Creek County Clerk County Purchasing Office Collins Building Annex 317 E. Lee Room 100 Sapulpa, Ok. 74066 918-227-4909

Creek County Clerk
Jennifer Mortazavi
jmortazavi@creekcountyonline.com

Purchasing Agent
Jana Thomas
jthomas@creekcountyonline.com

www.creekcountyclerk.org

INVITATION TO BID

BID NUMBER	BID CLOSING DATE & HOUR	DESCRIPTION	DATE
22-2	12/13 /21 8:59 A.M.	Creek County Justice Center Roof Replacement	11/8/21 Page 1 of 62

TERMS AND CONDITIONS

1. Sealed bids will be opened in the Commissioner's Conference Room, SUITE 103, COLLINS BUILDING ANNEX TO CREEK, County Courthouse, Sapulpa, Oklahoma, at the time and date shown on the invitation to bid form.

2. Late bids will not be considered. Bids must be received in sealed envelopes (one to an envelope) with complete vendor name, address, bid number and closing date written on the outside of the envelope and include 1 hard copy and 1 thumb drive. **Bids must be marked "Roof Replacement" Bid #22-2 & received in the County Clerk's office at 317 E. Lee Room 100 Sapulpa, OK. 74066 by 8:59 a.m. December 13, 2021.**

3. Project is located at the Creek County Jail. It consists of removing the existing modified bitumen roof and insulation down to the steel deck on a roof approximately 36,000 sq. ft. Install a new EPDM roof membrane, insulation, flashings and copings. Paint existing concrete block walls adjacent to the roof. Install two new skylights. Mandatory pre-bid meeting will be held December 1, 2021 at 10:00 a.m. in the commissioner's conference room.

4. The bid will be awarded to the lowest/best bidder(s) as determined by the county.

5. Unit prices will be guaranteed correct by the bidder. County reserves the right to accept or reject any or all bids and to waive informalities or minor irregularities in any bid. Successful bidders must verify workers' compensation coverage & general liability of company & outsource.

6. The business relationship affidavit, non-collusion certification, bonds and all other required documents within the bid document specifications must be returned with all sealed bids.

7. Bidder is responsible to adhere to all provisions pertaining to Federal laws, American Rescue Plan Act & Oklahoma State Statutes.

8. The sub-grantee, contractor, subcontractor, successor, transferee, and assignee shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of the Treasury's Title VI regulations, 31 CFR Part 22, which are herein incorporated by reference and made a part of this contract (or agreement). Title VI also includes protection to persons with "Limited English Proficiency" in any program or activity receiving federal financial assistance, 42 U.S.C. § 2000d et seq., as implemented by the Department of the Treasury's Title VI regulations, 31 CFR Part 22, and herein incorporated by reference and made a part of this contract or agreement.

9. Firm fixed prices will be F.O.B. destination.

10. Purchases by Creek County, Oklahoma, are not subject to state or federal taxes.

11. This bid is submitted as a legal offer and any bid when accepted by the County constitutes a firm contract.

12. The County reserves the right to terminate the contract with a 30 day written notice of termination for convenience.

13. The County reserves the right to terminate the contract without notice due to non-performance to any & all portions of the bid award.

14. Bids will be firm for 30 days.

Vendor: _____ Submitted by: _____ Title: _____

Address: _____ City: _____ State: _____ Zip: _____

Email: _____ Phone: _____

Business Relationships Affidavit

_____ (Project Name)

State of Oklahoma)
)SS
County of_____)

_____, of lawful age, being duly sworn, on oath says that he or she is the agent authorized by the bidder to submit the attached bid. Affiant further states that the nature of any partnership, or other business relationship presently in effect, of which existed within one (1) year prior to the date of this statement with the architect, engineer, or other party to the project is as follows:

_____

Affiant further states that any such business relationship presently in effect of which existed within one (1) year prior to the date of this statement between any officer or director of the bidding company and any officer or director of the architectural or engineering firm or other party to the project is as follows:

_____

Affiant further states that the names of all persons having any such business relationships and the positions they hold with their respective companies or firms are as follows:

_____

(If none of the business relationships herein above mentioned exist, affiant should so state.)

