors to airlocks.
- D. If the Decontamination area is located within an area containing friable asbestos on overhead ceilings, ducts, piping, etc., provide the area with a minimum 1/4 inch hardboard or 1/2 inch plywood "ceiling" with polyethylene sheeting, at least 6 mil (0.15 mm) in thickness covering the top of the "ceiling".
- E. Visual Barrier: Where the Decontamination area is immediately adjacent to and within view of occupied areas, provide a visual barrier of opaque polyethylene sheeting at least 6 mil (0.15 mm) in thickness so that worker privacy is maintained and work procedures are not visible to building occupants. Where the area adjacent to the Decontamination area is accessible to the public, construct a solid barrier on the public side of the sheeting to protect the sheeting. Construct barrier with metal studs covered with minimum 1/2 inch sheet rock. Where the solid barrier is provided, sheeting need not be opaque.
- F. Alternate methods of providing Decontamination facilities may be submitted to the Designer for approval. Do not proceed with any such method(s) without written authorization of the Designer.
- G. Electrical: Provide subpanel at Changing Room to accommodate all removal equipment. Power subpanel directly from a building electrical panel.

1. Connect all electrical branch circuits in Decontamination unit and particularly any pumps in shower room to a ground-fault circuit protection device.

3.4 CLEANING OF DECONTAMINATION UNITS

- A. Clean debris and residue from inside of Decontamination Units on a daily basis or as otherwise indicated on Contract Drawings. Damp wipe or hose down all surfaces after each shift change. Clean debris from shower pans on a daily basis.
- B. If the Changing Room of the Personnel Decontamination Unit becomes contaminated with asbestos-containing debris, abandon the entire Decontamination Unit and erect a new Decontamination Unit. Use the former Changing Room as an inner section of the new Equipment Room.

3.5 SIGNS

- A. Post an approximately 20 inch by 14 inch manufactured caution sign at each entrance to the Work Area displaying the following legend with letter sizes and styles of a visibility required by 29 CFR 1926:
 - 1. Provide signs in both English and Spanish.
 - 2. Legend: DANGER ASBESTOS CANCER AND LUNG DISEASE HAZARD AUTHORIZED PERSONNEL ONLY RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA
 - 3. Provide spacing between respective lines at least equal to the height of the respective upper line.
- B. Post an approximately 10 inch by 14 inch manufactured sign at each entrance to each Work Area displaying the following legend with letter sizes and styles of a visibility at least equal to the following:
 - 1. Provide signs in both English and Spanish.
 - 2. Legend Notation

NO FOOD, BEVERAGES OR TOBACCO PERMITTED3/4 inch BlockALL PERSONS SHALL DON PROTECTIVE3/4 inch BlockCLOTHING (COVERINGS) BEFORE ENTERING THE WORK3/4 inch Block

AREA

ALL PERSONS SHALL SHOWER IMMEDIATELY AFTER LEAVING WORK AREA AND BEFORE ENTERING THE CHANGING AREA 3/4 inch Block

END OF SECTION 02 82 77

SECTION 02 82 78 – MATERIALS AND EQUIPMENT ASBESTOS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. The Contractor's Construction Schedule is included under Section 02 82 12 Coordination - Asbestos Abatement.
 - The Contractor's Schedule of Submittals is included under Section 02 82
 25 Submittals Asbestos Abatement respectively.
 - 3. The applicability of industry standards to products specified is included under Section 02 82 21 Reference Standards and Definitions - Asbestos Abatement respectively.
 - 4. The administrative procedures for handling requests for substitutions made after award of the Contract is included under Section 02 82 79 Substitutions - Asbestos Abatement.

1.3 DEFINITIONS

- Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
 - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

- 2. "Named Products" are items identified by the manufacturer's product name, including make or model number or other designation, shown or listed in the manufacturer's published product literature, that is current as of the date of the Contract Documents.
- 3. "Foreign Products" as distinguished from "domestic products," are items substantially manufactured (50 percent or more of value) outside the United States and its possessions. Products produced or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens of, nor living within, the United States and its possessions are also considered to be foreign products.
- 4. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
- 5. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.
- 6. "Equipment" are products that may be either operational or fixed.
 - a. Operational Equipment are products with operating parts, whether motorized or manually operated, that requires temporary or permanent service connections, such as wiring or piping.
 - b. Fixed Equipment are products necessary for accomplishing the work that are used as a temporary facility during the work and removed afterward.

1.4 SUBMITTALS

- Required submittals: A general listing of products requiring submittals is included at the end of Section 02 82 25 "Submittals." This listing may not be complete. Submittal requirements are found in each specification section. Prepare a schedule in tabular form showing each product listed. Include the manufacturer's name and proprietary product names for each item listed.
 - 1. Form: Prepare product list with information on each item tabulated under the following column headings:
 - a. Related Specification Section number.
 - b. Generic name used in Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.

- 2. Initial Submittal: Within 10 days after date of Notice of Award, submit three (3) copies of an initial product list. Provide a written explanation for omissions of data and for known variations from Contract requirements.
 - a. At the Contractor's option, the initial submittal may be limited to product selections and designations that must be established early in the Contract period.
- 3. Designer's Action: The Designer will respond in writing to Contractor within one week of receipt of the completed product list. No response within this period constitutes no objection to listed manufacturers or products but does not constitute a waiver of the requirement that products comply with Contract Documents. The Owner's representative's response will include a list of unacceptable product selections, containing a brief explanation of reasons for this action.

1.5 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
 - 1. When specified products are available only from sources that do not, or cannot, produce a quantity adequate to complete project requirements in a timely manner, consult with the Owner's representative to determine the most important product qualities before proceeding. Qualities may include attributes, such as visual appearance, strength, durability, or compatibility. When a determination has been made; select products from sources producing products that possess these qualities to the fullest extent possible.
- B. Compatibility of Options: When the Contractor is given the option of selecting between two (2) or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
 - 1. The contractor is responsible for providing products and construction methods that are compatible with products and construction methods to be installed after completion of the work of this contract.
 - 2. If a dispute arises between contractors over concurrently selectable, but incompatible products, the Designer will determine which products shall be retained and which are incompatible and must be replaced.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
 - 1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 - 5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
 - 6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
 - 7. Store products subject to damage by the elements above ground, under cover in a weather tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.
 - 1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.

- 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures: The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
 - 1. Descriptive Specification Requirements: Where Specifications describe a product or assembly listing exact characteristics required with or without use of a brand or trade name provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
 - 2. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated.
 - a. Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.
 - 3. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes, or regulations specified.
 - 4. Allowances: Refer to individual Specification Sections and "Allowance" provisions in Division 1 for allowances that control product selection and for procedures required for processing such selections.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
 - 1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 02 82 78

SECTION 02 82 79 - SUBSTITUTIONS - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for handling requests for substitutions made after award of the Contract.
- B. Related Sections: The following Sections contain requirements that relate to the Section:
 - 1. Division 1 Section 02 82 21 "Reference Standards and Definitions -Asbestos Abatement" specifies the applicability of industry standards to products specified.
 - 2. Division 1 Section 02 82 12 "Coordination Asbestos Abatement" specifies requirements for submitting the Contractor's Construction Schedule.
 - 3. Division 1 Section 02 82 25 "Submittals Asbestos Abatement" specifies requirements for submitting the Submittal Schedule.
 - 4. Division 1 Section 02 82 78 "Materials and Equipment Asbestos Abatement" specifies requirements governing the Contractor's selection of products and product options.

1.3 **DEFINITIONS**

- A. Definitions in this Article do not change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by the Contractor after award of the Contract are considered to be requests for substitutions. The following are not considered to be requests for substitutions:
 - 1. Substitutions requested during the bidding period, and accepted by Addendum prior to award of the Contract, are included in the Contract

Documents and are not subject to requirements specified in this Section for substitutions.

- 2. Revisions to the Contract Documents requested by the Owner or Designer.
- 3. Specified options of products and construction methods included in the Contract Documents.
- 4. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.4 SUBMITTALS

- A. Substitution Request Submittal: The Designer will consider requests for substitution if received within 60 days after commencement of the Work.
 Requests received more than 60 days after commencement of the Work may be considered or rejected at the discretion of the Designer.
 - 1. Submit three (3) copies of each request for substitution for consideration. Submit requests in the form and according to procedures required for change-order proposals.
 - 2. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers.
 - 3. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
 - a. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate contractors that will be necessary to accommodate the proposed substitution.
 - b. A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements, such as performance, weight, size, durability, and visual effect.
 - c. Product Data, including Drawings and descriptions of products and fabrication and installation procedures.
 - d. Samples, where applicable or requested.
 - e. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.

- f. Cost information, including a proposal of the net change, if any in the Contract Sum.
- g. The Contractor's certification that the proposed substitution conforms to requirements in the Contract Documents in every respect and is appropriate for the applications indicated.
- h. The Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.
- 4. Designer's Action: If necessary, the Designer will request additional information or documentation for evaluation within one week of receipt of a request for substitution. The Designer will notify the Contractor of acceptance or rejection of the substitution within 2 weeks of receipt of the request, or one week of receipt of additional information or documentation, whichever is later. Acceptance will be in the form of a change order.
 - a. Use the product specified if the Designer cannot make a decision on the use of a proposed substitute within the time allocated.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Conditions: The Designer will receive and consider the Contractor's request for substitution when one or more of the following conditions are satisfied, as determined by the Designer. If the following conditions are not satisfied, the Designer will return the requests without action except to record noncompliance with these requirements.
 - 1. Extensive revisions to the Contract Documents are not required.
 - 2. Proposed changes are in keeping with the general intent of the Contract Documents.
 - 3. The request is timely, fully documented, and properly submitted.
 - 4. The specified product or method of construction cannot be provided within the Contract Time.
 - 5. The Designer will not consider the request if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
- B. The Contractor's submittal and the Designer's acceptance of Shop Drawings,

Product Data, or Samples for construction activities not complying with the Contract Documents do not constitute an acceptable or valid request for substitution, nor do they constitute approval.

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 02 82 79

SECTION 02 82 80 - PROJECT/CONTRACTOR CLOSEOUT - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project record document submittal.
 - 3. Submittal of warranties.
 - 4. Final cleaning.
- B. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 16.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
 - 1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
 - a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 - 2. Advise the Owner of pending insurance changeover requirements.

- 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
- 4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
- 5. Complete final cleanup requirements.
- B. Inspection Procedures: On receipt of a request for inspection, the Designer will either proceed with inspection or advise the Contractor of unfilled requirements. The Designer will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
 - 1. The Designer will repeat inspection when requested and assured that the Work is substantially complete.
 - 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.4 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
 - 1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
 - 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 - 3. Submit a certified copy of the Designer's final inspection list of items to be completed or corrected, endorsed and dated by the Designer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Designer.
 - 4. Submit consent of surety to final payment.
 - 5. Submit a final liquidated damages settlement statement.
 - 6. Submit copy of daily log, final project photographs, damage or settlement surveys, and similar final record information.
- B. Reinspection Procedure: The Designer will reinspect the Work upon receipt of

notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Designer.

- 1. Upon completion of reinspection, the Designer will prepare a certificate of final acceptance. If the Work is incomplete, the Designer will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
- 2. If necessary, reinspection will be repeated.
- C. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to the Designer for the Owner's records.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: The General Conditions require general cleaning during construction. Regular site cleaning is included in Division 1 Section "Construction Facilities and Temporary Controls." The cleaning in this Section is in addition to cleaning which is part of decontamination work. This section is intended to return the facility to the Owner in presentable condition.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.

Where extra materials of value remain after completion of associated 1. Work, they become the Owner's property. Dispose of these materials as directed by the Owner.

END OF SECTION 02 82 80

SECTION 02 82 81 - PROJECT DECONTAMINATION - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Work of This Section includes the decontamination of air in the Work Area which has been, or may have been, contaminated by the elevated airborne asbestos fiber levels generated during abatement activities, or which may previously have had elevated fiber levels due to friable asbestos-containing materials (ACM) in the space.
- B. Work of This Section includes the cleaning, decontamination, and removal of temporary facilities installed prior to abatement work, including:
 - 1. Primary and Critical Barriers erected by work of Section 02 82 61
 - 2. Decontamination Unit erected by work of Section 02 82 77
 - 3. Pressure Differential System installed by work of Section 02 82 60
- C. Work of This Section includes the cleaning, and decontamination of all surfaces (ceiling, walls, floor) of the Work Area, and all furniture or equipment in the Work Area.

1.2 RELATED DOCUMENTS

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

1.3 DESCRIPTION OF REQUIREMENTS

- A. General: Decontamination of the Work Area following asbestos abatement.
- B. If the asbestos abatement work is on damaged or friable materials the work is a four step procedure with two (2) cleanings of the Primary Barrier plastic prior to its removal and two (2) cleanings of the room surfaces to remove any new or existing contamination.
- C. If the asbestos abatement work is on undamaged and non-friable materials the decontamination procedure is a two (2) step procedure with two (2) cleanings of the Primary Barrier plastic to remove contamination, thus preventing contamination of the building when the Work Area isolation barriers are removed.

D. In both cases operation of the pressure differential system is used to remove airborne fibers generated by the abatement work.

1.4 RELATED WORK SPECIFIED ELSEWHERE

- A. Removal of Gross Debris is integral with the performance of abatement work and as such is specified in the appropriate work section(s) of these specifications:
 - 1. Section 02 83 30 Removal of Asbestos-containing Materials

1.5 CLEARANCE AIR SAMPLING BY THE CONTRACTOR

- A. To determine if the elevated airborne asbestos structure concentration encountered during abatement operations has been reduced to the specified level, the Contractor will secure samples and analyze them according to the following procedures.
 - 1. Aggressive sampling procedures as described below will be followed.
 - 2. TEM samples will be secured as indicated below and transmitted to the laboratory. Samples will be analyzed utilizing transmission electron microscopy (TEM) and the analytical protocol specified in the Louisiana Administrative Codes, Title 33, Part III Chapter 27, Section 2727, Subsection I, <u>Paragraph 3 or Paragraph 4</u>). If the area meets the TEM clearance criteria, the work of Section 02 82 81 Project Decontamination can continue.

1.6 AGGRESSIVE SAMPLING BY THE CONTRACTOR

- A. All Air Samples will be taken using aggressive sampling techniques as follows:
 - 1. Before sampling pumps are started the exhaust from forced-air equipment (leaf blower with an approximately 1 horsepower electric motor) will be swept against all walls, ceilings, floors, ledges and other surfaces in the room. This procedure will be continued for five minutes per 10,000 cubic feet of room volume.
 - 2. One 20 inch diameter fan per 10,000 cubic feet of room volume will be mounted in a central location at approximately 6 feet -6 inches above floor, directed toward ceiling and operated at low speed for the entire period of sample collection.
 - 3. Air samples will be collected in areas subject to normal air circulation away from room corners, obstructed locations, and sites near windows, doors of vents.

- 4. After air sampling pumps have been shut off, fans will be shut off.
- 5. In work areas where a dirt floor or exposed fibrous glass insulation is in the space, but outside the work area, maintain a critical barrier to prevent disturbance of these surfaces during aggressive sampling.

1.7 SCHEDULE OF CLEARANCE AIR SAMPLES BY CONTRACTOR

- A. Sample cassettes: Samples will be collected on 25 mm. cassettes as follows:
 - 1. TEM: 0.45 micrometer mixed cellulose ester or 0.40 micrometer polycarbonate, with 5.0 micron mixed cellulose ester backing filter.
- B. Number and Volume of Samples: The number and volume of air samples will be determined by the provisions in the Louisiana Administrative Codes, Title 33, Part III Chapter 27, Section 2727, Subsection I, Paragraph 3 or Paragraph 4,
- C. Sampling sensitivity:
 - 1. TEM: Analytical Sensitivity as set forth in the analytical method used or the AHERA regulation.

1.8 TRANSMISSION ELECTRON MICROSCOPY

A. Regardless if Paragraph 3 or Paragraph 4 of the Louisiana Administrative Codes, Title 33, Part III Chapter 27, Section 2727, Subsection I is the clearance protocol chosen, a <u>minimum</u> of 13 samples will be taken for each work area. If Paragraph 3 is chosen, all 13 samples will be analyzed. If Paragraph 4 is chosen, just the five samples taken from the work area and the three blanks will be analyzed. _

Location Sampled	Number of Samples	Analytical Sensitivity Struct/cc	Approx. Volume (Liters)	Rate Liters/ Minute
Each Work Area	5	0.005	1,300-1,800) 1-10
Outside Each Work Area	5	0.005	1,300-1,800) 1-10
Work Area Blank	1	0.005	0	Open for 30
Outside Blank	1	0.005	0	Seconds Open for 30 Seconds
Laboratory Blank	1	0.005	0	Do Not Open

- B. Analysis will be performed using the analysis method specified in the Louisiana Administrative Codes, Title 33, Part III Chapter 27, Section 2727, Subsection I, Paragraph 3 or Paragraph 4,)
- C. Asbestos Structures referred to in this Section include asbestos fibers, bundles, clusters or matrices, as defined by method of analysis.
- D. Release Criteria: Decontamination of the work site is complete if either of the following two (2) sets of conditions are met:
 - 1. Work Area Samples are below filter background levels
 - a. All Work Area sample volumes are greater than 1,199 liters for a 25 mm. sampling cassette.
 - b. The average asbestos concentration of the three blanks is below the filter background level of 70 structures per square millimeter of filter area.
 - c. The average concentration of asbestos of the five Work Area Samples does not exceed the filter background level of 70 structures per square millimeter of filter area.
 - 2. Work Area Samples are not statistically different from Outside samples
 - a. All sample volumes except for blanks are greater than 560 liters for a 25 mm. sampling cassette.
 - b. The average asbestos concentration of the three blanks is below the filter background level of 70 structures per square millimeter of filter area.
 - c. Average asbestos concentrations in Work Area Samples are not statistically different from Outside samples, as determined by the Z-test calculation found in 40 CFR Part 763, Subpart E, Appendix

A (Z is less than or equal to 1.65)

- E. If these conditions are not met then the decontamination is incomplete, repeat the cleaning procedures of this section.
- F. Termination of Analysis: if the arithmetic mean (average) asbestos concentration on the blank filters exceeds 70 structures per square millimeter of filter area the analysis will cease and new samples collected.

1.9 LABORATORY TESTING BY THE CONTRACTOR

- A. Phase Contrast Microscopy by the Contractor:
 - 1. The services of a testing laboratory must be employed by the Contractor to perform laboratory analysis of the air samples. A microscope and technician will be set up at the job site, or samples will be sent daily by overnight mail, so that verbal reports on air samples can be obtained within 24 hours. A complete record, certified by the testing laboratory, of all air monitoring tests and results will be furnished to the Designer, the Owner, and the Contractor.
- B. Transmission Electron Microscopy by the Contractor:
 - 1. Samples will be sent by overnight courier for analysis by Transmission Electron Microscopy. Samples will not be carried on weekends, so that samples shipped on Friday will arrive on the following Monday. Verbal results will normally be available within 24 hours of receipt of samples by the laboratory. The laboratory shall be capable of analyzing a maximum of 13 such samples from this project at any one time. All Transmission Electron Microscopy results will be available to the Contractor, the Designer and the Owner.

1.10 SUBMITTALS

- A. Before Start of Work submit the following to the Designer for review. Do not begin work until these submittals are returned with the Designer's action stamp indicating that the submittal has been "Received Not Reviewed."
 - 1. Safety Data Sheet: Submit Safety Data Sheets, or equivalent, in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) for the following:

a. "Lock-Back," sealer.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 START OF WORK

- A. Previous Work: During completion of the asbestos abatement work specified in other sections, the Secondary Barrier of polyethylene sheeting will have been removed and disposed of along with any gross debris generated by the asbestos abatement work.
- B. Visual inspection: Perform visual inspections of the work area along with the Project Administrator at each step of the decontamination process.
 - 1. Follow inspection procedures in EPA Purple Book.
- C. Start of Work: Work of this section begins with the cleaning of the Primary Barrier. At start of work the following will be in place:
 - 1. Primary Barrier: Two (2) layers of polyethylene sheeting on floor and one layer on walls.
 - 2. Critical Barrier: An airtight barrier between the Work Area and other portions of the building or the outside.
 - 3. Critical Barrier Sheeting: Over lighting fixtures and clocks, ventilation openings, doorways, convectors, speakers and other openings.
 - 4. Decontamination Units: For personnel and equipment in operating condition.
 - 5. Pressure Differential System: In operation.

3.2 FIRST CLEANING

- A. First Cleaning: Carry out a first cleaning of all surfaces of the work area including items of remaining sheeting, tools, scaffolding and/or staging by use of damp-cleaning and mopping, and/or a High Efficiency Particulate Air (HEPA) filtered vacuum. (Note: A HEPA vacuum may fail if used with wet material.) Do not perform dry dusting or dry sweeping. Use each surface of a cleaning cloth one time only and then dispose of as contaminated waste. Continue this cleaning until there is no visible debris from removed materials or residue on plastic sheeting or other surfaces.
 - 1. Remove All Filters in Air Handling System(s) and dispose of as asbestoscontaining waste in accordance with requirements of Section 02 83 32 Disposal of Regulated Asbestos-Containing Material.
 - 2. After the surfaces have passed a visual inspection verifying that all debris and residue has been removed from the sheet plastic, allow a waiting period that is long enough for the HEPA-filtered fan units operating in the work area to provide 96 air changes to clean air of airborne asbestos fibers. Use oscillating fans as necessary to assure circulation of air in all parts of work areas during this period. Maintain Pressure Differential System in operation for the entire 96 air change period.

3.3 SECOND CLEANING

- A. Second Cleaning: Carry out a second cleaning of all surfaces in the work area in the same manner as the first cleaning.
- B. Visual inspection: Perform a visual inspection to determine if all ACM including debris and residue has been removed. When the area is visually clean, remove primary barriers.
 - 1. Surfaces to be covered with sealer have met the requirements for a visual inspection in this section.
- C. Removal of Primary Barriers:
 - 1. Immediately following the second cleaning of the Primary plastic, remove all Primary Barrier sheeting and Material Decontamination Unit, if there is one, leaving only:
 - a. Critical Barrier: Which forms the sole barrier between the Work Area and other portions of the building or the outside.
 - b. Critical Barrier Sheeting: Over lighting fixtures and clocks,

ventilation openings, doorways, convectors, speakers, and other openings.

- c. Decontamination Unit: For personnel, in operating condition.
- d. Pressure Differential System: Maintain in continuous operation.

3.4 FINAL CLEANING

- A. Final Cleaning: Carry out a final cleaning of all surfaces in the Work Area in the same manner as the previous cleaning.
- B. Contractor's Testing: At the completion of the above cleaning visually inspect all surfaces. Reclean if any dust, debris, etc. is found. At completion of this inspection sweep entire Work Area including walls, ceilings, ledges, floors and other surfaces in the Work Area with exhaust from forced air equipment (leaf blower with approximately 1 horsepower electric motor or equivalent). Do not direct forced air equipment at any seal in any critical barrier. If any debris or dust is found repeat the final cleaning. Continue this process until no debris dust or other material is found while sweeping of all surfaces with forced air equipment.
- C. After a visual inspection, again wait for a period of time long enough for the HEPA-filtered fan units operating in the work area to provide 96 air changes to allow HEPA filtered fan units to clean air of airborne asbestos fibers. Use oscillating fans as necessary to assure circulation of air in all parts of Work Areas during this period. Maintain Pressure Differential System in operation for the entire 96 air change period.

3.5 VISUAL INSPECTION

- A. After Final Cleaning Perform a Complete Visual Inspection of the entire Work Area including: all surfaces, ceiling, walls, floor, decontamination unit, all plastic sheeting, seals over ventilation openings, doorways, windows, and other openings; look for debris from any source, residue on surfaces, dust or other matter. Perform visual inspection along with Owner's Representative during visual inspection sweep entire work area including walls, ceilings, ledges, floors, and other surfaces in the room with exhaust from forced air equipment (leaf blower with approximately 1 horsepower electric motor or equivalent). If any debris, residue, dust or other matter is found repeat final cleaning and continue decontamination procedure from that point. When the area is visually clean, and if after sweeping of all surfaces with leaf blower, no debris, residue, dust or other material is found, complete the certification at the end of this section. Visual inspection is not complete until confirmed in writing, on the certification, by Owner's Representative.
- B. Temporary lighting: Provide a minimum of 100 foot candles (1075 lumens / sq meter) of lighting on all surfaces in the areas to be subjected to visual inspection.

Provide hand held lights providing 150 foot candles (1600 lumens / sq meter) at 4 feet (1.25 meter) capable of reaching all locations in work area.

C. Lifts: Provide ladders, scaffolding, and lifts as required to provide access to all surfaces in the area to be subjected to visual inspection. Access is to allow touching of all surfaces.

3.6 CLEARANCE AIR SAMPLING BY CONTRACTOR (TEM)

- A. Transmission Electron Microscopy (TEM): After the Work Area is found to be visually clean, TEM air samples will be collected and analyzed by the Contractor in accordance with the procedure for Transmission Electron Microscopy set forth in Part 1 of this section.
 - 1. If Release Criteria are not met, repeat Final Cleaning and continue decontamination procedure from that point.
 - 2. If Release Criteria are met the Owner will continue with the clearance air testing by Transmission Electron Microscopy.

3.7 LOCK-BACK

A. Encapsulation of substrate: Perform encapsulation of substrate or installation of spray-applied finishes or fireproofing, where required, before Removal of Work Area Isolation as specified below. Maintain Pressure Differential System in operation during encapsulation work.

3.8 REMOVAL OF WORK AREA ISOLATION

- A. After all requirements of this section and Section 02 82 83 Work Area Clearance have been met:
 - 1. Shut down and remove the Pressure Differential System. Seal HEPA filtered fan units, HEPA vacuums and similar equipment with 6 mil (0.15 mm) polyethylene sheet and duct tape to form a tight seal at intake end before being moved from Work Area.
 - 2. Remove Personnel Decontamination Unit.
 - 3. Remove the Critical Barriers separating the Work Area from the rest of the building. Remove any small quantities of residual material found upon removal of the plastic sheeting with wet wiping, HEPA filtered vacuum cleaners and local area protection.

- 4. Remove all equipment, materials, debris from the work site.
- 5. Dispose of all asbestos-containing waste material as specified in Section 02 83 32 Disposal of Regulated Asbestos Containing Material.

3.9 SUBSTANTIAL COMPLETION OF ABATEMENT WORK

- A. Asbestos Abatement Work is Substantially Complete upon meeting the requirements of this section including submission of:
 - 1. Certificate of Visual Inspection
 - 2. Receipts Documenting proper disposal as required by Section 02 83 32 Disposal of Regulated Asbestos-Containing Material.
 - 3. Punch list detailing repairs to be made and incomplete items.

3.10 CERTIFICATE OF VISUAL INSPECTION

A. Following this section is a "Certificate of Visual Inspection". This certification is to be completed by the Contractor and certified by the Owner's Representative. Submit completed Certificate with Application for Final Payment. Final payment will not be made until this Certification is executed.

END OF SECTION 02 82 81

SECTION 02 82 82 - CERTIFICATE OF VISUAL INSPECTION - ASBESTOS ABATEMENT

CERTIFICATION OF VISUAL INSPECTION

In accordance with Section 02 82 81 "Project Decontamination" the Contractor hereby certifies that he has visually inspected the Work Area (all surfaces including pipes, beams, ledges, walls, ceiling and floor, Decontamination Unit, sheet plastic, etc.) and has found no dust, debris or residue.

by: (Signature)	Date
-----------------	------

(Print Name)_____

(Print Title)

OWNER'S REPRESENTATIVE CERTIFICATION

The Owner's Representative hereby certifies that he has accompanied the Contractor on the Contractor's visual inspection and verifies that this inspection has been thorough and to the best of their knowledge and belief, the Contractor's Certification above is a true and honest one.

by: (Signature) Date

(Print Name)

(Print Title)	

SECTION 02 82 83 – CLEANING AND DECONTAMINATION PROCEDURES - ASBESTOS ABATEMENT

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS:
 - A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to work of this section.
- 1.2 DESCRIPTION OF THE WORK:
 - A. The extent of cleaning and decontamination work is shown on the drawings.
- 1.3 RELATED WORK SPECIFIED ELSEWHERE:
 - A. Work Area Clearance: Specified in Section 02 82 84 Work Area Clearance.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

- 3.1 GENERAL:
 - A. Complete the following before start of work of this section:
 - 1. 02 82 76 Respiratory Protection
 - 2. 02 82 74 Worker Protection Repair and Maintenance

3.2 WET CLEANING:

- A. Accomplish wet cleaning during decontamination with paper towels or disposable rags.
- B. Immerse paper towel or rag in container of amended water or dilute removal encapsulant.
- C. Wring out. Fold into quarters.
- D. Wipe surface once and refold to a fresh face of cloth. Proceed in this manner until all available faces of paper towel or rag have been used.

- E. Dispose of paper towel or rag
- F. Do not place rag back in container to rinse out or for any other purpose. If a used towel or rag comes in contact with water, empty container and refill.
- G. Material adhered to a surface with removal encapsulant may require the application of additional removal encapsulant to facilitate cleaning.

3.3 REMOVAL OF ASBESTOS-CONTAINING DEBRIS

- A. Remove asbestos-containing debris and decontaminate the area involved using the following sequence:
 - 1. Shut down all ventilation into room.
 - 2. Seal entry to work area with 6 mil (0.15 mm) polyethylene. Slit polyethylene for entry. Install a flap to cover the slit automatically; tape slit closed after entry.
 - 3. Start HEPA vacuum before entering the area.
 - 4. Use the HEPA vacuum to clean a path at least 6 feet (1.83 m) wide from the entry point of the work area to the site of the fallen material.
 - 5. Remove all small debris with the HEPA vacuum.
 - 6. HEPA vacuum surfaces of all pieces too large to be removed by the suction of the HEPA vacuum.
 - Pick up such pieces and place in the bottom of a 6 mil (0.15 mm) polyethylene disposal bag conforming to the requirements of Section 02
 83 Disposal of Regulated Asbestos-Containing Material. Place pieces in the bag without dropping and avoiding unnecessary disturbance and release of material.
 - 8. Remove all remaining visible debris with HEPA vacuum.
 - 9. HEPA vacuum an area 3 feet (0.91 m) beyond the location in which any visible debris was found in two (2) directions each at right angles to the other.
 - 10. Place a 6 mil (0.15 mm) polyethylene drop cloth immediately on top of the HEPA vacuumed area before performing any repair work on site from which fall-out occurred.

- 11. HEPA vacuum the site from which material fell removing all loose material which can be removed by the vacuums suction.
- 12. Repair or remove remaining material.
- 13. HEPA vacuum ladder and/or any tools used and pass out of the work area.
- 14. HEPA vacuum all surfaces in the room starting at the top of wall and working downward to the floor. Then start at corner of floor farthest from Work Area entrance and work towards entrance.
- 15. HEPA vacuum the floor using a floor attachment with rubber floor seals and adjustable floor to attachment height. Adjust the height so that the rubber seals just touch the floor if carpeted and are within 1/16 inch (1.6 mm) of hard surface floors. Vacuum the floor in parallel passes with each pass overlapping the previous by one-half the width of the floor attachment. At the completion of one cleaning vacuum the floor a second time at right angles to the first.
- Secure area from occupancy until air monitoring results per Section 02 82
 77 Project Decontamination indicate that area is safe for reoccupancy.

3.4 CLEANING AND DECONTAMINATING OBJECTS

- A. Perform all work of decontaminating objects wherever possible on a plastic drop sheet installed in conformance with Section 02 82 77.
- B. HEPA vacuum all surfaces of object and immediate area before moving the object.
- C. Pick-up object, if possible, and HEPA vacuum all surfaces.
- D. Hand to off-sheet worker who will wet-clean object, if possible, and place in storage location.
- E. Decontaminate area where object was located by HEPA vacuuming twice, in two (2) perpendicular directions. Wet clean if necessary to remove any debris.
- F. Return object to its original location.

3.5 DECONTAMINATION OF ROOMS:

- A. Shut down all ventilation into space.
- B. Seal entry to Work Area with 6 mil (0.15 mm) polyethylene. Slit polyethylene for

entry. Install a flap to cover the slit automatically; tape slit closed after entry.

- C. Install Differential Pressure System in accordance with Section 02 82 60.
- D. Recirculate HEPA filtered fan units in space by operating them so that discharge from machine is back into room. Use one HEPA filtered fan unit for each 2,500 cubic feet (70.8 cubic meters) of room volume.
- E. HEPA vacuum all surfaces in the room starting at the ceiling, then top of wall and working downward to the floor.
- F. HEPA vacuum the floor using a floor attachment with rubber floor seals and adjustable floor to attachment height. Adjust the height so that the rubber seals just touch the floor if carpeted and are within 1/16 inch (1.6 mm) of hard surface floors. Vacuum the floor in parallel passes with each pass overlapping the previous by one half the width of the floor attachment. At the completion of one cleaning, vacuum the floor a second time at right angles to the first.
- G. Operate HEPA filtered fan unit in space for 96 air changes minimum.
- H. At completion of Decontamination Work workers decontaminate in accordance with Section 02 82 73 Worker Protection.
- I. Secure area from occupancy until air monitoring results per Section 02 82 84 Work Area Clearance indicate area is safe for reoccupancy.

END OF SECTION – 02 82 83

SECTION 02 82 84 - WORK AREA CLEARANCE - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to work of this section.
 - 1. Visual Inspection: required as a prerequisite of air testing, is set forth in Section 02 82 81 Project Decontamination.
 - 2. Air Monitoring: performed by the Owner during abatement work, is described in Section 02 82 30 Test Laboratory Services.

1.2 SUMMARY

- A. This section describes work being performed by the Owner's Representative. This work is not in the Contract Sum, except where the initial test results are not satisfactory, then the Contractor shall pay for the cost of all TEM and PCM retesting and analysis of all PCM and TEM samples taken by the Hygienist. Contractor shall pay re-testing costs for samples at laboratory selected by the Owner.
- B. This Section sets forth required post-abatement airborne asbestos concentrations in the Work Area and describes testing procedures the Owner's Representative will use to measure these levels.

1.3 CONTRACTOR RELEASE CRITERIA

- A. <u>The Asbestos Abatement Work Area is Cleared</u> when the Work Area is visually clean and airborne asbestos structure concentrations have been reduced to the level specified below.
- B. <u>VISUAL INSPECTION</u>: Work of this Section will not begin until the visual inspection described in Section 02 82 81 Project Decontamination is complete and has been certified by the Project Administrator.
- C. <u>AIR MONITORING</u>: To determine if the elevated airborne asbestos structure concentration encountered during abatement operations has been reduced to the specified level, the Owner will secure samples and analyze then according to the following procedures.
 - 1. <u>Aggressive sampling procedures as described below will be followed.</u>
 - 2. <u>PCM samples</u> will be secured as indicated below. If the area meets the

clearance criteria TEM sampling will proceed.

- 3. <u>Aggressive sampling procedures will be repeated.</u>
- 4. <u>TEM samples</u> will be secured and analyzed as indicated below.
- 5. <u>Work Area Clearance</u>: upon meeting the TEM Clearance requirements the work of Section 02 82 81 Project Decontamination can continue.

1.4 AGGRESSIVE SAMPLING

- A. <u>All Air Samples</u> will be taken using aggressive sampling techniques as follows:
 - 1. Before sampling pumps are started the exhaust from forced-air equipment (leaf blower with an approximately 1 horsepower electric motor) will be swept against all walls, ceilings, floors, ledges, and other surfaces in the room. This procedure will be continued for 5 minutes per 10,000 cubic feet of room volume.
 - 2. One 20 inch diameter fan per 10,000 cubic feet of room volume will be mounted in a central location at approximately 2 meters above floor, directed toward ceiling and operated at low speed for the entire period of sample collection.
 - 3. Air samples will be collected in areas subject to normal air circulation away from room corners, obstructed locations, and sites near windows, doors, or vents.
 - 4. After air sampling pumps have been shut off, fans will be shut off.

1.5 SCHEDULE OF AIR SAMPLES

A. <u>General</u>: The number and volume of air samples taken and analytical methods used by the Owner will be in accordance with the following schedule. Sample volumes given may vary depending upon the analytical instruments used.

1.6 PHASE MICROSCOPY CONTRAST

- A. <u>In each homogeneous Work Area</u> after completion of all cleaning work, a minimum of 7 samples will be taken and analyzed as follows:
- B. Samples will be collected on 25 mm. cassettes with the following filter media:
 PCM: 0.8 mixed cellulose ester in a cassette with a conductive extension cowl.

Location Number Analysis Detection Minimum Rate

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Sampled	of Samples	Method	Limit Fibers/cc.	Volume (Liters)	LPM
Each Work Area or	5	РСМ	0.01	1,200	1-10
Each Room of Work Area	1 (5 min.)	РСМ	0.01	1,200	1-10
Work Area Blank	1	РСМ	0.01	0	open for 30 seconds
Laboratory Blank	1	РСМ	0.01	0	Do not Open

- C. <u>Analysis</u>: Fibers on each filter will be measured using the NIOSH Method 7400 entitled "Fibers" published in the NIOSH Manual of Analytical Methods, 3rd Edition, Second Supplement, August 1987.
- D. <u>Fibers</u>: referred to in this section include fibers regardless of composition as counted by the phase contrast microscopy method used.
- E. <u>Split Sample</u>: One Work Area sample will be split and both halves analyzed separately for duplicate analysis.
- F. <u>Release Criteria</u>: Decontamination of the work site is complete when every Work Area sample is at or below the Detection Limit above. If any sample is above the Detection Limit, then the decontamination is incomplete and recleaning per section 02 82 81 Project Decontamination is required.

1.7 TRANSMISSION ELECTRON MICROSCOPY

A. <u>In each homogeneous work area</u> after completion of all cleaning work, a minimum of 13 samples will be taken and analyzed as follows:

Location Sampled	Number of Samples	Analysis Method	Analytical Sensitivity Fibers/cc.	Recommended Volume (Liters)	Rate LPM
Each Work Area	5	TEM	0.005	1,300-1,800	1-10
Outside Each Work Area	5	TEM	0.005	1,300-1,800	1-10
Work Area Blank	1	TEM	0.005	0	Open for

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30 sec.

Outside Blank	1	TEM	0.005	0	Open for 30 sec.
Laboratory Blank	1	TEM	0.005	0	Do Not open

- B. <u>Analysis</u> will be performed using the analysis method set forth in the AHERA Regulation 40 CFR Part 763 Appendix A.
- C. <u>Asbestos Structures</u> referred to in this Section include asbestos fibers, bundles, clusters or matrices, as defined by method of analysis.
- D. <u>Release Criteria</u>: Decontamination of the work site is complete if either of the following two (2) sets of conditions are met:
 - a. <u>Work Area Samples are below filter background levels:</u>
 - 1) All Work Area samples volumes are greater than 1,199 liters for a 25 mm. sampling cassette.
 - 2) The average concentration of asbestos on the five Work Area Samples does not exceed the filter background level of 70 structures per square millimeter of filter area.
 - b. <u>Work Area Samples are not statistically different from Outside</u> <u>samples:</u>
 - 1) All sample volumes except for blanks are greater than 560 liters for a 25 mm. sampling cassette.
 - 2) The average asbestos concentration of the three (3) blanks is below the filter background level of 70 structures per square millimeter of filter area.
 - Average asbestos concentrations in Work Area Samples are not statistically different from Outside samples, as determined by the Ztest calculation found in 40 CFR Part 763, Subpart E, Appendix A (Z is less than or equal to 1.65)
 - c. If these conditions are not met then the decontamination is incomplete and the cleaning procedures of Section 01710 shall be repeated.
- D. <u>Termination of Analysis</u>: if the arithmetic mean (average) asbestos concentration on the blank filters exceed 70 structures per square millimeter of filter area the analysis will cease and new samples collected.

1.8 LABORATORY TESTING

A. <u>PHASE CONTRAST MICROSCOPY</u>: The services of a testing laboratory will be

employed by the Owner to perform laboratory analysis of the air samples. A microscope and technician will be set up at the job site, or samples will be sent daily by overnight mail, so that verbal reports on air samples can be obtained within 24 hours. A complete record, certified by the testing laboratory, or all air monitoring tests and results will be furnished to the Owner's Representative, the Owner and the Contractor.

B. <u>TRANSMISSION ELECTRON MICROSCOPY</u>: Samples will be sent by overnight courier for analysis by Transmission Electron Microscopy. Samples will not be carried on weekends, so that samples shipped on Friday will arrive on the following Monday. Verbal results will normally be available during the 5th working day after receipt of samples by the laboratory. The laboratory is capable of analyzing a maximum of 13 such samples from this project at any one time. All Transmission Electron Microscopy results will be available to the Contractor.

1.9 FINAL AIR CLEARANCE

- A. Final area air clearance samples will be accomplished by TEM. Contractor will plan for approximately five days in the TEM process as well as for any possibilities of TEM failures. A prospective schedule may be as follows:
 - a. 24 hour settling/waiting-period after final visual inspection and written certification by Contractor to proceed with final TEM.
 - b. Air samples taken several hour.
 - c. Samples directed to laboratory.
 - d. Waiting period for analysis report from laboratory.
 - e. Verbal reporting
 - f. Faxing of information to Industrial Hygienist will serve as preliminary notification for final clearance.
 - g. Final written authorization to encapsulate abated areas.
- B. PCM analysis may be used for final work area clearance when areas are less than 3000 square feet or 1000 linear feet.

2.0 FINAL SOIL CLEARANCE

- A. Final area soil clearance samples will be accomplished by PLM.
 - a. A core sample of soil shall be collected in Lab approved sampling tubes.
 - b. One (1) PLM sample for every 50 linear feet of pipe insulation that has been removed will be required.
 - c. Samples to be sent to laboratory for analysis.
 - d. Waiting period for analysis report from laboratory.
 - e. Verbal reporting to Project Designer of results.
 - f. Email of information to Project Designer will serve as preliminary

notification for final clearance.

g. If samples are above 1% ACM, then an additional 1 inch (1") (25mm) of soil will be required to be removed and retested at contractor's expense to follow for Clearance.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION 02 82 84

SECTION 02 83 30 - REMOVAL OF ASBESTOS CONTAINING MATERIALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Worker Protection requirements are set forth in Section 02 82 73 Worker Protection - Asbestos Abatement.
- B. Installation of Critical and Primary Barriers, and Work Area Isolation Procedures are set forth in Section 02 82 61 Temporary Enclosures.
- C. Project Decontamination procedures after removal of the Secondary Barrier are specified in Section 02 82 81 Project Decontamination.
- D. Disposal of asbestos-containing waste is specified in Section 02 83 32 Disposal of Regulated Asbestos-Containing Material.