Signature of Affiant_____

S.A.&I. 425 (2000)

Affidavit for filing with competitive bid

State of Oklahoma)
)SS
County of_____)

_____, of lawful age, being first duly sworn, on oath says, that (s)he is the agent authorized by bidder to submit the attached bid. Affiant further states that the bidder has not been a party to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding; or with any county official or employee as to quantity, quality or price in the prospective contract, or any other terms of said prospective contract; or in any discussions between bidders and any county official concerning exchange of money or other thing of value for special consideration in the letting of a contract.

Bidder: _____

Signature: _____

Subscribed and sworn to before me this _____ day of _____ 20_____.

Commission #_____ Expires _____

Notary Public (or Clerk or Judge)

Notary Public (or Clerk or Judge)

S. A. & I. 1-4001 (2005)

AFFIDAVIT FOR CONTRACTS AND PAYMENTS

STATE OF OKLAHOMA)
) ss
COUNTY OF _____)

THE UNDERSIGNED (ARCHITECT, CONTRACTOR, SUPPLIER OR ENGINEER), OF LAWFUL AGE, BEING FIRST DULY SWORN, ON OATH SAYS THAT THIS INVOICE OR CLAIM IS TRUE AND CORRECT. AFFIANT FURTHER STATES THAT THE (WORK, SERVICES OR MATERIALS) AS SHOWN BY THIS INVOICE OR CLAIM HAVE BEEN (COMPLETED OR SUPPLIED) IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS, ORDERS OR REQUESTS FURNISHED THE AFFIANT. AFFIANT FURTHER STATES THAT (S)HE HAS MADE NO PAYMENT DIRECTLY OR INDIRECTLY TO ANY ELECTED OFFICIAL, OFFICER OR EMPLOYEE OF THE STATE OF OKLAHOMA, ANY COUNTY OR LOCAL SUBDIVISION OF THE STATE, OF MONEY OR ANY OTHER THING OF VALUE TO OBTAIN PAYMENT OF THE INVOICE OR PROCURE THE CONTRACT OR PURCHASE ORDER PURSUANT TO WHICH AN INVOICE IS REQUIRED.

_____
BUSINESS NAME

By _____

SUBSCRIBED AND SWORN TO BEFORE ME THIS_____ DAY OF _____, 20 _____

_____
NOTARY PUBLIC (OR CLERK OR JUDGE)

NOTE: 62 OKL.ST.ANN. § 310.9 (B), AUTHORIZES COUNTIES EXECUTING MORE THAN ONE CONTRACT, EXCEEDING $ 25,000.00 DURING THE FISCAL YEAR, WITH AN ARCHITECT, CONTRACTOR, ENGINEER OR SUPPLIER OF CONSTRUCTION MATERIALS TO ACCEPT ONE AFFIDAVIT APPLYING TO ALL WORK, SERVICES OR MATERIALS COMPLETED OR SUPPLIED UNDER THE TERMS OF AWARDED CONTRACTS, OR WHICH ARE NEEDED ON A CONTINUAL BASIS; SUCH AFFIDAVIT TO BE IN LIEU OF ALL INDIVIDUAL AFFIDAVITS FOR EACH INVOICE SUBMITTED IN RELATION TO SUCH CONTRACT.

CREEK COUNTY

JUSTICE CENTER ROOF REPLACEMENT

9175 Ridgeview St, Sapulpa, OK 74066

BID DOCUMENT SPECIFICATIONS

November 2, 2021

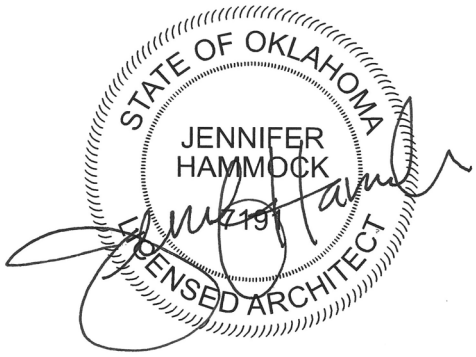
PREPARED BY:

BKL ENGINEERS | ARCHITECTS

ENGINEERS AND ARCHITECTS
1623 East 6th Street
Tulsa, Oklahoma 74120
918-835-9588

C.A. 262 (PE) RENEWAL DATE: 06-30-2023
C.A. 0049 (ARCH) RENEWAL DATE: 06-31-2022

BKL PROJECT NO: 790



11/2/21

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END OF TABLE OF CONTENTS

SECTION 012100

ALLOWANCES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:
   1. Contingency allowance.

1.2 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of allowance.

1.3 CONTINGENCY ALLOWANCES

A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

B. Contractor's overhead and profit for related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.

D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.4 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable.

   1. Include installation costs in purchase amount only where indicated as part of the allowance.
   2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
   3. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

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

3.2 PREPARATION

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

3.3 SCHEDULE OF ALLOWANCES

A. Contingency Allowance: Include a contingency allowance of $10,000.00 for use according to Owner's written instructions. The amount should be included in the base bid.

END OF SECTION

SECTION 012500

SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

1.2 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
2. Substitutions for Convenience are not allowed.
3. All substitutions of a manufacturer not listed in the specifications must be submitted and receive approval prior to bid. Alternate manufacturers will not be considered after the bid.

1.3 ACTION SUBMITTALS

A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use standard CSI form or other form acceptable to Architect.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.

g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor through Construction Manager of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

    a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
    b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.4 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.5 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.6 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

    a. Requested substitution is consistent with the Contract Documents and will produce indicated results.

    b. Substitution request is fully documented and properly submitted.
    c. Requested substitution will not adversely affect Contractor's construction schedule.
    d. Requested substitution has received necessary approvals of authorities having jurisdiction.
    e. Requested substitution is compatible with other portions of the Work.
    f. Requested substitution has been coordinated with other portions of the Work.
    g. Requested substitution provides specified warranty.
    h. 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.

B. Substitutions for Convenience are not allowed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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. Warranties.
4. Final cleaning.

B. Related Requirements:

1. Section 017823 "Operation and Maintenance Data" for additional operation and maintenance manual requirements.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of cleaning agent.

B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.3 CLOSEOUT SUBMITTALS

A. MAINTANCE SUBMITTALS
1. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.
2. Remember to include the punch list form as an “Attachment A”

B. Certificate of Insurance: For continuing coverage.

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 operation and maintenance manuals.
   2. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
   3. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items. Label with manufacturer's name and model number.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of 5 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
   1. Complete final cleaning requirements.
   2. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 5 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
   1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
   2. Results of completed inspection will form the basis of requirements for final completion.

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 General Conditions.
   2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall 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. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1.6 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. Provide the documents in electronic and paper format.

C. Warranty Electronic File: Provide warranties and bonds 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 warranties on a thumb drive.
   a. Include the Record Documents and Drawings on this same thumb drive. ..

D. Warranties in Paper Form:

1. Bind warranties and bonds in the same heavy-duty, three-ring, vinyl-covered, loose-leaf binders for the Operation and Maintenance Data. The binder thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
   a. The maximum binder size is 2". Provide an additional Volume if the data requires more than 2".

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.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

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.

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, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Remove labels that are not permanent.
f. 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.
g. Clean roof drains.
h. Leave Project clean and ready for occupancy.

C. Construction Waste Disposal: Comply with waste-disposal requirements in General Conditions.

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

END OF SECTION

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. Operation and maintenance documentation directory manuals.
2. 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 on digital media acceptable to Architect or by email to Architect. Enable reviewer comments on draft submittals.
2. Submit three paper copies. Architect, will return two copies.

C. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

1.3 FORMAT OF OPERATION AND MAINTENANCE MANUALS

A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting

bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

B. 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.
    b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

1.4 REQUIREMENTS FOR 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 Construction Manager.
7. Name and contact information for Architect.
8. Name and contact information for Commissioning Authority.
9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
10. 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.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents.