1.3 SUBMITTALS

- A. Before Start of Work: Submit the following to the Designer for review. Do not start work until these submittals are returned with Designer's action stamp indicating that the submittal is returned for unrestricted use.
 - 1. Surfactant: Submit product data, use instructions and recommendations from manufacturer of surfactant intended for use. Include data substantiating that material complies with requirements.
 - 2. Removal Encapsulant: Submit product data, use instructions and recommendations from manufacturer of removal encapsulant intended for use. Include data substantiating that material complies with requirements.
 - 3. NESHAP Certification: Submit certification from manufacturer of surfactant or removal encapsulant that, to the extent required by this specification, the material, if used in accordance with manufacturer's instructions, will wet Asbestos-Containing Materials (ACM) to which it is applied as required by the National Emission Standard for Hazardous Pollutants (NESHAP) Asbestos Regulations (40 CFR 61, Subpart M).

- B. Before Start of Work submit the following to the Designer for review. Do not begin work until these submittals are returned with the Designer's action stamp indicating that the submittal has been "Received Not Reviewed."
 - 1. Safety Data Sheet: Submit Safety Data Sheets, or equivalent, in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) for the following:
 - a. Surfactants.
 - b. Encapsulants.
 - c. Solvents.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Wetting Materials: For wetting prior to disturbance of ACM use either amended water or a removal encapsulant:
- B. Amended Water: Provide water to which a surfactant has been added. Use a mixture of surfactant and water which results in wetting of the ACM and retardation of fiber release during disturbance of the material equal to or greater than that provided by the use of 1 ounce of a surfactant consisting of 50 percent polyoxyethylene ester and 50 percent polyoxyethylene ether mixed with 5 gallons (19 liters) of water.
- C. Removal Encapsulant: Provide a penetrating type encapsulant designed specifically for removal of ACM. Use a material which results in wetting of the ACM and retardation of fiber release during disturbance of the material equal to or greater than that provided by water amended with a surfactant consisting of 1 ounce of a mixture of 50 percent polyoxyethylene ester and 50 percent polyoxyethylene ether in 5 gallons (19 liters) of water.
- D. Polyethylene Sheet: Provide flame resistant polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 6.0 mil (0.15 mm) thick, frosted or black as indicated.
- E. Duct Tape: Provide duct tape in 2 inch or 3 inch (50 mm or 75 mm) widths as indicated, with an adhesive which is formulated to stick aggressively to sheet polyethylene.
- F. Spray Cement: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.

- G. Disposal Bags: Provide 6 mil (0.15 mm) thick leak-tight polyethylene bags labeled as required by Section 02 83 32 Disposal of Regulated Asbestos Containing Material.
- H. Fiberboard Drums: Provide heavy duty leak tight fiberboard drums with tight sealing locking metal tops.
- I. Paper board Boxes: Provide heavy duty corrugated paper board boxes coated with plastic or wax to retard deterioration from moisture. Provide in sizes that will easily fit in disposal bags.
- J. Felt: Standard felt approximately 1/16 inch (1.6 mm) thick and 36 inches (900 mm) to 72 inches (1800 mm) in width.

PART 3 - EXECUTION

3.1 SECONDARY BARRIER

- A. Secondary Barrier: Over the Primary Barrier, install as a drop cloth a clear 6 mil (0.15 mm) sheet plastic in all areas where asbestos removal work is to be carried out. Completely cover floor with sheet plastic. Where the work is within 10 feet (3 m) of a wall extend the Secondary Barrier up wall to ceiling. Support sheet plastic on wall with duct tape, seal top of Secondary plastic to Primary Barrier with duct tape so that debris is unable to get behind it. Provide cross strips of duct tape at wall support as necessary to support sheet plastic and prevent its falling during removal operations.
 - 1. Install Secondary Barrier at the beginning of each work shift. Install only sufficient plastic for work of that shift.
 - 2. Remove Secondary Barrier at end of each work shift or as work in an area is completed. Fold plastic toward center of sheet and pack in disposal bags. Keep material on sheet continuously wet until bagged.

3.2 WORKER PROTECTION

A. Before beginning work with any material for which a Safety Data Sheet has been submitted provide workers with the required protective equipment. Require that appropriate protective equipment be used at all times.

3.3 WET REMOVAL

A. Thoroughly wet to satisfaction of Designer any ACM to be removed prior to stripping and/or tooling to reduce fiber dispersal into the air. Accomplish wetting by a fine spray (mist) of amended water or removal encapsulant. Saturate material sufficiently to wet to the substrate without causing excess dripping. Allow time for amended water or removal encapsulant to penetrate material thoroughly. If amended water is used, spray material repeatedly during the work process to maintain a continuously wet condition. If a removal encapsulant is used, apply in strict accordance with manufacturer's written instructions. Perforate outer covering of any installation which has been painted and/or jacketed in order to allow penetration of amended water or removal encapsulant, or use injection equipment to wet material under the covering. Where necessary, carefully strip away while simultaneously spraying amended water or removal encapsulant on the installation to minimize dispersal of asbestos fibers into the air.

- 1. Mist work area continuously with amended water whenever necessary to reduce airborne fiber levels.
- 2. Remove saturated ACM in small sections from all areas. Do not allow material to dry out. As it is removed, simultaneously pack material while still wet into disposal bags. Twist neck of bags, bend over and seal with minimum three (3) wraps of duct tape. Clean outside and move to Wash Down Station adjacent to Material Decontamination Unit.
- 3. Evacuate air from disposal bags with a HEPA filtered vacuum cleaner before sealing.
- B. Pipe Insulation: Spray with a mist of amended water or removal encapsulant. Allow amended water or removal encapsulant to saturate material to substrate. If a removal encapsulant is used, use in strict accordance with manufacturer's instructions. Cut bands holding preformed pipe insulation, slit jackets at seams, remove and hand-place in a disposal bag. Remove job-molded fitting insulation in chunks and hand place in a disposal bag. Do not drop to floor. Remove any residue on pipe or fitting with stiff bristle nylon hand brush. In locations where pipe fitting insulation is removed from pipe with straight runs insulated with fibrous glass or other non-asbestos-containing fibrous material, remove fibrous material 6 inches (150 mm) from the point where it contacts the asbestos-containing insulation.

END OF SECTION 02 83 30

SECTION 02 83 32 - DISPOSAL OF REGULATED ASBESTOS-CONTAINING MATERIAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Worker protection requirements are set forth in Sections 02 82 73 Worker Protection - Asbestos abatement
- B. Section 02 82 23 Codes, Regulations and Standards Asbestos Abatement describes applicable federal, state and local regulations.

1.3 DESCRIPTION OF THE WORK

 A. This section describes the disposal of Regulated Asbestos-Containing Materials (RACM). Disposal includes packaging of Regulated Asbestos-Containing Materials. Disposal may be accomplished either by land filling or converting Regulated Asbestos Containing Materials to non Asbestos waste.

1.4 SUBMITTALS

- A. Before Start of Work: Submit the following to the Designer for review. Do not start work until these submittals are returned with Designer's action stamp indicating that the submittal is returned for unrestricted use.
 - 1. Copy of state or local license for waste hauler.
 - 2. Name and address of landfill where Regulated Asbestos Containing Materials are to be buried. Include contact person and telephone number.
 - 3. Sample of disposal bag and any added labels to be used.
- B. On a weekly basis submit copies of all manifests and disposal site receipts to Designer.
- C. Waste Shipment Record: Maintain a waste shipment record as required by the NESHAP regulation which indicates the waste generator, transporter, and disposal site, and which describes the nature, size, type of container, and form of asbestos waste. Submit to Designer within 35 days of departure from building.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Disposal Bags: Provide 6 mil (0.15 mm) thick leak-tight polyethylene bags labeled with three (3) labels with text as follows:
 - 1. First Label: Provide in accordance with 29 CFR 1910.1200(f) of OSHA's Hazard Communication standard:

DANGER CONTAINS ASBESTOS FIBERS AVOID CREATING DUST CANCER AND LUNG DISEASE HAZARD BREATHING AIRBORNE FIBERS IS HAZARDOUS TO YOUR HEALTH

2. Second Label: Provide in accordance with U. S. Department of Transportation regulation on hazardous waste marking. 49 CFR parts 171 and 172. Hazardous Substances

RQ-ASBESTOS WASTE CLASS 9 NA2212-PG III

3. Third Label: Provide the name of the waste generator (Owner's name), the location from which the waste was generated and the names and addresses of the contractor and transporter. This label must be durable, able to repel dirt and moisture (e.g., permanent marker). Label must be placed directly on disposal bag(s) in a legible format. Peel and stick type labels are expressly prohibited.

PART 3 - EXECUTION

3.1 SEQUENCE

- A. Comply with the following sections during all phases of this work:
 - 1. Section 02 82 73 Worker Protection Asbestos Abatement
 - 2. Section 02 82 75 Respiratory Protection

3.2 GENERAL

- A. All waste is to be hauled by a waste hauler with all required licenses from all state and local authority with jurisdiction.
- B. Liquid waste: Mix all liquid asbestos-containing waste or asbestos contaminated waste with a bladeable material so that it forms a bladeable (non-liquid) form, and have the concurrence of the landfill operator prior to disposal.
- C. Load all adequately wetted Regulated Asbestos-Containing Material in disposal bags or leak-tight containers. All materials are to be contained in one of the following
 - 1. Two (2) 6 mil (0.15 mm) disposal bags or
 - 2. Two (2) 6 mil (0.15 mm) disposal bags and a fiberboard drum or
 - 3. Sealed steel drum with no bag
- D. Protect interior of truck or dumpster with Critical and Primary Barriers as described in Section 02 82 61 Temporary Enclosures.
- E. Carefully load containerized waste in fully enclosed dumpsters, trucks or other appropriate vehicles for transport. Exercise care before and during transport, to insure that no unauthorized persons have access to the material.
- F. Warning Signs: During loading and unloading mark dumpsters, receptacles and vehicles with a sign complying with requirements of the EPA NESHAP regulation (40 CFR Part 61), in a manner and location that a person can read the following legend:

DANGER ASBESTOS DUST HAZARD CANCER AND LUNG DISEASE HAZARD AUTHORIZED PERSONNEL ONLY

- G. Do not store containerized materials outside of the Work Area. Take containers from the Work Area directly to a sealed truck or dumpster.
- H. Do not transport disposal bagged materials on open trucks. Label drums with same warning labels as bags. Uncontaminated drums may be reused. Treat drums that have been contaminated as Regulated Asbestos-Containing Material and dispose of in accordance with this specification.
- I. Advise the landfill operator or processor, at least 10 days in advance of transport, of the quantity of material to be delivered.

- J. At disposal site unload containerized waste:
 - 1. At a disposal site, sealed plastic bags may be carefully unloaded from the truck. If bags are broken or damaged, return to work site for rebagging. Clean entire truck and contents using procedures set forth in section 02 82 81 Project Decontamination.
- K. Retain receipts from landfill or processor for materials disposed of.
- L. At completion of hauling and disposal of each load submit copy of waste manifest, chain of custody form, and landfill receipt to Designer.

END OF SECTION 02 83 32

DRAWINGS

Refer to Drawing Sheet No. ENV1

ROOF REPLACEMENT, HENRY THURMAN BUILDING, SOUTHERN UNIVERSITY AND A&M COLLEGE

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1/2"

1" The graphic scale at the bottom left corner of this drawing must measure 1"x1" otherwise all listed scales are null and void.

STATE BUILDING ID: S02150 SITE CODE: 2-17-038 STATE PROJECT NO.: 01-107-24-05 WBS PROJECT NO.: F.19002599

CONSTRUCTION DOCUMENT SUBMITTAL

OWNER

Southern University Baton Rouge 801 Harding Boulevard Baton Rouge, LA Zip 70807 225-771-4500

ARCHITECT

Holly & Smith Architects, APAC

2302 Magazine Street New Orleans, LA 70130 504.585.1315

ENVIRONMENTAL ENGINEER

Ritter Consulting Engineers

2014 West Pinhook Road Suite 200 Lafayette, LA 70508 337.984.8498

HOLLY & SMITH ARCHITECTS HAMMOND T 985.345.5210 NEW ORLEANS 504.585.131 LAFAYETTE $T \qquad 3 \ 3 \ 7 \ . \ 2 \ 7 \ 9 \ . \ 2 \ 0 \ 1 \ 0$ www.hollyandsmith.com





PROJECT NO.	24043
PHASE	CD
DATE	04/04/2025
PROJECT MANAGER	
QUALITY CONTROL	

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RENOVATION NO	DTES	
HE PROJECT IS CURRENTLY OCCUPIED AND MUST REMA PERATIONAL DURING NORMAL BUSINESS HOURS (7:00 A		1. VISIT TH CONDITI
COORDINATE WITH THE OWNER AND OCCUPANTS ALL CO HAT MAY IMPEDE NORMAL OPERATIONS, INCLUDING AC	ONSTRUCTION ACTIVITIES	2. NOTIFY
XCESSIVE NOISE, AIRBORNE PARTICULATES, OR EXCES	SIVE TRAFFIC. SEPARATE	

OPERABLE EXITS SHALL REMAIN CLEAR AND USABLE THROUGHOUT THE CONSTRUCTION PROCESS UNLESS SHOWN OTHERWISE. PROVIDE TEMPORARY MEANS OF EGRESS, AS DETERMINED BY ARCHITECT, WHERE REQUIRED EXITS MUST BE CLOSED.

- FIRE PROTECTION MEASURES, INCLUDING EXIT/EMERGENCY LIGHTING, SPRINKLER SYSTEMS, AND FIRE ALARM SYSTEMS SHALL REMAIN OPERATIONAL IN OCCUPIED SPACES THROUGHOUT THE CONSTRUCTION PROCESS.
- MAINTAIN A SECURE SITE AT ALL TIMES. PROVIDE MORE PERMANENT WEATHER AND SECURITY PROTECTION IF CONSTRUCTION IS DELAYED OR POSTPONED; CONFIRM SCOPE WITH ARCHITECT.
- FIELD VERIFY AND DOCUMENT ALL EXISTING CONDITIONS, DIMENSIONS, ELEVATIONS BENCHMARKS, MATERIALS AND METHODS OF CONSTRUCTION THAT AFFECT THE WORK. DRAWINGS OF EXISTING CONDITIONS ARE BASED ON AVAILABLE DOCUMENTS AND OBSERVABLE FIELD CONDITIONS AND MAY VARY FROM ACTUAL CONDITIONS. COORDINATE VERIFIED ITEMS WITH THE DOCUMENTS. NOTIFY THE ARCHITECT OF DISCREPANCIES.
- ASSIST THE ARCHITECT IN MAKING EVALUATIONS OF UNKNOWN CONDITIONS BY PROVIDING FIELD INFORMATION.
- NOTIFY ARCHITECT, DISCONTINUE WORK, AND VACATE AREAS WHERE MATERIALS SUSPECTED OF BEING HAZARDOUS ARE ENCOUNTERED. ASSUME THAT PAINT APPLIED PRIOR TO 1978 CONTAINS LEAD. IN SCHOOLS AND GOVERNMENT-OWNED BUILDINGS REVIEW ASBESTOS MANAGEMENT PLANS WITH OWNER'S RESPONSIBLE PARTY PRIOR TO PROCEEDING WITH THE WORK.
- PRIOR TO THE START OF DEMOLITION, COORDINATE WITH OWNER AND ARCHITECT ITEMS TO BE SALVAGED AND ITEMS TO BE DISPOSED OF.
- DRAWINGS SHOW GENERAL DEMOLITION INTENT BUT DO NOT SHOW ALL THE ITEMS REQUIRED TO BE REMOVED. INCORPORATE IN THE DEMOLITION ALL ITEMS AND COMPONENTS REQUIRED FOR THE COMPLETION OF THE PROJECT.
-). DO NOT PROCEED WITH DEMOLITION WORK THAT MAY COMPROMISE THE STRUCTURAL OR INTEGRITY OF WORK TO REMAIN WITHOUT NOTIFYING THE ARCHITECT.
- PROVIDE TEMPORARY ENCLOSURES AND WEATHER PROTECTION FOR PORTIONS OF STRUCTURES SCHEDULED TO REMAIN.
- MAINTAIN MOVEMENT JOINTS IN EXISTING CONSTRUCTION WITHOUT COMPROMISE. NOTIFY ARCHITECT OF AREAS IN QUESTION.
- . PROTECT EXISTING UTILITIES TO REMAIN. TERMINATE IN A MANNER MEETING THE DOCUMENTS REQUIREMENTS AND INDUSTRY STANDARDS. PROVIDE BARRICADES AND TEMPORARY COVERING FOR EXPOSED AREAS.
- I. IF UTILITY LINES ARE ENCOUNTERED THAT ARE NOT SHOWN ON THE DRAWINGS, DO NOT PROCEED WITHOUT INSTRUCTIONS FROM THE ARCHITECT
- 5. RE-PAINT WALL/CEILING SURFACES IN THEIR ENTIRETY IF MARRED BY CONSTRUCTION, TOP TO BOTTOM, CORNER TO CORNER. SPOT TOUCH-UPS ARE NOT ACCEPTABLE.
- . REMOVE AND STORE MATERIALS AND EQUIPMENT AT EXISTING SITE INDICATED TO BE REUSED OR RELOCATED TO PREVENT DAMAGE, AND REINSTALL AS THE WORK PROGRESSES.
- REMOVE AND TRANSPORT DEBRIS AND RUBBISH IN A MANNER THAT WILL PREVENT SPILLAGE ON PAVEMENTS, STREETS, OR ADJACENT AREAS. CLEAN UP SPILLAGE FROM PAVEMENTS, STREETS, AND ADJACENT AREAS, IN COMPLIANCE WITH ALL LOCAL AND STATE REQUIREMENTS.

8. THE PROJECT WILL REMAIN OCCUPIED AND OPERATIONAL THROUGHOUT CONSTRUCTION. COORDINATE AND PHASE ALL PORTIONS OF THE WORK TO MINIMIZE DISRUPTION TO THE OCCUPANTS AS MUCH AS POSSIBLE. PROVIDE ALL TEMPORARY PROTECTIONS AND CONNECTIONS AS REQUIRED TO MAINTAIN SAFE AND UNINTERRUPTED USE.

SYMBOLS

NOTE: ALL OF THE SYMBOLS AND ABBREVIATIONS APPEARING ON THIS SHEET MAY

NEW ELEVATION

COLUMN MARK

CENTERLINE

ROOM NUMBER

FIRE CABINET AND

EXTINGUISHER

REVISION NOTE

DOOR TAG

KEYNOTE

PHOTO TAG

(CLOUDED AREA

DENOTES REVISIONS

OCCUR IN THIS AREA)