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)

END OF SECTION

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.

1.3 INFORMATIONAL SUBMITTALS

A. Schedule of selective demolition activities with starting and ending dates for each activity.

B. Predemolition photographs or video.

1.4 CLOSEOUT SUBMITTALS

A. Inventory of items that have been removed and salvaged.

1.5 FIELD CONDITIONS

A. Owner will occupy the building during selective demolition. 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.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. Hazardous materials will be removed by Owner before start of the Work.
2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

F. 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 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

3.2 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.

3.3 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. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
4. Dispose of demolished items and materials promptly.

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. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. 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. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. 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 reinstalled in their original locations after selective demolition operations are complete.

3.4 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.

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.

END OF SECTION

SECTION 061000

ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Rooftop equipment bases and support curbs.
3. Wood blocking and nailers.
4. Wood furring.
5. Wood sleepers.
6. Plywood backing panels.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

1.3 INFORMATIONAL SUBMITTALS

A. Material Certificates: 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.

B. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated wood.
2. Fire-retardant-treated wood.
3. Power-driven fasteners.
4. Post-installed anchors.
5. Metal framing anchors.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: 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. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece
3. Dress lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 19 percent.

C. Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.

1. Allowable design stresses, as published by manufacturer, shall meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

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.

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 unless otherwise indicated.

2.3 FIRE-RETARDANT-TREATED MATERIALS

A. General: Where fire-retardant-treated materials are indicated, materials shall comply with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.

1. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D2898. Use for exterior locations and where indicated.

2. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D3201 at 92 percent relative humidity. Use where exterior type is not indicated.

C. Kiln-dry lumber after treatment to maximum moisture content of 19 percent.

D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.

E. Application: Treat all rough carpentry unless otherwise indicated.

2.4 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.
3. Rooftop equipment bases and support curbs.
4. Cants.
5. Furring.
6. Grounds.

B. Dimension Lumber Items: Standard, Stud, or No. 3 grade lumber of any species.

C. Concealed Boards: 19 percent maximum moisture content and any of the following species and grades:

1. Mixed southern pine or southern pine; No. 3 grade; SPIB.
2. Eastern softwoods; No. 3, Common grade; NeLMA.
3. Northern species; No. 3 Common grade; NLGA.
4. Western woods; Standard or No. 3 Common grade; WCLIB or WWPA.

2.5 PLYWOOD BACKING PANELS

A. Backing Panels: Plywood, DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.

2.6 FASTENERS

A. General: Fasteners shall be of size and type indicated and shall comply with requirements specified in this article for material and manufacture.

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.

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 as appropriate for the substrate.

2.7 METAL FRAMING ANCHORS

A. Allowable design loads, as published by manufacturer, shall meet or exceed those indicated of basis-of-design products. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency. Framing anchors shall be punched for fasteners adequate to withstand same loads as framing anchors.

B. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A653/A653M, G60 coating designation.

1. Use for interior locations unless otherwise indicated.

C. Hot-Dip, Heavy-Galvanized Steel Sheet: ASTM A653/A653M; structural steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 coating designation; and not less than 0.036 inch thick.

1. Use for wood-preservative-treated lumber and where indicated.

2.8 MISCELLANEOUS MATERIALS

A. Adhesives for Gluing to Concrete or Masonry: Formulation complying with ASTM D3498 that is approved for use indicated by adhesive manufacturer.

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. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.

C. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.

D. Install shear wall panels to comply with manufacturer's written instructions.

E. Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.

F. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

G. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

H. 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. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
3. ICC-ES evaluation report for fastener.

3.2 PROTECTION

A. Protect rough carpentry from weather.

END OF SECTION

SECTION 075300

THERMOSET, EPDM, MEMBRANE ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Remove existing modified bitumen roof system including all insulation, flashings, copings, etc. and replace with new system as specified.