EXISTING ELEVATION

DRAWING

NUMBER

SHEET

NUMBER

DRAWING

GENERAL NOTES

- HE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS. VERIFY ALL IONS THAT RELATE TO THE EXECUTION OF THE WORK.
- ARCHITECT OF ANY DISCREPANCIES OR OMISSIONS THAT AFFECT ETION OF THE WORK.
- DIVISION OF DRAWINGS AND SPECIFICATIONS INTO DISCIPLINES DO NOT LIMIT SCOPE OR INTENT OF ANY PART. WORK IS TO BE CONSTRUCTED AS A COMPLETE INTEGRATED AND UNIFIED WHOLE
- THE DOCUMENTS ARE COMPLIMENTARY: ITEMS SHOWN IN ONE OR MULTIPLE LOCATIONS SHALL BE REQUIREMENTS OF THE CONTRACT FOR CONSTRUCTION. SEEK CLARIFICATION FROM THE ARCHITECT PRIOR TO BIDDING IN THE EVENT OF INCONSISTENCIES WITHIN THE DOCUMENTS. WHERE INCONSISTENCIES ARE NOT CLARIFIED INCLUDE THE BETTER QUALITY OR GREATER QUANTITY OF WORK IN THE BID PROPOSAL. THE WORK INCLUDES LABOR AND MATERIALS NECESSARY FOR A COMPLETE PROJECT AS DESCRIBED OR INFERRED IN THE DOCUMENTS.
- THE CONTRACT DOCUMENTS INCLUDE THE AGREEMENT, DRAWINGS, PROJECT MANUAL. ADDENDA, AMENDMENTS, FIELD ORDERS, AND CHANGE ORDERS.
- DRAWING SCALES CHANGE WITH PRINTED SHEET SIZE. NOTE THE GRAPHIC SCALE IN THE LOWER LEFT CORNER OF EACH ARCHITECTURAL SHEET. NOT ALL DRAWINGS ARE GUARANTEED TO BE EXACTLY TO SCALE; CONSULT ARCHITECT SHOULD QUESTIONS ARISE
- DOCUMENTS DO NOT SHOW THE EXACT QUANTITIES OF MATERIALS.
- THE DRAWINGS REPRESENT GENERAL LOCATIONS OF IMPROVEMENTS. LOCATE ALL IMPROVEMENTS ON SITE PRIOR TO ALTERATION, ADDITIONS, OR TIE-INS.
- PROTECT THE SITE AND PROPERTY, MAINTAIN ALL AREAS FREE OF TRASH AND DEBRIS: REMOVE COLLECTED WASTE WEEKLY. VERIFY LOCATION OF DUMPSTER WITH ARCHITECT. AFTER PROJECT COMPLETION, RESTORE DUMPSTER AREA TO PRE-CONSTRUCTION CONDITION UNLESS NOTED OTHERWISE
- . STORE MATERIALS IN STAGING AREA, WHICH SHALL BE DETERMINED AND APPROVED BY THE OWNER AT THE PRE-BID MEETING. AFTER COMPLETION, RESTORE STAGING AREA TO ORIGINAL CONDITION UNLESS NOTED OTHERWISE. RESTORE PORTIONS OF THE SITE AFFECTED BY THE WORK TO ORIGINAL CONDITION.
- MINIMIZE TRAFFIC DISRUPTION IN THE VICINITY OF THE SITE. REGULAR WORKING HOURS SHALL BE FROM 7:00 AM TO 5:00 PM UNLESS NOTED OR APPROVED OTHERWISE.
- 2. PROVIDE TEMPORARY ENCLOSURES AND SITE FENCING WHERE INDICATED, OR WHERE NOT INDICATED, IN LOCATIONS APPROVED BY THE ARCHITECT AT THE PRE-CONSTRUCTION CONFERENCE. ALL STAGING AND MATERIAL STORAGE AREAS SHALL BE ENCLOSED WITH 6-FT CHAIN LINK TEMPORARY FENCING AND GATES. KEEP ALL BUILDING EXITS ACCESSIBLE.
- . OBTAIN AND PAY FOR PERMITS AND CONNECTION FEES; PROVIDE FINAL INSPECTION CERTIFICATES AND OCCUPANCY PERMITS UPON COMPLETION."
- NOTIFY THE ARCHITECT OF ANY DISCOVERED DISCREPANCIES BETWEEN THE WORK AND APPLICABLE CODES AND STANDARDS.
- . UNLESS NOTED OTHERWISE, ALL MATERIALS SHALL BE NEW. INSTALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, IN PROPER RELATION WITH EACH OTHER AND WITH ADJACENT CONSTRUCTION.
- . ANTICIPATE AND MAKE ARRANGEMENTS WITH LOCAL GOVERNMENT AGENCIES SHOULD ENTRY ONTO, OR OBSTRUCTION OF, A PUBLIC WAY BE NECESSARY IN CONNECTION WITH THE WORK.
- . PROVIDE SITE DEMOLITION/UTILITY RELOCATIONS AS NECESSARY FOR COMPLETION OF THE PROJECT. VERIFY EXISTING UTILITIES AND EXACT LOCATIONS PRIOR TO PERFORMING WORK. NOTIFY THE ARCHITECT REGARDING EXISTING SITE CONDITIONS IN CONFLICT WITH THE DOCUMENTS.
- 18. EQUIPMENT AND DEVICE LOCATIONS ARE SHOWN ON THE DRAWINGS. CONFIRM DISCREPANCIES AND QUESTIONS WITH THE ARCHITECT.
- 19. EXERCISE CARE TO AVOID DAMAGE TO EXISTING WORK, ADJACENT SURFACES, AND AD IOINING AREAS INCLUDING AREAS TO REMAIN AS A PART OF THE COMPLETED CONSTRUCTION, REPAIR OR RESTORE AREAS OR SURFACES DAMAGED OR REMOVED ON ACCOUNT OF CONSTRUCTION WORK
- 20. PROVIDE AND INSTALL ALL ITEMS UNLESS NOTED OTHERWISE.
- 1. WORK INDICATED AS "NOT IN CONTRACT", "N.I.C", OR "BY OTHERS" SHALL BE PERFORMED BY OWNER'S SEPARATE CONTRACTORS. ASSIST IN COORDINATING THE WORK BY SEPARATE CONTRACTORS WITH THE WORK OF THIS CONTRACT.
- 2. ALL PLAN DIMENSIONS ARE TO FACE OF STUD, FACE OF MASONRY, FACE OF SLAB, OR CENTERLINE OF COLUMN.
- 23. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL LOCATIONS OF CONSTRUCTION.
- I. COORDINATE ROOFTOP EQUIPMENT AND PENETRATIONS WITH EXISTING CONDITIONS. FLASH ALL PENETRATIONS IN ACCORDANCE WITH THE ROOFING MANUFACTURER'S RECOMMENDATIONS. PROVIDE POSITIVE DRAINAGE ON HIGH-SIDE OF PENETRATIONS.
- . PROVIDE MIN. 3-FT. WIDE WALKBOARDS AROUND ALL ROOF-MOUNTED EQUIPMENT NEEDING REGULAR MAINTENANCE. PROVIDE MIN. 3-FT. WIDE WALKBOARD PATHWAYS FROM ROOF ACCESS POINT TO ALL SUCH ROOF-MOUNTED EQUIPMENT.
- 26. ALL WORK IS TO HAVE A ONE YEAR WARRANTY, MINIMUM
- .. NAMING A CERTAIN BRAND OR MANUFACTURER IS TO DESIGNATE THE GENERAL STYLE, TYPE, CHARACTER, AND QUALITY STANDARD OF THE PRODUCT DESIRED. SUBSTITUTION REQUESTS MUST BE SUBMITTED PRIOR TO BIDDING.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SAFETY APPARATUS, MEANS. METHODS, AND TECHNIQUES, AS REQUIRED TO ENSURE THE HEALTH, SAFETY, AND WELFARE OF ALL PERSONNEL INCLUDING, BUT NOT LIMITED TO: STAFF, FACULTY, STUDENTS, AND THE GENERAL PUBLIC, IN AND AROUND THE SITE.
- 29. INTERIOR WALLS AND CEILING SHALL HAVE A FLAME SPREAD OF 0-200 AND A SMOKE DEVELOPMENT RATING OF 0-450.
- 30. PENETRATIONS THROUGH RATED CONSTRUCTION SHALL BE SEALED BY APPROVED FIRESTOP SYSTEMS OR DEVICES TESTED IN ACCORDANCE WITH ASTM E-814 OR ANSI/UL 1479
- . CONCEALED INSULATION SHALL HAVE A FLAME SPREAD OF 0-25 AND A SMOKE DEVELOPMENT FACTOR OF 0-450.
- 32. DEMOLITION SHALL BE PERFORMED IN AN ORDERLY SEQUENCE, SCHEDULED BY TH CONTRACTOR AND COORDINATED WITH THE OWNER. SHOULD HAZARDOUS
- MATERIALS, OR MATERIALS SUSPECTED TO BE HAZARDOUS BE ENCOUNTERED, TH CONTRACTOR SHALL NOT PROCEED AND IMMEDIATELY CALL TO THE ATTENTION OF THE OWNER. ALL HAZARDOUS WASTE SHALL BE CONTAINED, ABATED, REMOVED, A DISPOSED OF IN ACCORDANCE WITH FEDERAL REGULATIONS, LA.D.E.Q. AND THE OWNER'S ASBESTOS MANAGEMENT PLAN.
- 3. SHALL ROOF MODIFICATIONS BE REQUIRED, THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ACCESSORIES AS REQUIRED BY ROOFING MANUFACTURER TO PROVID A COMPLETE ROOF CERTIFIABLE BY THE MANUFACTURER.

NOT NECESSARILY BE USED ON THIS PROJECT. FOR ADDITIONS TO AND/OR DEVIATIONS FROM THESE STANDARDS, REFER TO THE APPLICABLE DISCIPLINE'S WORK THROUGHOUT THE SET OF DRAWINGS. 0.000 (A)1 <u>100' - 0"</u> 101a ല

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	NUMBER
LEVEL LINE, CONTROL	· · · · · · · · · · · · · ·
POINT OR DATUM	SHEET NUMBER
BREAK LINE	DRAWING
	NUMBER

SHEET NUMBER DRAWING NUMBER SHEET NUMBER

DRAWING NUMBER SHEET

NUMBER

INTERIOR ELEVATION

BUILDING SECTION

DETAIL

SECTION

ELEVATION

INTERIOR

ELEVATION

-A501

A401

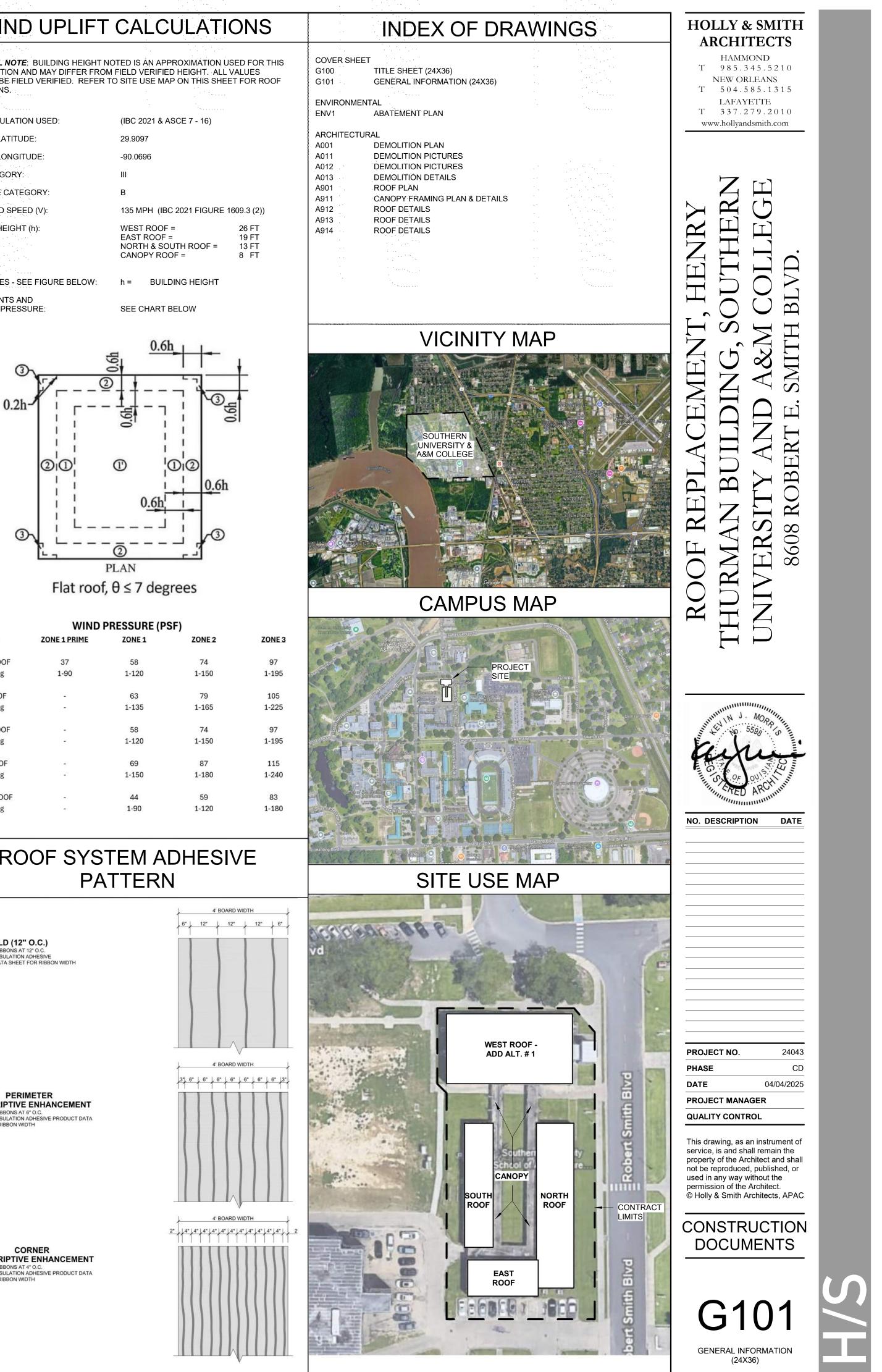
1" The graphic scale at the bottom left corner of this drawing must measure 1"x1" otherwise all listed scales are null and void.

ABBREVIATIONS

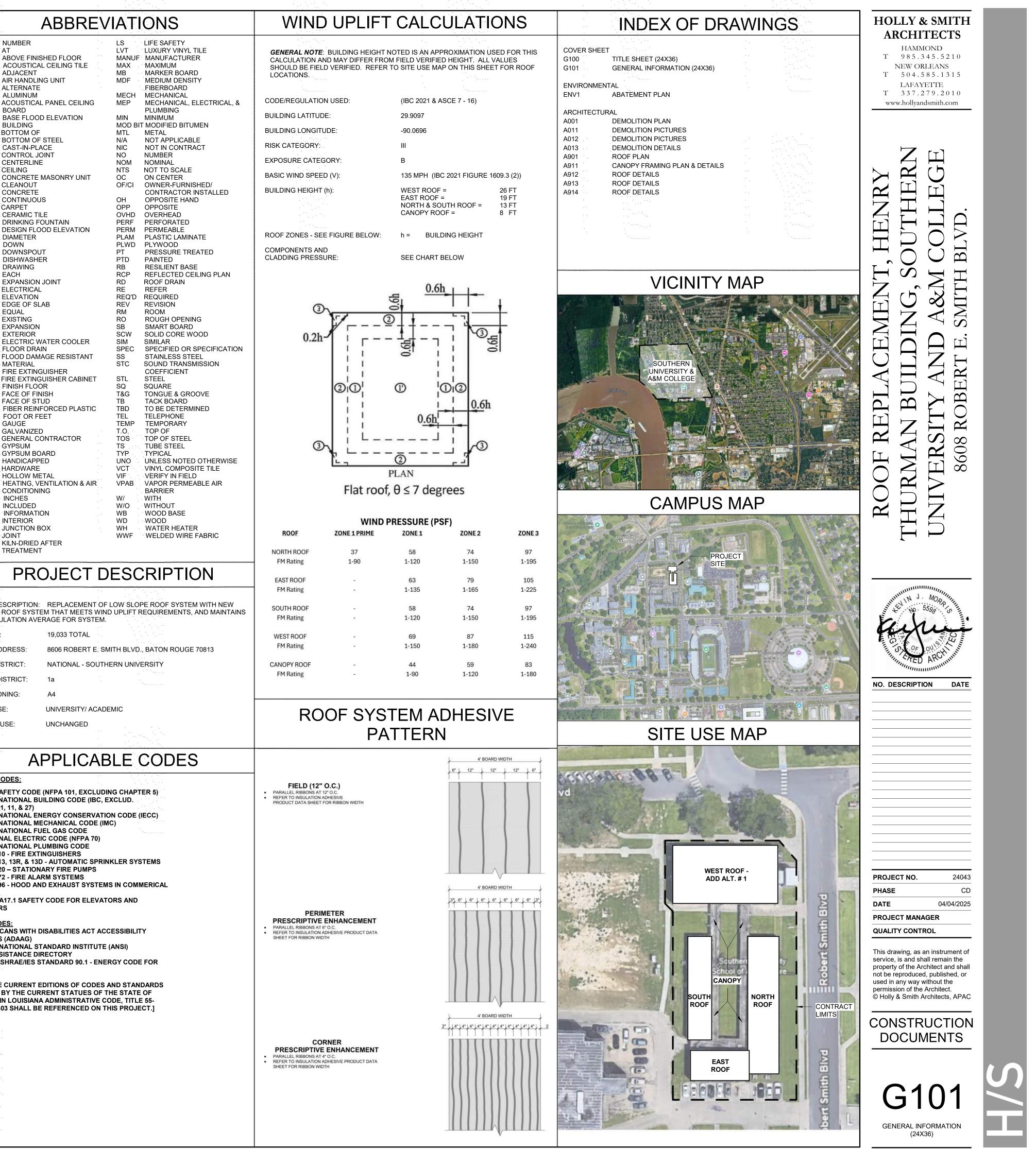
_		····
	#	NUMBER
	₽	
	AFF	NUMBER AT ABOVE FINISHED FLOOR
	ACT	ACOUSTICAL CEILING TILE
	AHU	ADJACENT AIR HANDLING UNIT
	ALT	ALTERNATE
	ALUM	ALUMINUM
		ACOUSTICAL PANEL CEILING
	BD	BOARD
	BFF	BOARD BASE FLOOD ELEVATION
	BLDG	BUILDING
		BOTTOM OF
	BOS	BOTTOM OF STEEL
	CIP	CAST-IN-PLACE CONTROL JOINT CENTERLINE
	CJ	CONTROL JOINT
	CL	CENTERLINE
	CLG	CENTERLINE CEILING
	CMU	CONCRETE MASONRY UNIT
	CO	CLEANOUT
	CONC	CONCRETE
	CONT	CLEANOUT CONCRETE CONTINUOUS
	CPT	CARPET
	СТ	CERAMIC TILE
	DF	DRINKING FOUNTAIN
	DFE	DESIGN FLOOD ELEVATION
	DIA	DRINKING FOUNTAIN DESIGN FLOOD ELEVATION DIAMETER
	DN	DOWN
		DOWNSPOUT
	DW	DISHWASHER
	DWG	DRAWING EACH
	EA	EACH EXPANSION JOINT
	EJ	
		ELECTRICAL
	ELEV	
	E03	EDGE OF SLAB
	FXIST	EQUAL
	EXP	EXPANSION
	EXT	EXTERIOR
	EWC	ELECTRIC WATER COOLER
	FD	FLOOR DRAIN
	FDRM	FLOOD DAMAGE RESISTANT
		MATERIAL
	FE .	FIRE EXTINGUISHER
		FIRE EXTINGUISHER CABINET
		FINISH FLOOR
	FOF	FACE OF FINISH FACE OF STUD
		FIBER REINFORCED PLASTIC
		FOOT OR FEET
		GAUGE
		GALVANIZED
	GC	GENERAL CONTRACTOR
	GYP	GYPSUM
	GYP BD	GYPSUM BOARD
	HC	HANDICAPPED
	HDWR	HARDWARE
	HM	HOLLOW METAL
	HVAC	HEATING, VENTILATION & AIR
		CONDITIONING
		INCHES INCLUDED
		INCLUDED
		INTERIOR
		JUNCTION BOX
	JNT	
		KILN-DRIED AFTER

-	LIFE SAFETY LUXURY VINYL TILE
> .'	
√ Τ . '	LUXURY VINYL TILE
	MANUFACTURER
AX ·	MAXIMUM
B	MARKER BOARD
	MEDIUM DENSITY
· · .	FIBERBOARD
	MECHANICAL
EP	MECHANICAL, ELECTRICAL, &
	PLUMBING
IN	MINIMUM
OD BIT	MODIFIED BITUMEN
TL	METAL
/A	NOT APPLICABLE
IC	NOT IN CONTRACT
-	
0	NUMBER
ОМ	NOMINAL
TS	NOT TO SCALE
С	ON CENTER
E/CI	OWNER-FURNISHED/
1701	
	CONTRACTOR INSTALLED
Н	OPPOSITE HAND
PP	
	OPPOSITE
VHD	OVERHEAD
ERF	PERFORATED
	-
ERM	PERMEABLE
LAM	PLASTIC LAMINATE
LWD	PLYWOOD
Т	PRESSURE TREATED
TD	PAINTED
В	RESILIENT BASE
CP	REFLECTED CEILING PLAN
D	ROOF DRAIN
E	REFER
EQ'D	REQUIRED
EV	REVISION
Μ	ROOM
0	ROUGH OPENING
-	
В	SMART BOARD
CW	SOLID CORE WOOD
IM	SIMILAR
PEC	SPECIFIED OR SPECIFICATION
S	STAINLESS STEEL
ТС	SOUND TRANSMISSION
	COEFFICIENT
TL	STEEL
-	
Q	SQUARE
&G	TONGUE & GROOVE
В	TACK BOARD
BD	TO BE DETERMINED
EL	TELEPHONE
EMP	TEMPORARY
0.	TOP OF
	TOP OF STEEL
03	TOP OF STEEL
S	TUBE STEEL
YP ·	TYPICAL
NО	UNLESS NOTED OTHERWISE
СТ	VINYL COMPOSITE TILE
IF ·	TYPICAL UNLESS NOTED OTHERWISE VINYL COMPOSITE TILE VERIFY IN FIELD VAPOR PERMEABLE AIR BARRIER
PAB	VAPOR PERMEABLE AIR
	BARRIER
· · ·	
	WITH
//O . ·	WITHOUT
/B	WOOD BASE
	WOOD
	WATER HEATER
WF .	WELDED WIRE FABRIC

ND MAY DIFFER FROM FIELD VERIFIED HEIGHT. ALL VA D VERIFIED. REFER TO SITE USE MAP ON THIS SHEET		
ON USED:	(IBC 20	21 & ASCE 7 - 16)
DE:	29.9097	7
UDE:	-90.069	6
	111	
GORY:	В	
ED (V):	135 MF	PH (IBC 2021 FIGURE 160
`(h):	EAST F	ROOF = 2 ROOF = 1 & SOUTH ROOF = 2 PY ROOF = 2
E FIGURE BELOW:	h =	BUILDING HEIGHT
ID SURE:	SEE CH	HART BELOW
		0.01



	WIND	PRESSURE (PS	SF)
ROOF	ZONE 1 PRIME	ZONE 1	ZONE 2
NORTH ROOF	37	58	74
FM Rating	1-90	1-120	1-150
EAST ROOF	-	63	79
FM Rating	5-	1-135	1-165
SOUTH ROOF	Ť.	58	74
FM Rating	<u>.</u>	1-120	1-150
WEST ROOF	÷	69	87
FM Rating	-	1-150	1-180
CANOPY ROOF	<u> 1</u> -	44	59
FM Rating	.	1-90	1-120



PROJECT DESCRIPTION

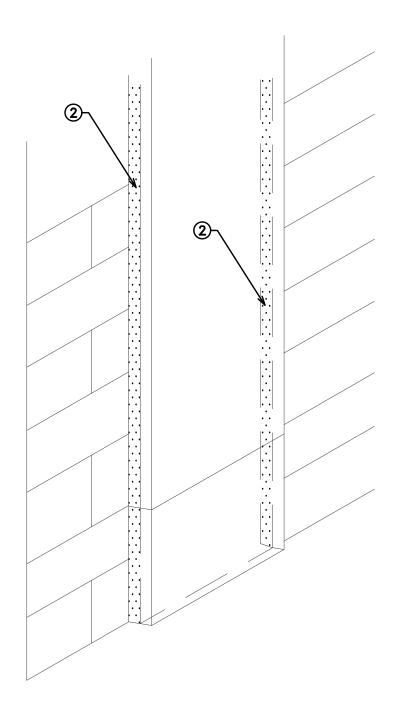
	EM THAT MEETS WIND UPLIFT	OPE ROOF SYSTEM WITH NEW FREQUIREMENTS, AND MAINTAINS
ROOF AREA:	19,033 TOTAL	
PROJECT ADDRESS:	8606 ROBERT E. SMITH BLV	/D., BATON ROUGE 70813
HISTORIC DISTRICT:	NATIONAL - SOUTHERN UN	IVERSITY
PLANNING DISTRICT:	1a	
EXISTING ZONING:	A4	
EXISTING USE:	UNIVERSITY/ ACADEMIC	

UNCHANGED

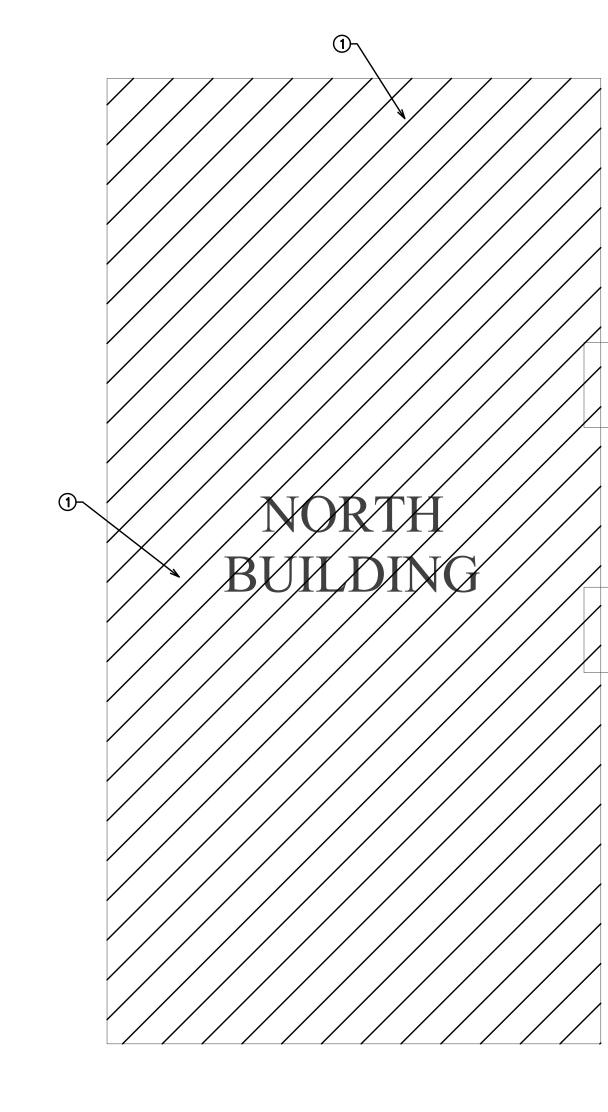
PROPOSED USE:

APPLICABLE CODES

 	BUILDING CODES:
	2015 LIFE SAFETY CODE (NFPA 101, EXCLUDING CHAPTER 5)
	2021 INTERNATIONAL BUILDING CODE (IBC, EXCLUD.
	CHAPTERS 1, 11, & 27)
	2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
	2021 INTERNATIONAL MECHANICAL CODE (IMC)
ר	2021 INTERNATIONAL FUEL GAS CODE
, ,	2021 NATIONAL ELECTRIC CODE (NFPA 70)
	2015 INTERNATIONAL PLUMBING CODE
	2019 NFPA 10 - FIRE EXTINGUISHERS
ΚE	2019 NFPA 13, 13R, & 13D - AUTOMATIC SPRINKLER SYSTEMS
	2019 NFPA 20 – STATIONARY FIRE PUMPS
	2019 NFPA 72 - FIRE ALARM SYSTEMS
D.	2019 NFPA 96 - HOOD AND EXHAUST SYSTEMS IN COMMERICAL
	KITCHENS
	2019 ASME A17.1 SAFETY CODE FOR ELEVATORS AND
	ESCALATORS
. •	OTHER CODES:
· .	2010 AMERICANS WITH DISABILITIES ACT ACCESSIBILITY
HE	GUIDELINES (ADAAG)
	AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)
łΕ	UL FIRE RESISTANCE DIRECTORY
F	2007 ANSI/ASHRAE/IES STANDARD 90.1 - ENERGY CODE FOR
ND	BUILDINGS
	[NOTE: THE CURRENT EDITIONS OF CODES AND STANDARDS
	ENFORCED BY THE CURRENT STATUES OF THE STATE OF
	LOUISIANA IN LOUISIANA ADMINISTRATIVE CODE, TITLE 55-
DE	V.103 AND 303 SHALL BE REFERENCED ON THIS PROJECT.]



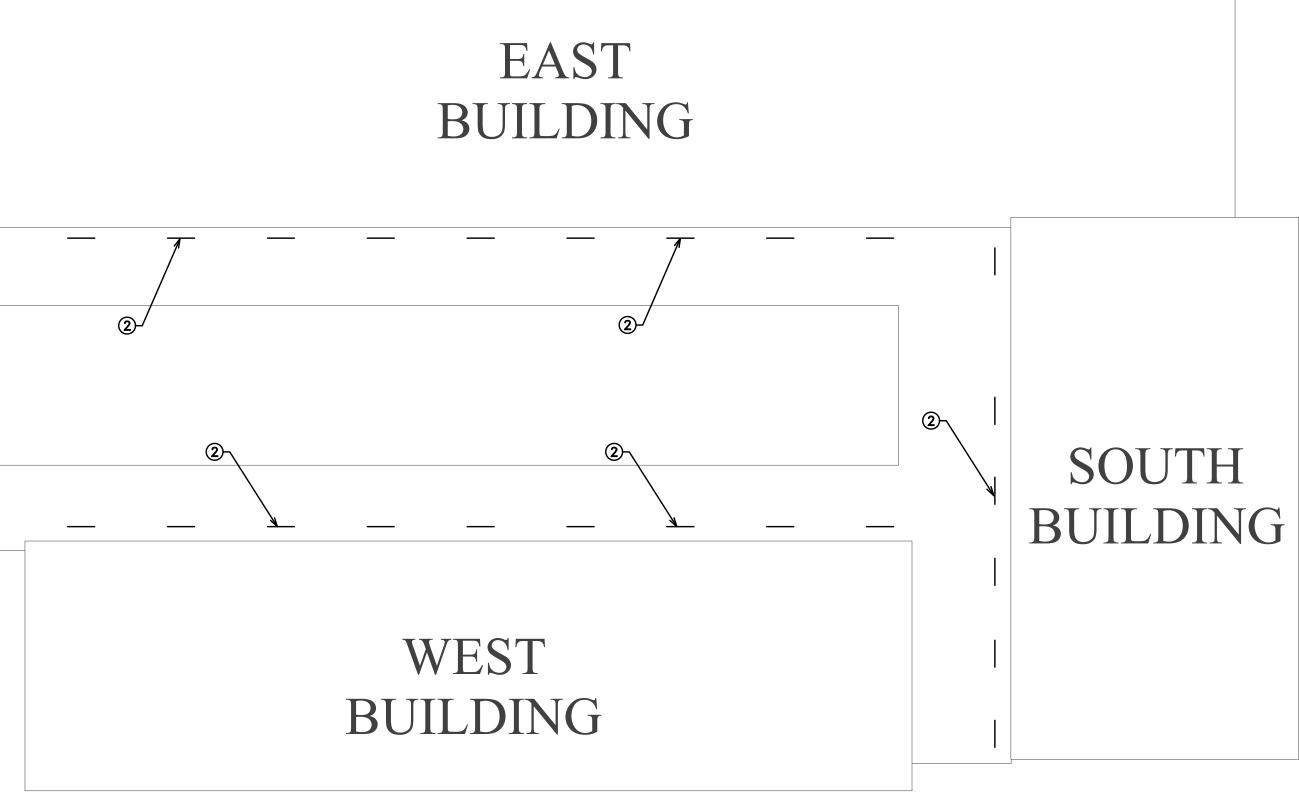
$2 \frac{\text{COLUMN SEALANT - ABATEMENT}}{\frac{3}{32"} = 1'-0"}$



ROOF PLAN - ABATEMENT

3/32" = 1'-0"

50 Ś က \geq



ABATEMENT NOTES:

- 1. ABATE THE SELECT ASBESTOS-CONTAINING SEALANT SHOWN WITH HATCHING TYPE. THE SEALANT IS POSITIVE FOR ASBESTOS.
- 2. ABATE THE SELECTED ASBESTOS-CONTAINING ROOFING SHOWN WITH HATCHING TYPE. THE ROOFING IS POSITIVE FOR ASBESTOS.
- 3. CONTRACTOR SHALL MAKE ALL NOTIFICATIONS TO LaDEQ AS PER CHAPTER 27 AND CHAPTER 51 OF STATE REGULATIONS.
- 4. CONTRACTOR SHALL ERECT ALL NECESSARY CRITICAL BARRIERS FOR WORK AREA.
- 5. THE AIR MONITORING OF THE PROJECT SHALL BE PROVIDED THROUGH OWNER.
- 6. PRIOR TO START OF WORK, A COPY OF EMERGENCY CONTACTS, ON SITE SUPERVISOR, AND WORK SCHEDULE SHALL BE PROVIDED TO LEE RITTER AT RITTER CONSULTING ENGINEERS.
- 7. A COPY OF THE ACC-2 NOTIFICATION SHALL BE ON SITE AT THE START OF WORK. IF AN EMERGENCY WAS CALLED IN, A RECORD OF THE CALL MUST BE EMAILED TO THE DESIGNER WITH DAY/TIME OF CALL.

NOTE: PATTERN & LINETYPE INDICATES POSITIVE FOR ASBESTOS.



ASPHALT ROOFING POSITIVE FOR ASBESTOS. APPROXIMATELY: 6160 SF

2

WALL SEALANT POSITIVE FOR ASBESTOS. APPROXIMATELY: 360 LF

ADVF INFORMATION

INSPECTOR NAME: STEPHAN COMB INSPECTOR ACCREDITATION NO.: JI239425 DATE OF INSPECTION: JANUARY 9, 2025

CERTIFIED LAB NAME: CA LABS, LLC LAB ACCREDITATION NO.: 03069 ANALYSIS DATE: JANUARY 13, 2025

DESIGNER NAME: LEE RITTER DESIGNER ACCREDITATION NO.: JD133462



2014 WEST PINHOOK SUITE 200 LAFAYETTE, LOUISIANA 70508 (337) 984-8498 FAX (337) 984-8576

RCE PROJECT NO. 255059

USE AND INTERPRETATION OF THIS DRAWING 1. GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, ARTICLE 1 AIA DOCUMENT A201, ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THIS DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENT, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANYONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS. 2. BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER REPRESENTS THAT HE LAS REVIEWED AND APPROVED THE DRAWINGS, AND THAT THE CONSTRUCTION DOCUMENT PHASE OF THE PROJECT IS COMPLETE. THE CONTRACTOR REPRESENTS THAT HE HAS VISITED THE SITE, FAMILLARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS.

3. THE CONTRACT SUM AND CONTRACT TIME MAY BE CHANGED ONLY BY CHANGE ORDER TO THE CONTRACTOR SIGNED BY THE OWNER AND THE ARCHITECT. ANY WORK PERFORMED IN VARIANCE WITH THE CONTRACT DOCUMENTS AND NOT COVERED BY THE ARCHITECT'S WRITTEN ORDER FOR A MINOR CHANGE IN THE WORK OR A CHANGE ORDER, WILL NOT BE ACCEPTED. 4. AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS AND COPIES THEREOF FURNISHED BY THE ARCHITECT ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED

ARCHITECT ARE HIS PROPERTY. THEY ARE TO BE USED UNLY FOR THIS PROJECT AND ARE NOT TO BE U ON ANY OTHER PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ARCHITECT. ANY SUBMISSION OR DISTRIBUTION WITHOUT THE EXPRESS WRITTEN CONSERV OF THE ARCHITECT MAY BE CONSTRUED AS DEROGATION OF THE ARCHITECT'S COPYRIGHT OR OTHER RESERVED RIGHTS.

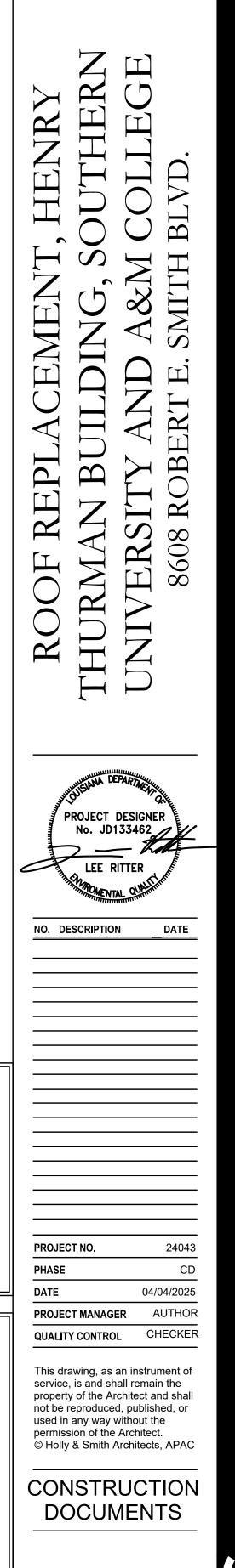
REUSE OF THIS DRAWING IN ANY MANNER IS STRICTLY PROHIBITED WITHOUT THE WRITTEN APPROVAL OF RITTER CONSULTING ENGINEERS, LTD.

HOLLY & SMITH ARCHITECTS

- HAMMOND T 985.345.5210
- NEW ORLEANS T 504.585.1315

LAFAYETTE T 337.279.2010

www.hollyandsmith.com





DEMOLITION GENERAL NOTES

- WEATHERPROOF DAILY: CONTRACTOR SHALL SEAL THE ROOF ON THE SAME DAY AS ANY DEMO/ INSTALLATION. IN ADDITION, THE CONTRACTOR SHOULD NOT REMOVE MORE ROOF THAN CAN BE REPLACED IN THE SAME DAY, KEEPING WATCH ON HOURLY LOCAL RAIN FORECASTS.
- HAZARDOUS MATERIAL: COORDINATE ALL DEMOLITION WORK WITH ABATEMENT SCOPE IDENTIFIED IN THESE DRAWINGS.
- **<u>COORDINATION OF WORK</u>**: COORDINATE ALL WORK WITH THE DESIGNER AND USER AGENCY.
- STAGING & RESTRICTED AREAS: COORDINATE RESTRICTED AND/OR STAGING AREAS, AS WELL AS TEMPORARY UTILITY SHUTDOWN WITH THE USER AGENCY.
- ABANDONED ELEMENTS: VERIFY ALL ABANDONED WIRING AND CONDUIT AND REMOVE. REMOVE ALL TRASH, DEBRIS AND ELEMENTS THAT ARE NO LONGER ATTACHED TO ANYTHING OR IN SERVICE ON THE ROOF.
- QUANTITIES, LOCATIONS, SIZES AND ORIENTATIONS OF ALL ROOF MOUNTED ITEMS ARE APPROXIMATE. FIELD VERIFY ALL CONDITIONS THROUGHOUT.
- UNLESS NOTED OTHERWISE, DASHED LINES INDICATE WORK TO BE DEMOLISHED AND REMOVED.
- DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW EVERY ITEM TO BE DEMOLISHED; WHETHER LISTED OR NOT, REMOVE ALL ROOF COVERING DOWN TO TOP OF CONCRETE ROOF DECK AT MAIN ROOF AREAS AND DOWN TO TOP OF STRUCTURAL STEEL ROOF FRAME AT CANOPY UNLESS NOTED OTHERWISE.
- 9. PROTECT ALL WORK THAT IS SCHEDULED TO REMAIN FROM DAMAGE.
- 10. PRIOR TO EXECUTING WORK, NOTIFY THE ARCHITECT IF CONDITIONS DEVIATE FROM WHAT IS SHOWN.
- 11. VERIFY THAT ALL ROOF DRAIN LEADERS ARE CLEAR OF DEBRIS AND UNOBSTRUCTED AND CLEAN OUT AS NEEDED.
- 12. REMOVE ANY WOOD BLOCK NAILERS, LIGHTWEIGHT CONCRETE OR METAL DECK THAT HAS BECOME LOOSE, DETERIORATED AND/OR IS DAMAGED DURING DEMOLITION. REFER TO UNIT PRICE SPECIFICATION SECTION FOR PRICING OF THIS WORK.
- 13. COORDINATE ANY DEMOLITION OF ELECTRICAL WIRING AND/OR CONDUIT WITH OWNER'S REPRESENTATIVE AND HANDLE PER NEC REQUIREMENTS.
- 4. DEMOLISH ALL PITCH POCKET ASSEMBLIES AND PIPE/CONDUIT SUPPORTS THROUGHOUT. COORDINATE TEMPORARY SUPPORT FOR PIPE/CONDUIT THAT IS EXISTING TO REMAIN DURING RENOVATION UNTIL PERMANENT SUPPORT CAN BE INSTALLED. SALVAGE ROOF PENETRATIONS UNLESS NOTED OTHERWISE AND PREPARE FOR FLASHING INTO NEW ROOF SYSTEM.
- 15. COORDINATE DELIVERY OF ALL DEMOLISHED COPPER FLASHING TO "EMR RECYCLING" IN BATON ROUGE (225-355-4453) FOR OWNER. OWNER WILL COLLECT THE SALVAGED VALUE OF THE MATERIAL.
- 16. SCOPE ROOF DRAIN LEADERS AND VERIFY THAT THEY'RE FREE OF ALL DEBRIS AND/OR OBSTRUCTIONS. MECHANICALLY REMOVE ALL DEBRIS AND OBSTRUCTIONS AS NEEDED.

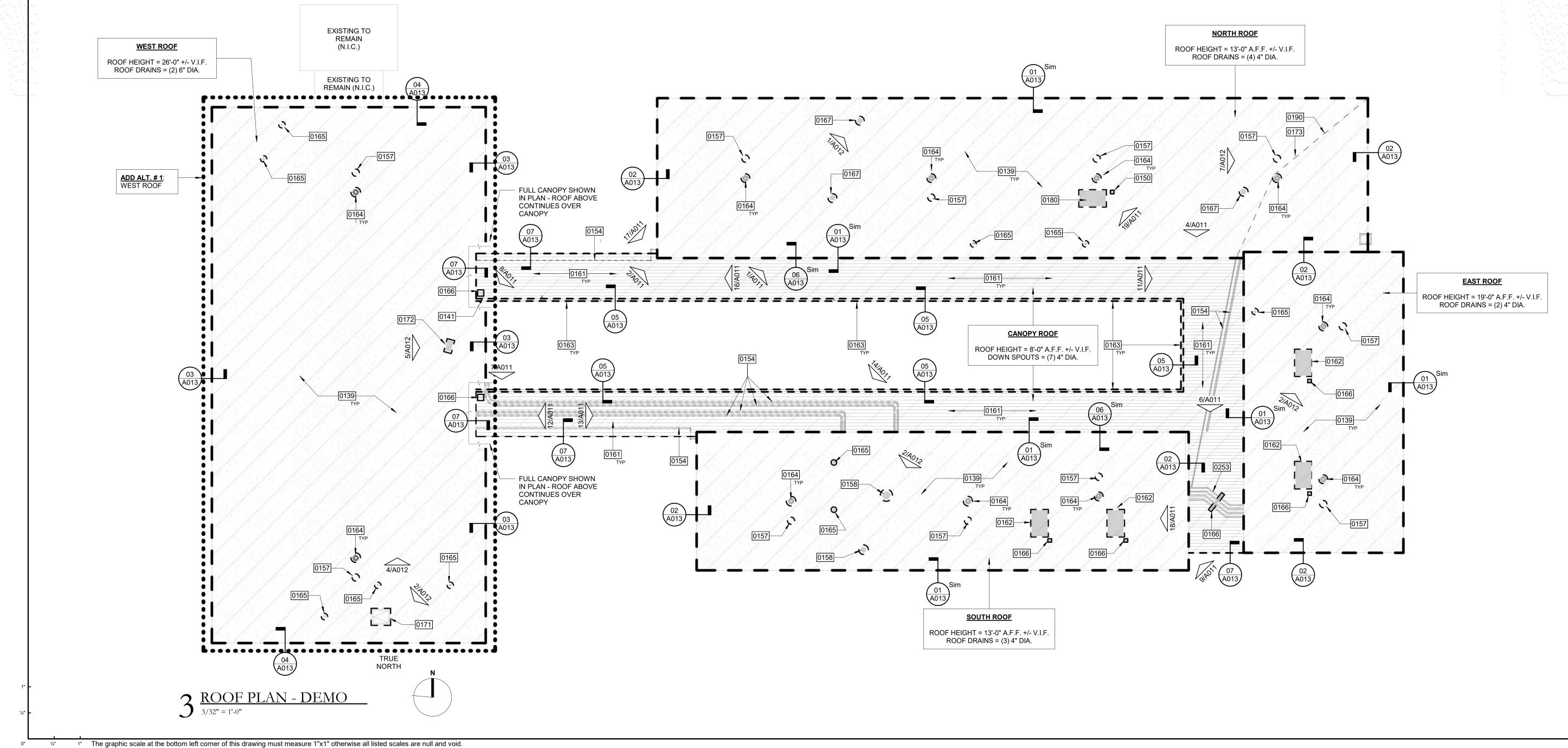
EXISTING CONSTRUCTION

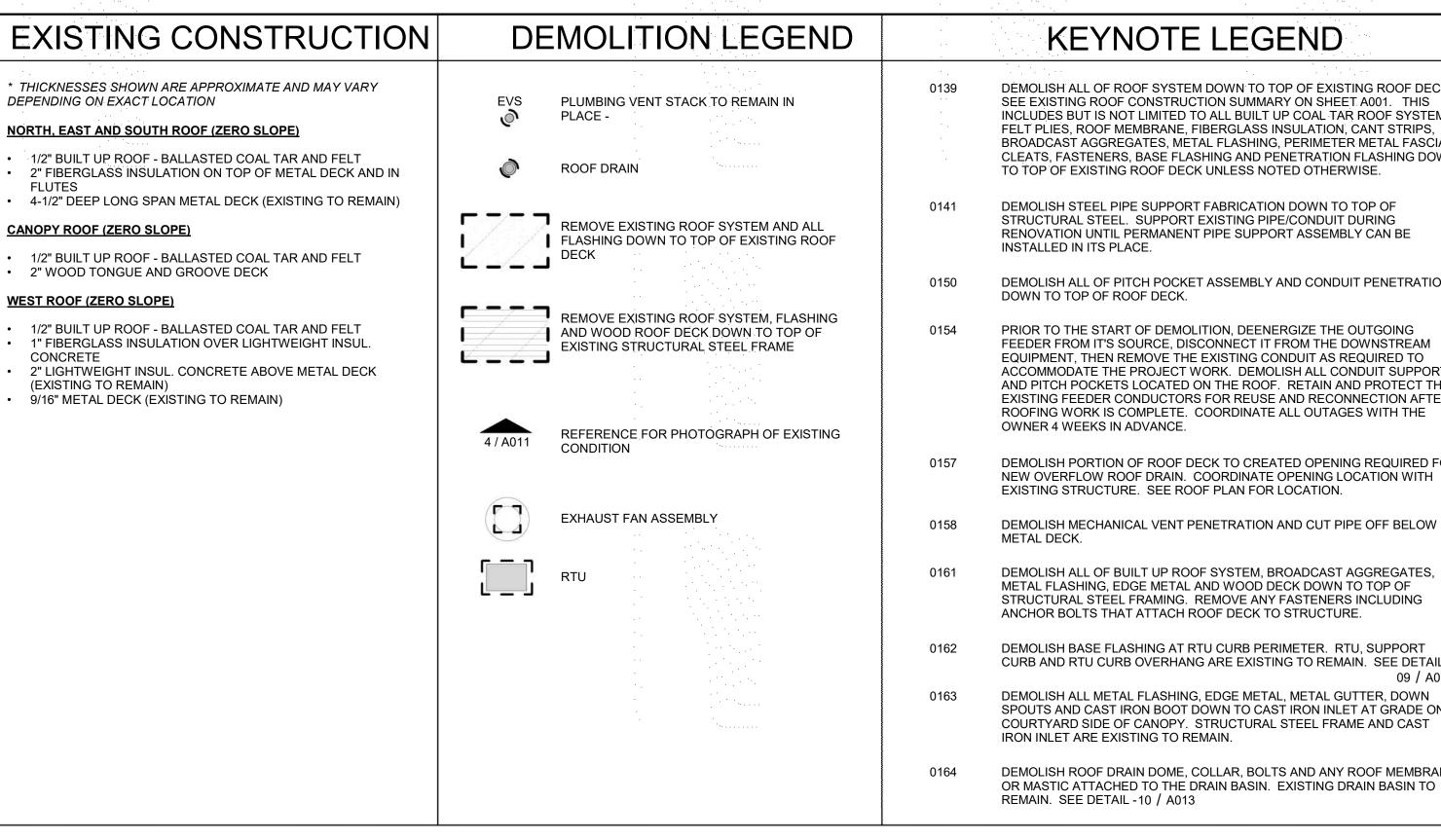
DEPENDING ON EXACT LOCATION

- NORTH, EAST AND SOUTH ROOF (ZERO SLOPE)
- 2" FIBERGLASS INSULATION ON TOP OF METAL DECK AND IN FLUTES
- 4-1/2" DEEP LONG SPAN METAL DECK (EXISTING TO REMAIN)
- CANOPY ROOF (ZERO SLOPE)
- 1/2" BUILT UP ROOF BALLASTED COAL TAR AND FELT • 2" WOOD TONGUE AND GROOVE DECK

WEST ROOF (ZERO SLOPE)

- 1/2" BUILT UP ROOF BALLASTED COAL TAR AND FELT • 1" FIBERGLASS INSULATION OVER LIGHTWEIGHT INSUL.
- CONCRETE • 2" LIGHTWEIGHT INSUL. CONCRETE ABOVE METAL DECK (EXISTING TO REMAIN)
- 9/16" METAL DECK (EXISTING TO REMAIN)

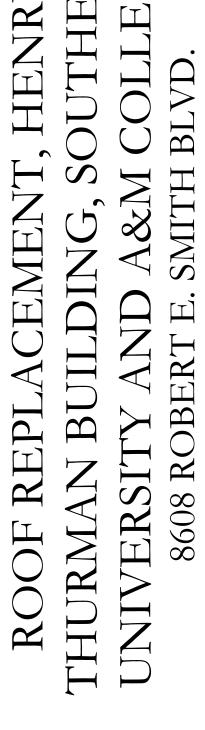


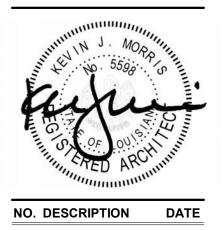


KEYNOTE LEGEND

OF DECK. THIS SYSTEM, RIPS, FASCIA,	0165	DEMOLISH ALL LEAD FLASHING, MASTIC AND ROOF MEMBRANE FROM PLUMBING VENT AND PREPARE VENT FOR TIE IN TO NEW ROOF. SEE DETAIL - 11 / A013
IG DOWN	0166	DEMOLISH PITCH POCKET ASSEMBLY. EXISTING STRUCTURAL, CONDUIT AND/OR PIPE PENETRATIONS ARE EXISTING TO REMAIN. REWORK AND PREPARE PENETRATIONS TO BE FLASHED INTO NEW ROOF SYSTEM INDIVIDUALLY.
E	0167	DEMOLISH JACK VENT ASSEMBLY AND ANY ASSOCIATED FLASHING OR FASTENERS DOWN TO TOP OF CONCRETE ROOF DECK.
RATION	0171	DEMOLISH INSULATED ROOF HATCH ASSEMBLY, CURB, BLOCKING, CANTS AND FLASHING DOWN TO TOP OF LIGHT WEIGHT CONCRETE DECK.
IG REAM TO	0172	DEMOLISH COPPER ENCLOSURE AND ANY MASTIC OR COAL TAR FOUND INSIDE DOWN TO TOP OF LIGHT WEIGHT INSULATED CONCRETE DECK.
JPPORT ECT THE N AFTER THE	0173	EXPOSED CONDUIT AND WIRING LINES EXTENDING ACROSS THE ROOF SURFACE ARE EXISTING TO REMAIN AND SHALL REMAIN FACTIONAL THROUGHOUT PROJECT UNLESS NOTED OTHERWISE. EXPOSED LINES AND LINES THAT ARE LESS THAN 12" CLEAR ABOVE ROOF SHALL BE REWORKED, RAISED AND/OR REPLACED SO THAT THEY ARE 12" CLEAR OR MORE ABOVE ROOF. COORDINATE WORK SO AS NOT TO DISTURB
RED FOR WITH		OPERATION.
ELOW	0180	DEMOLISH ROOF CURB AND PANEL COVER ASSEMBLY DOWN TO TOP OF ROOF DECK.
ATES, IF ING	0190	PRIOR TO THE START OF DEMOLITION, DISCONNECT THE OUTGOING DATA CABLE FROM THE DOWNSTREAM EQUIPMENT, THEN REMOVE THE EXISTING CONDUIT AS REQUIRED TO ACCOMMODATE THE PROJECT WORK. RETAIN AND PROTECT THE EXISTING CABLE FOR REUSE AND RECONNECTION AFTER ROOFING WORK IS COMPLETE. COORDINATE ALL OUTAGES WITH THE OWNER 4 WEEKS IN ADVANCE.
ORT DETAIL - 19 / A013 OWN ADE ON CAST	0253	EXISTING CONDUIT AND LINES EXTENDING ACROSS THE ROOF SURFACE ARE EXISTING TO REMAIN AND SHALL REMAIN FUNCTIONAL THROUGHOUT PROJECT UNLESS NOTED OTHERWISE. COORDINATE DEMOLITION WORK SO AS NOT TO DISTURB OPERATION. DEMOLISH SUPPORT PEDESTALS NOT ATTACHED TO THE ROOF STRUCTURE.
MBRANE		

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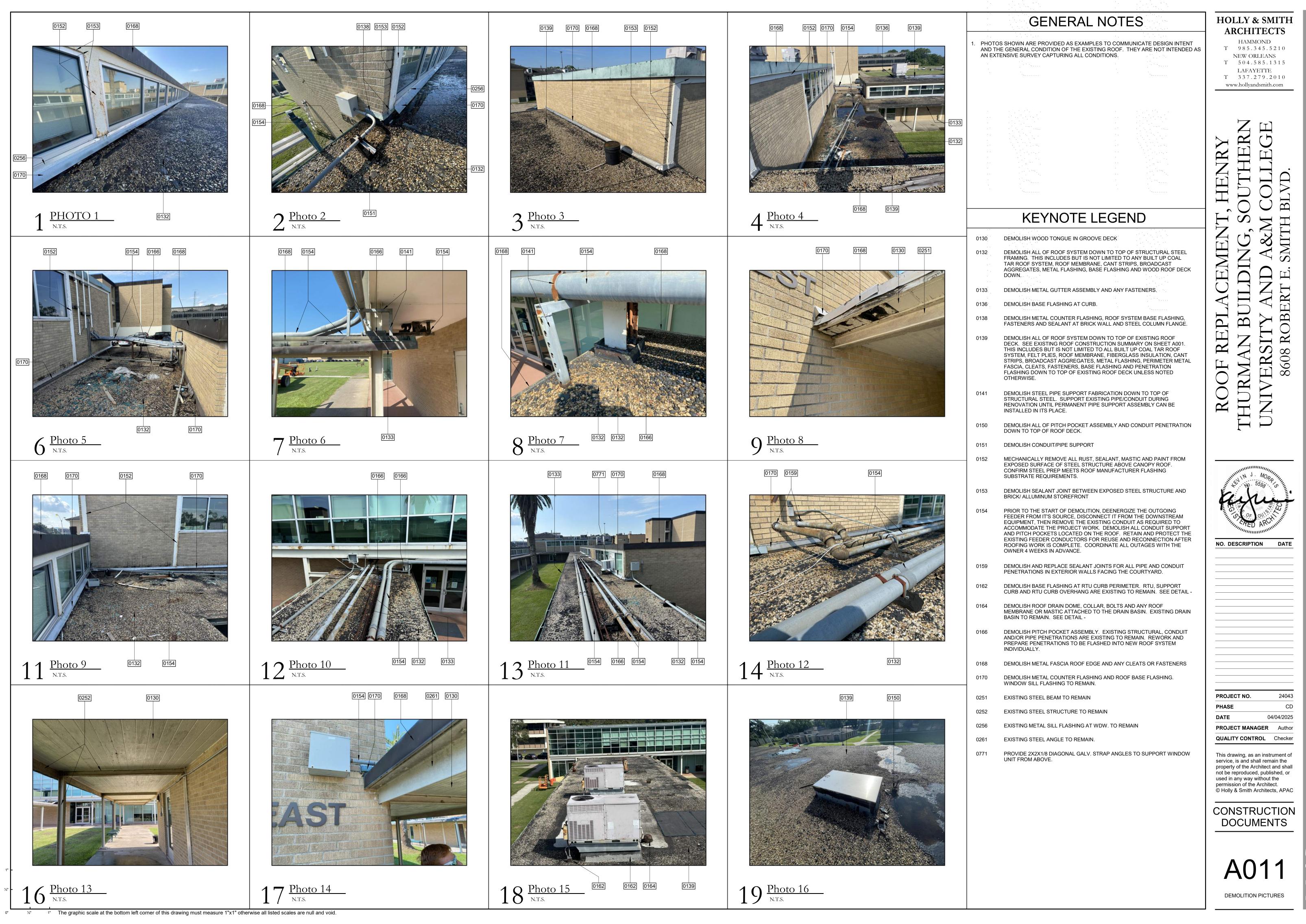
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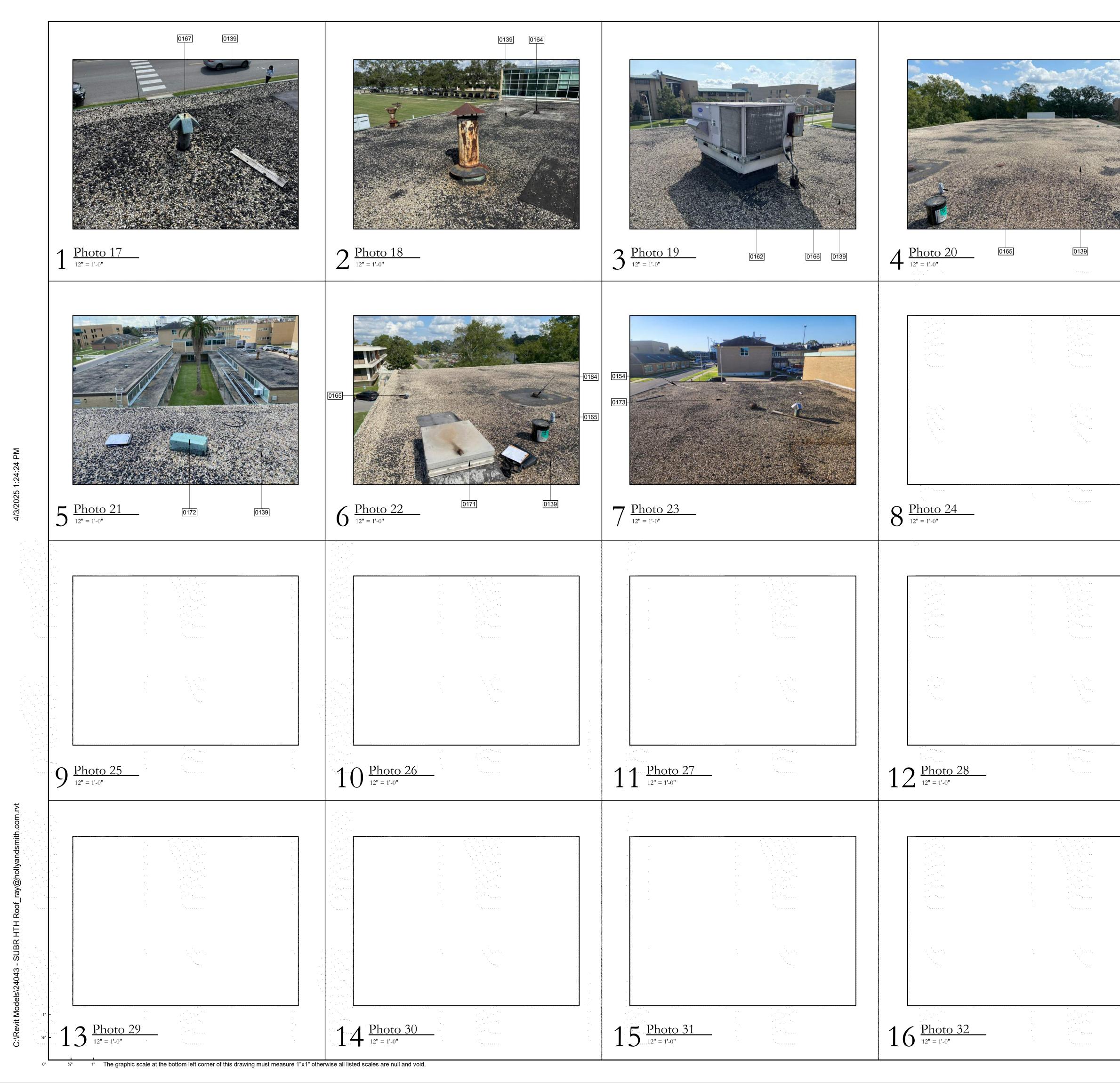


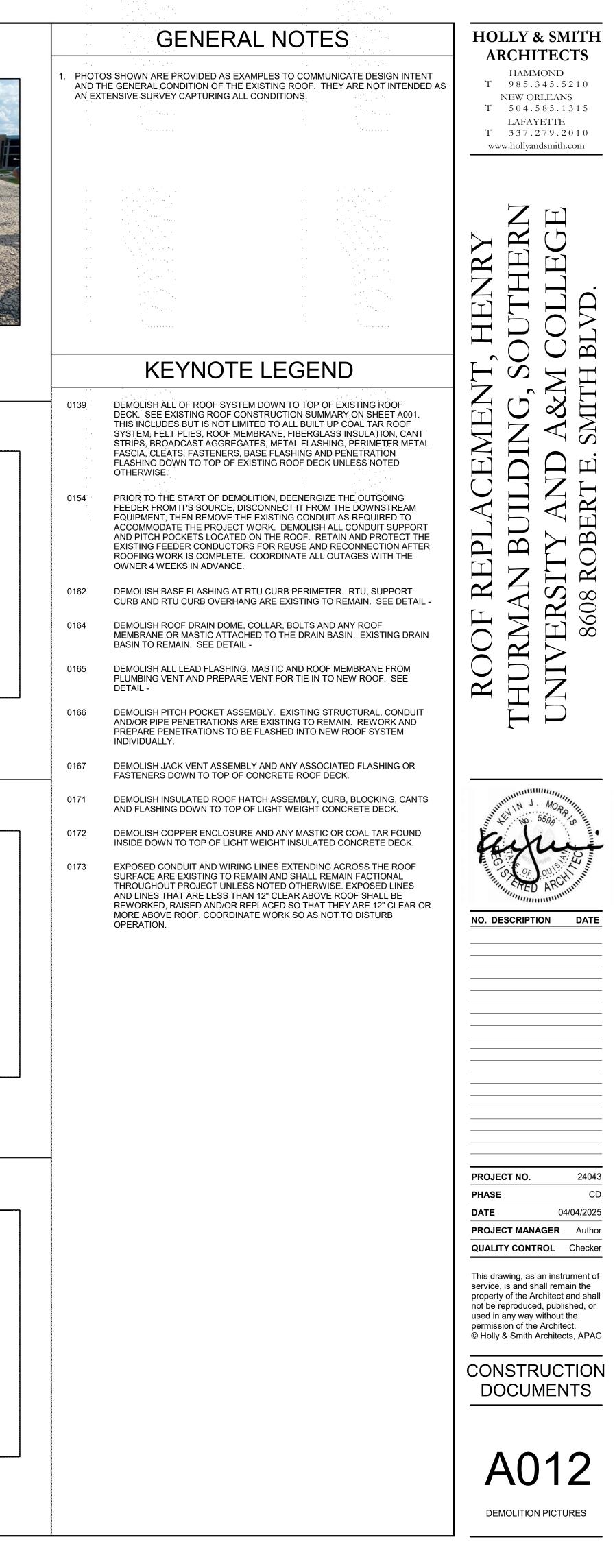


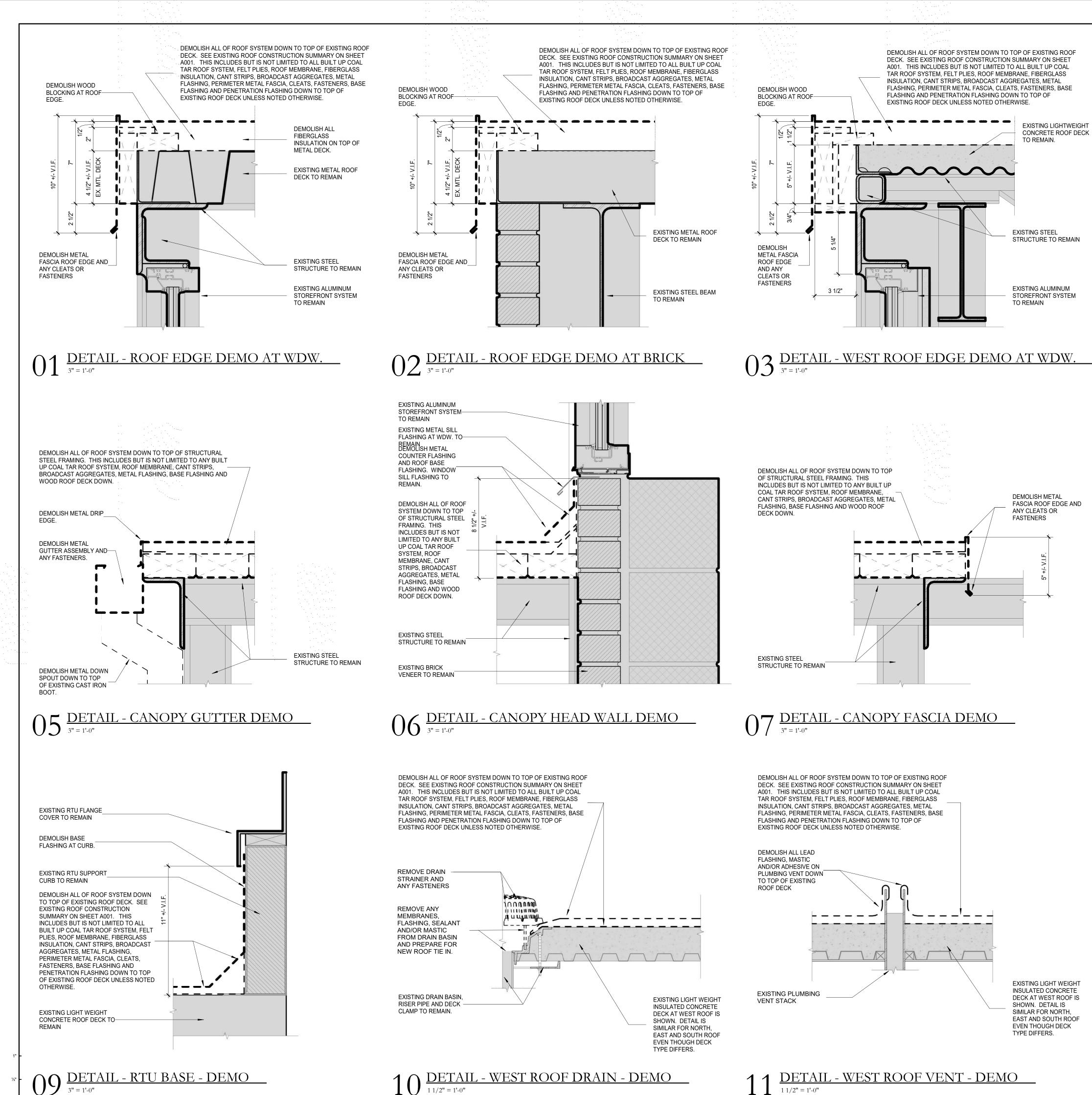




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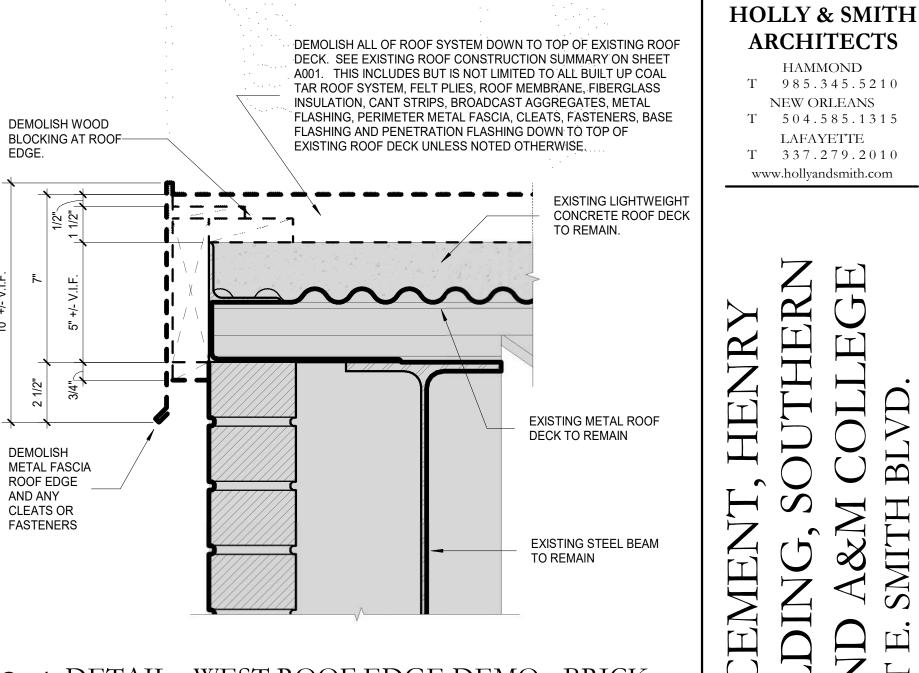




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EXISTING LIGHT WEIGHT EAST AND SOUTH ROOF



$04 \frac{\text{DETAIL} - \text{WEST ROOF EDGE DEMO - BRICK}}{3'' = 1'-0''}$



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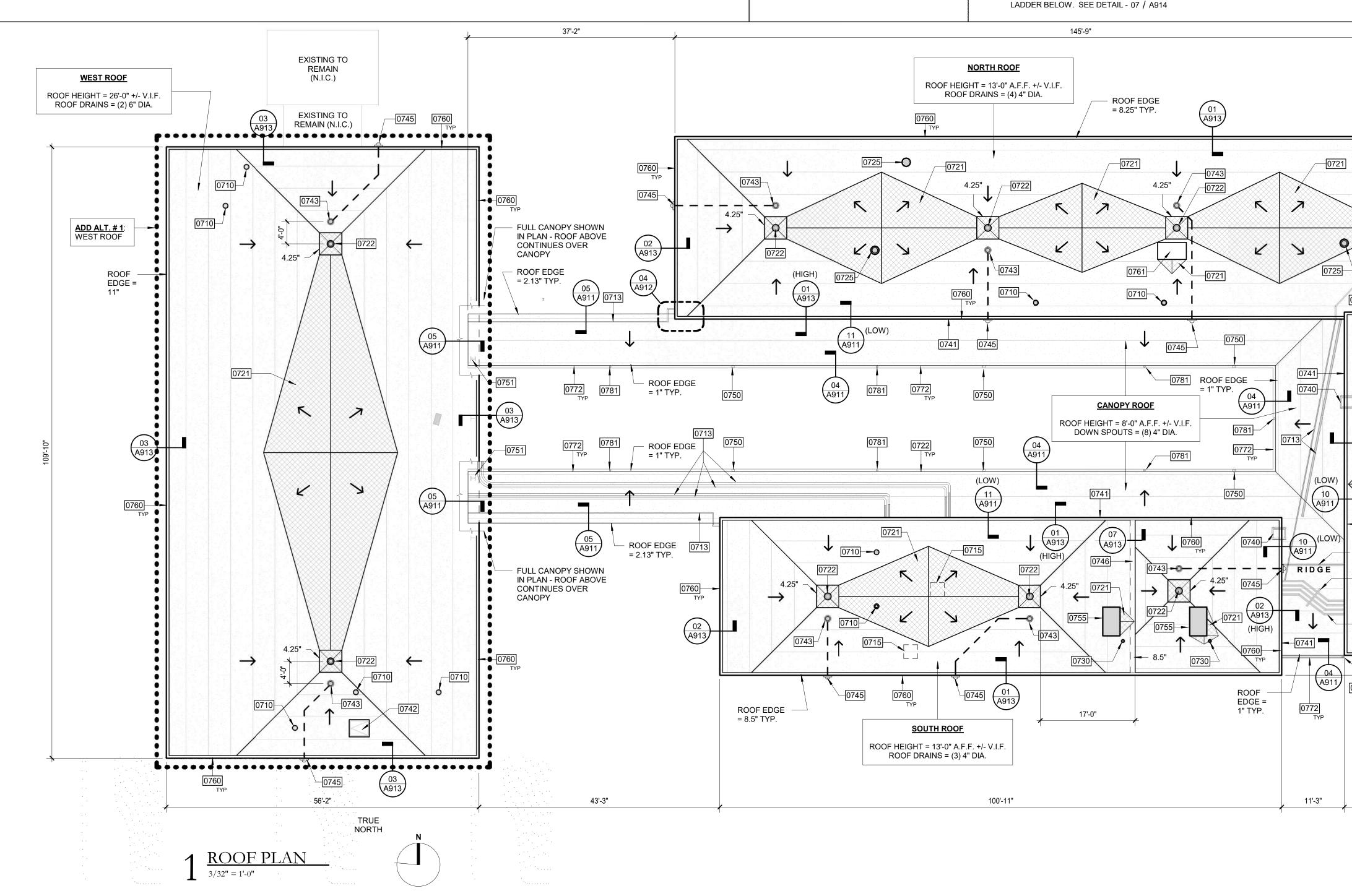


DEMOLITION DETAILS

GENERAL NOTES

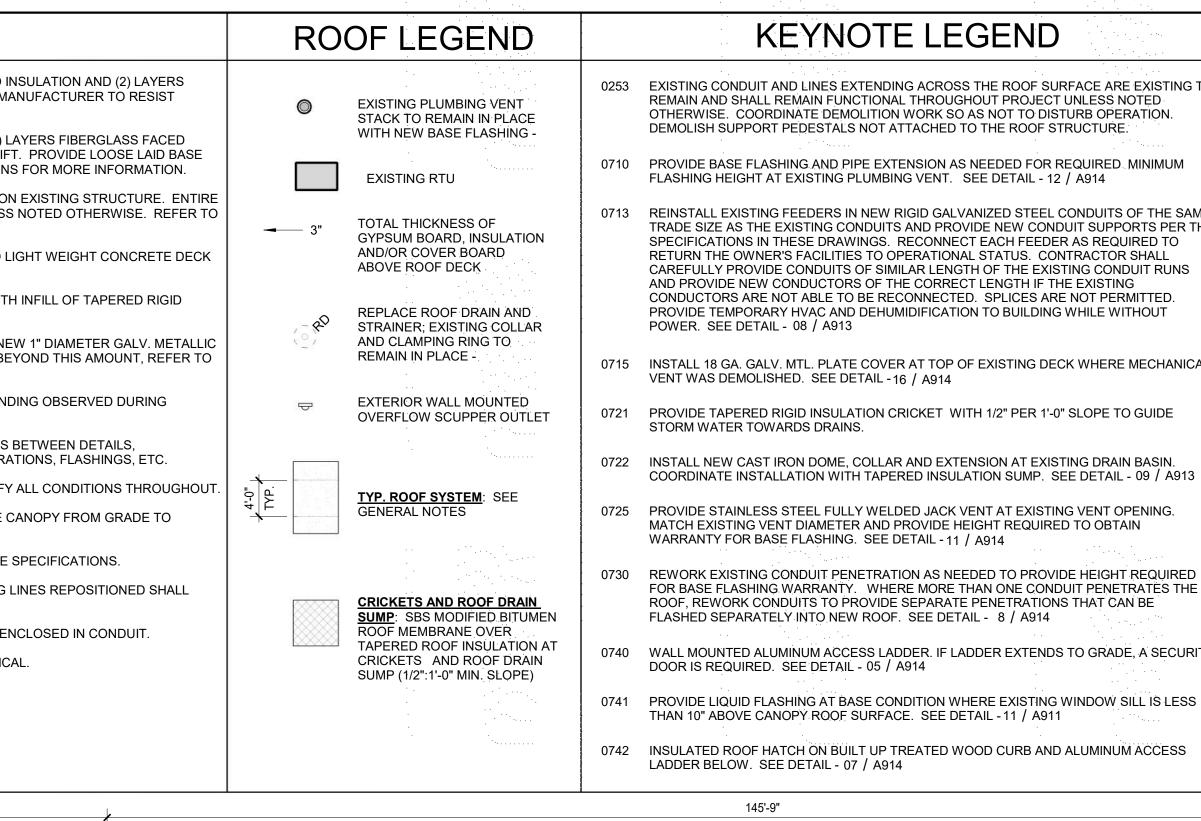
- I. NORTH, EAST AND SOUTH ROOF SYSTEM: COLD APPLIED SBS MODIFIED BITUMEN ROOF SYSTEM ON 1/2" COVER BOARD AND R-25 MIN. AVERAGE TAPERED RIGID INSULATION AND (2) LAYERS FIBERGLASS FACED GYPSUM PANELS ON EXISTING ROOF DECK. ENTIRE SYSTEM IS SET IN ADHESIVE ON EXISTING ROOF DECK IN PATTERN RECOMMENDED BY MANUFACTURER TO RESIST UPLIFT. PROVIDE 1/4" PER FOOT SLOPE TYPICAL UNLESS NOTED OTHERWISE. REFER TO DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- 2. WEST ROOF SYSTEM: COLD APPLIED SBS MODIFIED BITUMEN ROOF SYSTEM ON 1/2" COVER BOARD AND R-25 MIN. AVERAGE TAPERED RIGID INSULATION AND (2) LAYERS FIBERGLASS FACED GYPSUM PANELS MECHANICALLY FASTENED THROUGH EXISTING LWIC AND METAL ROOF DECK IN PATTERN RECOMMENDED BY MANUFACTURER TO RESIST UPLIFT. PROVIDE LOOSE LAID BASE PLY BETWEEN GYPSUM PANELS AND TOP OF LWIC. PROVIDE 1/4" PER FOOT SLOPE TYPICAL UNLESS NOTED OTHERWISE. REFER TO DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- 3. CANOPY ROOF SYSTEM: COLD APPLIED SBS MODIFIED BITUMEN MEMBRANE ON 1/2" COVER BOARD, TAPERED RIGID INSULATION AND GALV. METAL ROOF DECK ON EXISTING STRUCTURE. ENTIRE ROOF SYSTEM IS SET IN ADHESIVE ON DECK IN PATTERN RECOMMENDED BY MANUFACTURER TO RESIST UPLIFT. PROVIDE 1/8" PER FOOT SLOPE TYPICAL UNLESS NOTED OTHERWISE. REFER TO DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- 4. IN ADDITION TO WHAT'S NOTED IN THE DOCUMENTS, THE SCOPE OF WORK SHALL ALSO INCLUDE PATCHING AND REPAIR OF 6 SQUARES X 2" THICK OF DAMAGED LIGHT WEIGHT CONCRETE DECK SURFACE WITH PATCHING COMPOUND. FOR ANY QUANTITY REQUIRED BEYOND THIS AMOUNT, REFER TO UNIT PRICE SPECIFICATION.
- 5. IN ADDITION TO WHAT'S NOTED IN THE DOCUMENTS, THE SCOPE OF WORK SHALL ALSO INCLUDE REPLACEMENT OF 13 CF OF LIGHTWEIGHT CONCRETE DECK WITH INFILL OF TAPERED RIGID INSULATION DOWN TO METAL DECK. FOR ANY QUANTITY REQUIRED BEYOND THIS AMOUNT, REFER TO UNIT PRICE SPECIFICATION.
- 6. IN ADDITION TO WHAT'S NOTED IN THE DOCUMENTS, THE SCOPE OF WORK SHALL ALSO INCLUDE THE INSTALLATON OF 600 LF OF EXISTING LOOSE WIRE INSIDE NEW 1" DIAMETER GALV. METALLIC CONDUIT INSTALLED 6" MIN. ABOVE ROOF SURFACE WITH RECYCLED RUBBER SUPPORTS SET IN ROOFING CEMENT AT 6'-0" O.C. FOR ANY QUANTITY REQUIRED BEYOND THIS AMOUNT, REFER TO UNIT PRICE SPECIFICATION.
- 7. THE WORK SHALL INCLUDE THE INSTALLATION OF 18 SQUARES OF MODIFIED BITUMEN CAP SHEET PLIES ONLY AS DETERMINED BY ARCHITECT TO ELIMINATE PONDING OBSERVED DURING PONDING WATER INSPECTION. FOR ANY QUANTITY REQUIRED BEYOND THIS AMOUNT, REFER TO UNIT PRICE SPECIFICATION.
- 8. WHERE DETAILS ARE NOT SHOWN, PROVIDE STANDARD DETAILS AS RECOMMENDED BY THE ROOFING MANUFACTURER AND NRCA. REPORT ANY DISCREPANCIES BETWEEN DETAILS, MANUFACTURER'S RECOMMENDATIONS, AND FIELD CONDITIONS TO THE ARCHITECT. COMPLY WITH MANUFACTURER'S RECOMMENDATIONS FOR ROOF PENETRATIONS, FLASHINGS, ETC.
- DIMENSIONS, ROOF THICKNESSES, LOCATIONS, SIZES AND ORIENTATIONS OF ALL ROOF AREAS AND ROOF MOUNTED ITEMS ARE ALL APPROXIMATE. FIELD VERIFY ALL CONDITIONS THROUGHOUT.
 PREP, PRIME AND PAINT ALL EXPOSED STRUCTURAL STEEL AND METAL DECK AT COURTYARD CANOPY, INCLUDING STEEL COLUMNS IN EXISTING FACADE ABOVE CANOPY FROM GRADE TO
- TERMINATION AT ROOF LEVEL.
- PROVIDE ROOF WALK WAY PADS FROM ROOF LADDER ACCESS POINTS TO EACH ROOF TOP UNIT AND AROUND THE PERIMETER OF THE UNIT AS OUTLINED IN THE SPECIFICATIONS.
 ALL ELECTRICAL, MECHANICAL AND/OR PLUMBING WORK REQUIRED TO BE DISCONNECTED, RECONFIGURED, EXTENDED, RELOCATED AND/OR TO HAVE EXISTING LINES REPOSITIONED SHALL MEET ALL IMC, IPC AND NEC REQUIREMENTS.
- 13. PROVIDE GALVANIZED METAL CONDUIT WITH RECYCLED RUBBER SUPPORTS FOR ALL LOOSE WIRE OR CABLE FOUND ON ROOF STILL IN USE AND NOT ALREADY ENCLOSED IN CONDUIT. 14. USE TRANSITION STRIPS AND/OR CANTS AT ROOF EDGE AND MODIFY HEIGHTS AS NEEDED TO MAKE SMOOTH TAPER FROM ROOF EDGE TO ROOF SURFACE TYPICAL.

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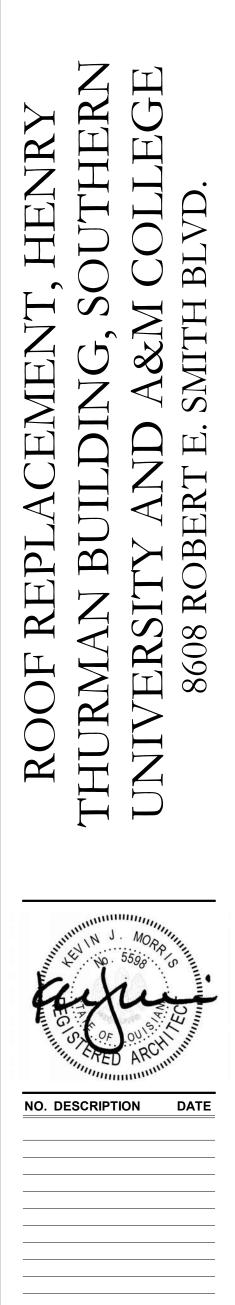
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KEYNOTE LEGEND

				4. 4 ⁴		
ТО	0743		DRAIN MATCHING CAPACITY OF ADJACENT EXI E 40 PVC STORM PIPE ROUTE TO EXTERIOR WA NTS. SEE DETAIL - 10 / A913			
	0745	STAINLESS STEEL WALL MOUNT	ED OVERFLOW SCUPPER OUTLET. SEE DETAIL	11 / A913		
.ME THE	0746	STEPPED ROOF TRANSITION FOR MATCHING EDGE OF ROOF HEIG	RMED WITH TREATED 2X6 WOOD BLOCKING AN HT. SEE DETAIL - 07 / A913	ID		
	0750	GUTTER EXPANSION JOINT ASSE	EMBLY PER DETAIL - 09 / A911			
	0751	PROVIDE LIQUID FLASHING AT B/ PENETRATES ROOF ASSEMBLY.	ASE CONDITION WHERE STRUCTURAL STEEL C SEE DETAIL - 05 / A912	COLUMN		
CAL	0755	EXTEND PVC CONDENSATE DRA	TER OF EXISTING MECHANICAL EQUIPMENT CL IN FOR UNIT TO ROOF DRAIN AND MAINTAIN DF PROVIDE RECYCLED PIPE SUPPORTS AT 72" C	RAINAGE		
	0760	PREFINISHED METAL GRAVEL ST EDGE TYPICAL.	OP FASCIA ON TREATED 2X6 WOOD BLOCKING	G AT ROOF		
3	0761	INSULATED MODULAR ROOF CURB WITH INSULATED COVER AT EXISTING OPENING. SEE DETAIL - 09 / A914				
	0772	PREFINISHED METAL GUTTER AN	ND BLOCKING AT CANOPY EDGE. SEE DETAIL -	04 / A911		
	0780	FLASH BASE PENETRATIONS IN F	ROOF AT EXISTING STEEL DUNNAGE. SEE DE	TAIL - 05 / A912		
D E	0781	COLUMN AND COORDINATE TIE I PRECAST CONCRETE SPLASH PA	ER DOWNSPOUT AND CAST IRON BOOT TO EXI N TO UNDERGROUND STORM LINE AT GRADE. AD AT GRADE WHERE THERE IS NO UNDERGRO	PROVIDE		
RITY S	0783	SEE DETAIL - 08 / A911 IMMEDIATELY AFTER THE ROOF WORK IS COMPLETE, REINSTALL THE EXISTING DATA CABLES IN NEW RIGID GALVANIZED STEEL CONDUITS OF THE SAME TRADE SIZE AS THE EXISTING CONDUITS AND PROVIDE NEW CONDUIT SUPPORTS PER THE SPECIFICATIONS IN THE DRAWINGS. RECONNECT EACH CABLE AS REQUIRED TO RETURN THE OWNER'S FACILITIES TO OPERATIONAL STATUS. CONTRACTOR SHALL CAREFULLY PROVIDE CONDUITS OF SIMILAR LENGTH OF THE EXISTING CONDUIT RUNS AND PROVIDE NEW CABLES OF THE CORRECT LENGTH IF THE EXISTING CABLES ARE NOT ABLE TO BE RECONNECTED. SPLICES ARE NOT PERMITTED.				
		ر 7'-3" پر	2			
4.2	5" •	0743 0743 0743 0783 0745	ζο			
0740	↑ (0722 ← 0760 TYP (LOW) 0741 0740 A911 0745	31-6 3/16"			
-	0710 0755		EAST ROOF ROOF HEIGHT = 19'-0" A.F.F. +/- V.I.F. ROOF DRAINS = (2) 4" DIA.			
(HIGI 01 A91	$\frac{1}{2}$		01 (A913)			
4						
- 0	760	0730 8.25" 0755 0722	- ROOF EDGE = 8.25" TYP.			
- 4" - 0780 0	→ 721	4.75" 0743				
0253						
	02 (A91		້້າ. ໂ- ັດ			
0781		3 0745 0760 TYP 32'-9"	2			

$\begin{array}{c} \textbf{HOLLY \& SMITH} \\ \textbf{ARCHITECTS} \\ \\ \textbf{HAMMOND} \\ \textbf{T} \quad 9\,8\,5\,.\,3\,4\,5\,.\,5\,2\,1\,0 \\ \\ \textbf{NEW ORLEANS} \\ \textbf{T} \quad 5\,0\,4\,.\,5\,8\,5\,.\,1\,3\,1\,5 \\ \\ \textbf{LAFAYETTE} \\ \textbf{T} \quad 3\,3\,7\,.\,2\,7\,9\,.\,2\,0\,1\,0 \\ \\ \textbf{www.hollyandsmith.com} \end{array}$



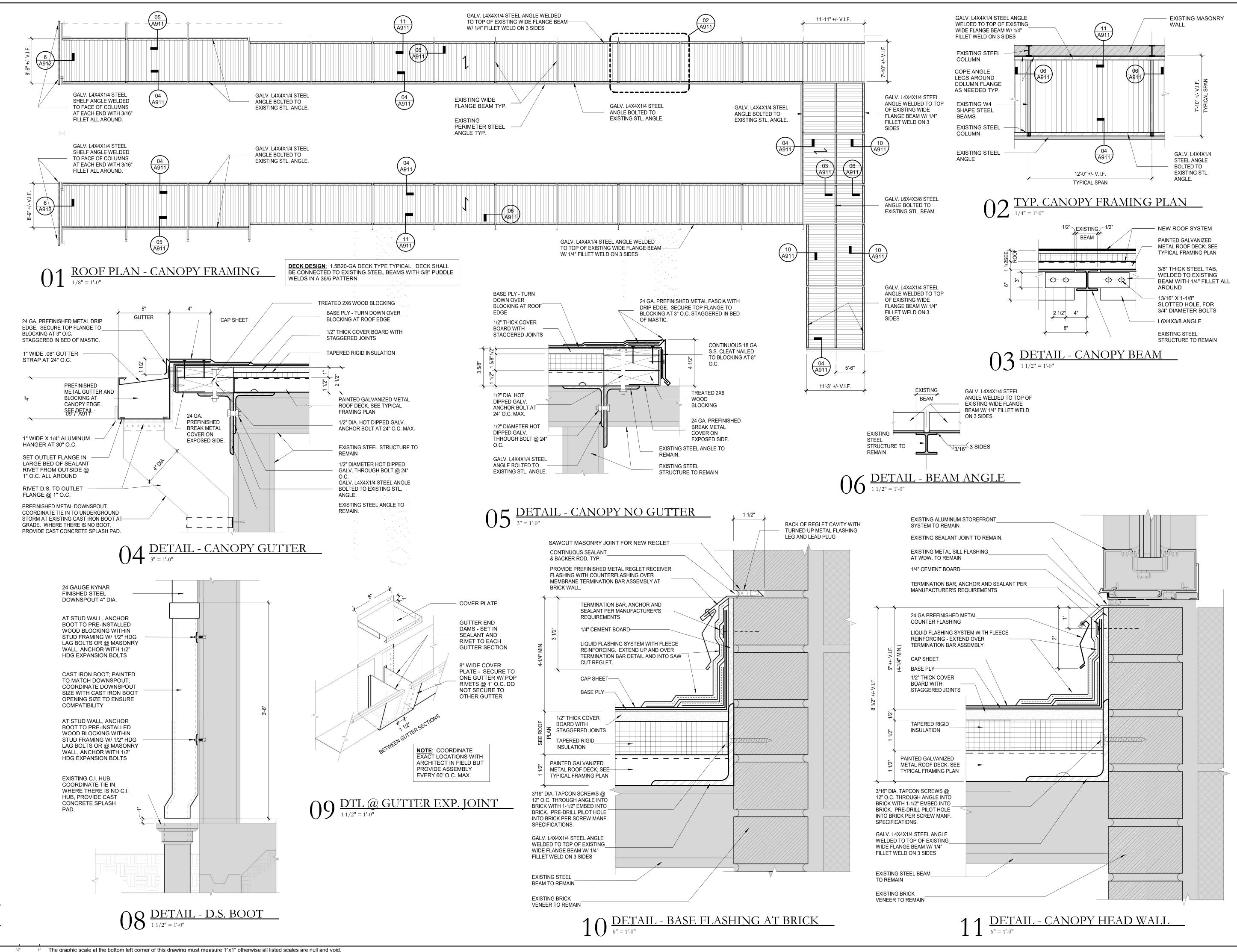
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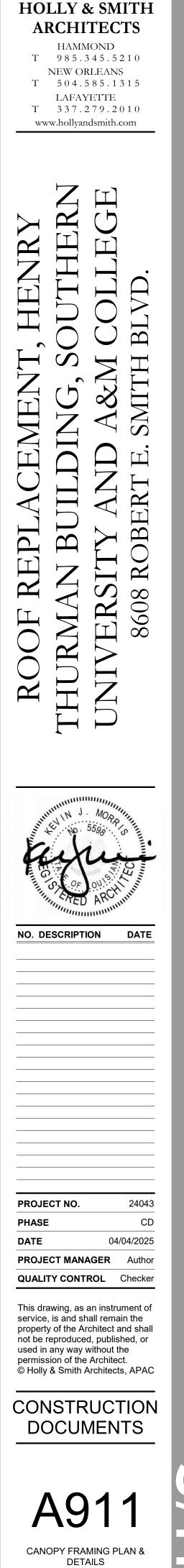
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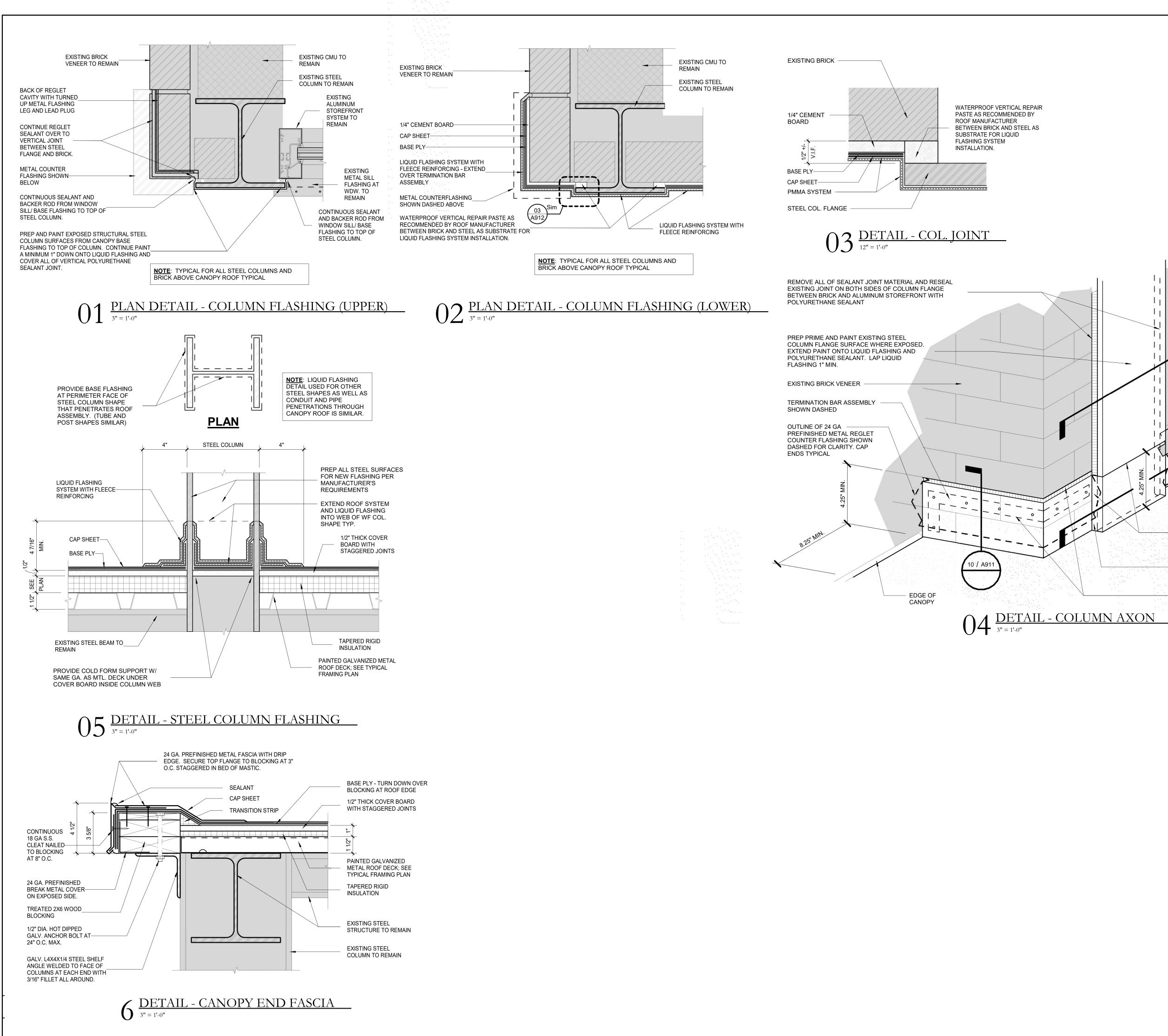






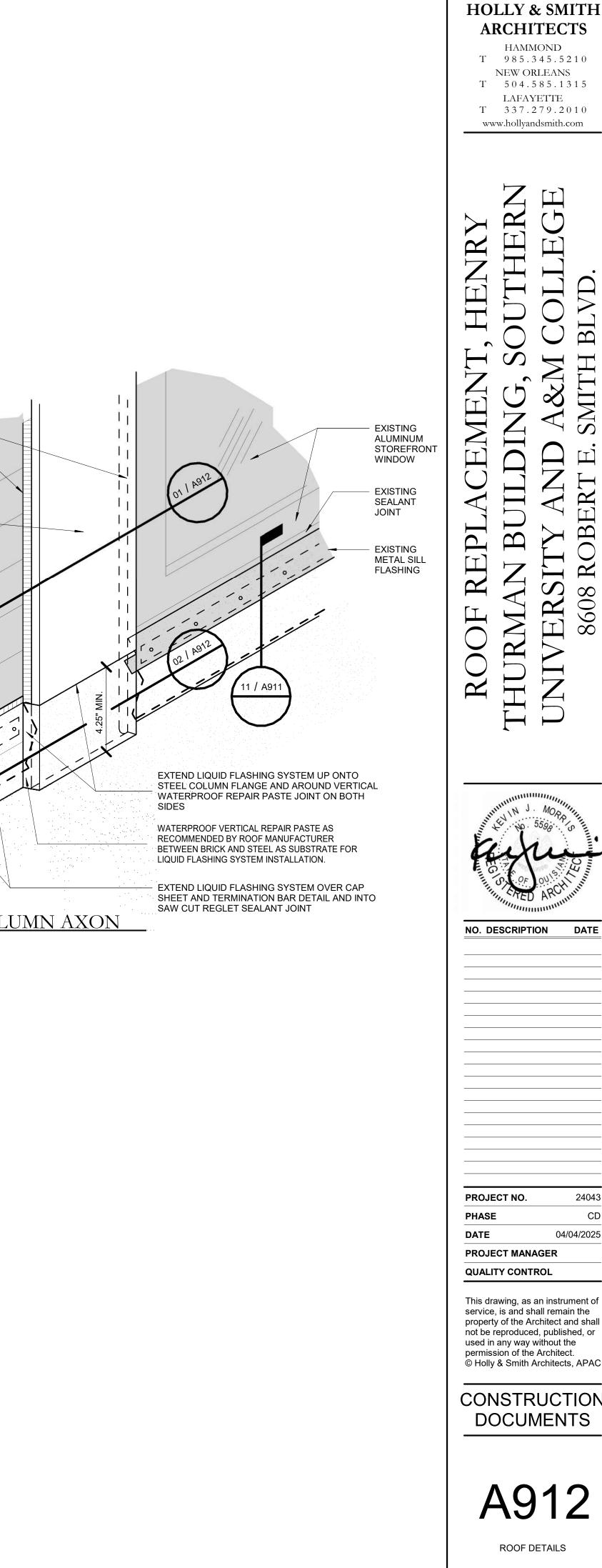


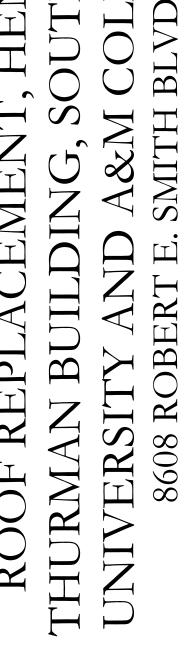




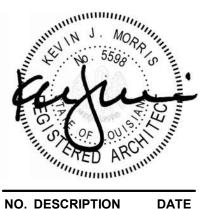
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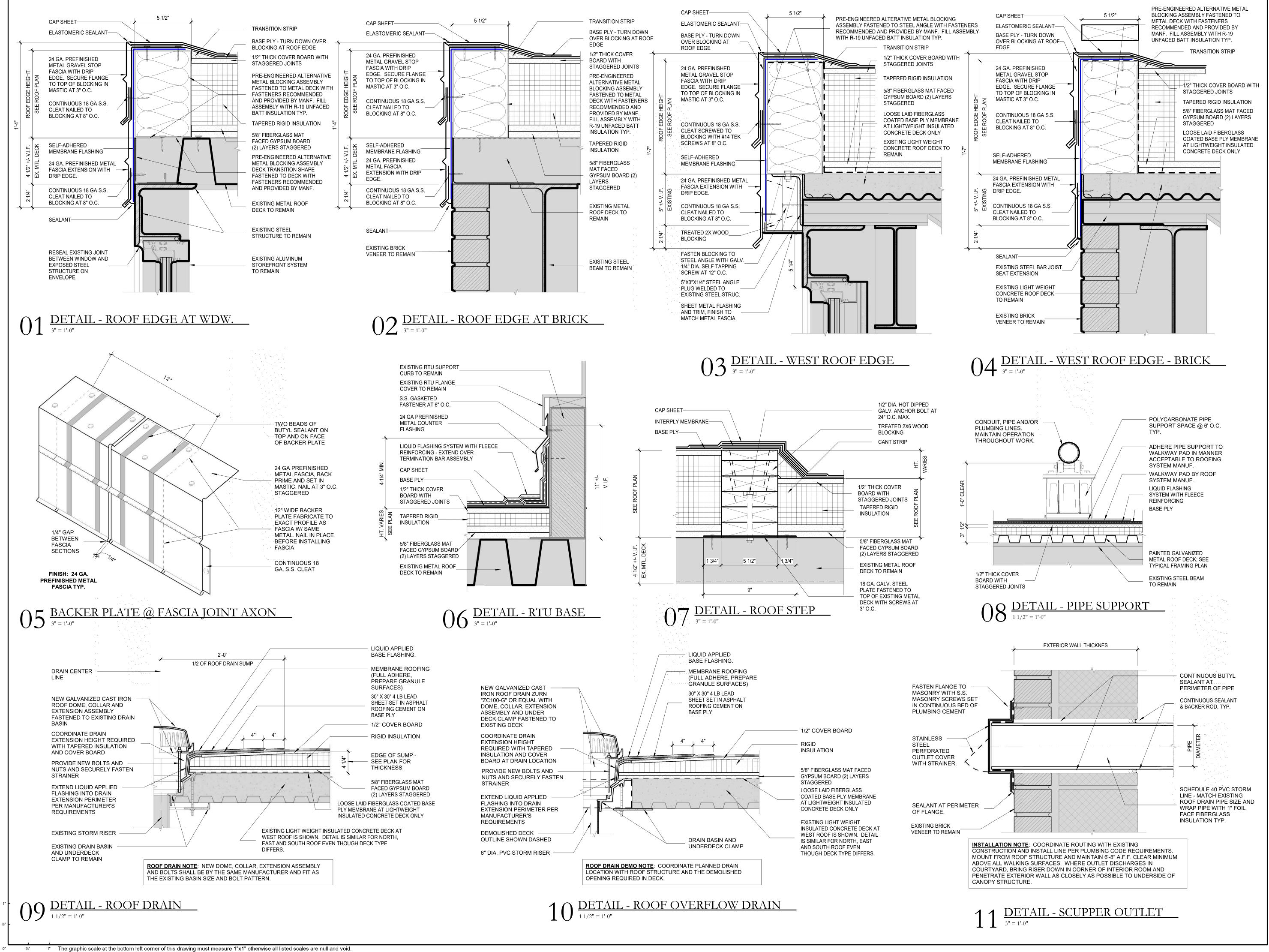
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HOLLY & SMITH

ARCHITECTS

HAMMOND

T 985.345.5210

NEW ORLEANS

T 504.585.1315

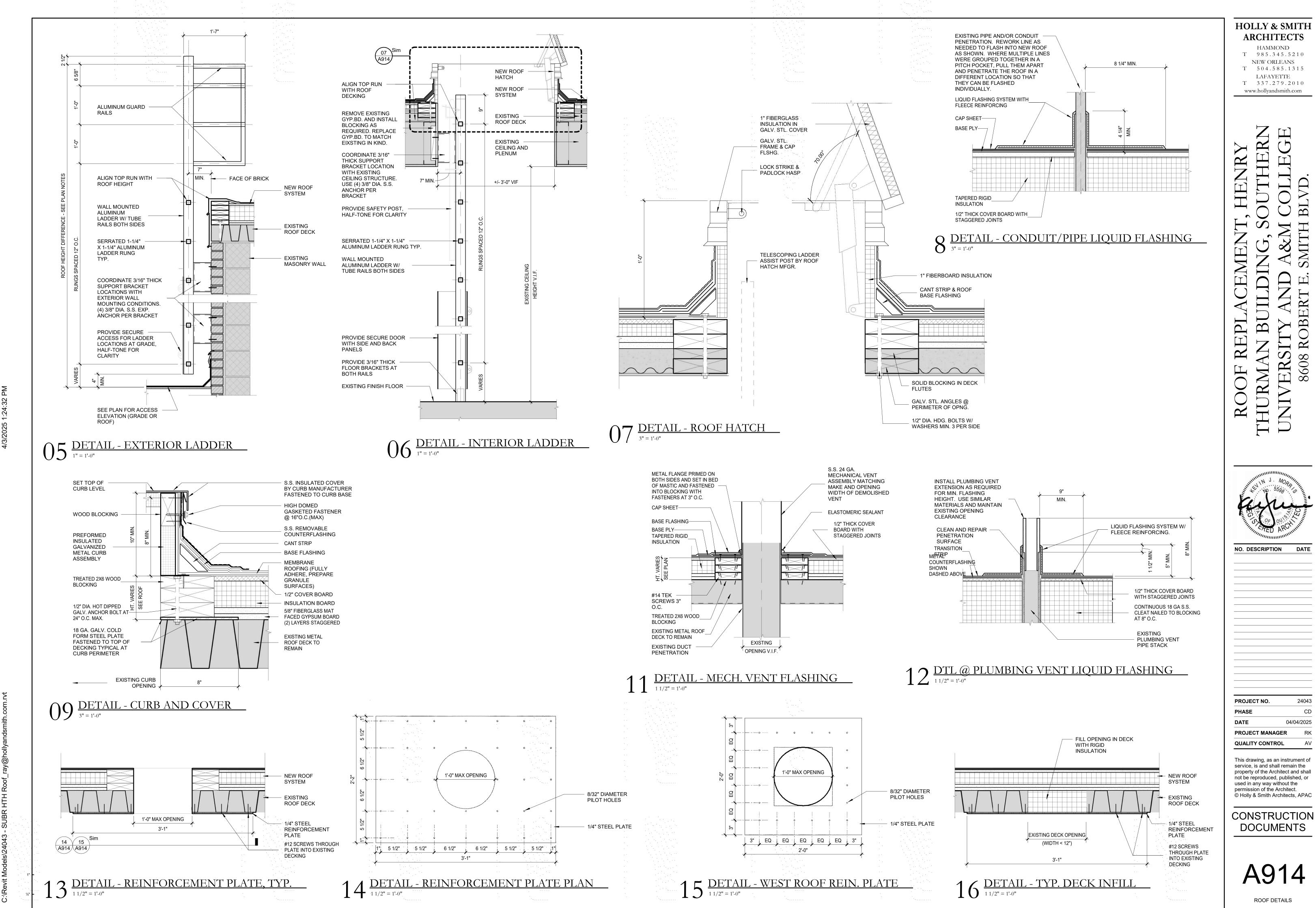
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A913 ROOF DETAILS



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