B. Work shall include, but is not limited to, the following:
   1. Preparation of existing steel deck and all flashing substrates.
   2. EPS flute fill Insulation.
   3. Mechanically attach EPS insulation.
   4. Adhered tapered EPS insulation (as needed).
   5. Adhered cover board.
   6. Fully adhered EPDM roof membrane.
   7. Fully adhered membrane flashing.
   8. Pre-manufactured edge metal systems.
   9. Pipe Supports.
   10. All related materials and labor required to complete specified roofing necessary to receive specified manufacturer's warranty.

1.2 RELATED SECTIONS

A. Section 07 62 00 - Sheet Metal Flashing and Trim.

1.3 REFERENCES

A. American Society of Civil Engineers (ASCE) - ASCE 7 - Minimum Design Loads for Buildings and Other Structures, Current Revision.

B. ASTM International (ASTM):
   1. ASTM C 578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation Board.
   2. ASTM D 412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension.
   3. ASTM D 624 - Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
   4. ASTM D 816 - Standard Test Methods for Rubber Cements.
   5. ASTM D 4637 - Standard Specification for EPDM Sheet Used In Single-Ply Roof Membrane.
   6. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials.

C. Factory Mutual (FM Global):
   1. Approval Guide.
      a. Factory Mutual Standard 4470 - Approval Standard for Class 1 Roof Covers.
      b. Loss Prevention Data Sheets 1-28, 1-29.

D. International Code Council (ICC):
   1. International Building Code (IBC).

E. National Roofing Contractors Association (NRCA) - Low Slope Roofing and Waterproofing Manual, Current Edition.

F. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - Architectural Sheet Metal Manual.
G. Underwriters Laboratories (UL):
   1. TGFU R1306 - "Roofing Systems and Materials Guide".
   2. UL-790 - Standard Test Method for Fire Tests of Roof Coverings.

1.4 DESIGN CRITERIA

A. Wind Uplift Performance:
   1. Roof system is designed to achieve a FM 1-90 wind uplift rating.
   2. Warranted Wind Speed: 120 MPH.
B. Fire Resistance Performance:
   1. Roof system will achieve a UL Class A rating when tested in accordance with UL-790.
C. Thermal Performance: Insulation thickness and slopes are shown on the drawings.
D. Drainage: Provide a roof system with positive drainage where all standing water dissipates within 48 hours after precipitation ends.
E. Building Codes:
   1. Roof system will meet the requirements of all federal, state and local code bodies having jurisdiction.

1.5 SUBMITTALS

A. Submit under provisions of Division 1 – General Requirements.
B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
C. Detail Drawings:
   1. Submit approved plan, section, elevation or isometric drawings which detail the appropriate methods for all flashing conditions found on the project.
   2. Submit tapered insulation layout indicating all slopes and thicknesses
   3. Coordinate approved drawings with locations found on the Contract Drawings.
D. Selection Samples: For each finish product specified, two complete sets of chips representing manufacturer's full range of available colors, membranes, and thicknesses.
E. Verification Samples: For each finish product specified, two samples, minimum size 4 inches (102 mm) square representing actual product, color, and patterns.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of fifteen (15) years experience.
B. Installer Qualifications:
   1. Contractor shall provide full time, on-site superintendent or foreman experienced with the specified roofing from beginning through satisfactory project completion.
   2. Applicators shall be skilled in the application methods for all materials.
   3. Contractor shall maintain a daily record, on-site, documenting material installation and related project conditions.
   4. Contractor shall maintain a copy of all submittal documents, on-site, available always for reference.

   5. Bidding installer must provide the following Contractor Qualification Documentation:

a. Proof of a minimum of two similar No Dollar Limit guaranteed jobs from the approved roofing system Manufacturer.
b. Proof of Manufacturer's License Agreement from approved Manufacture dated at least three months prior to date of bid opening.
c. Proof of a minimum $1,000,000 workman com. / liability insurance umbrella.
d. Documentation from NCCI stating an Experience Modification Rating (EMR) of 1.0 or less.
e. Documentation stating that Project Manager, Job site Superintendent and all other roofing applicators are employed directly by the Installer. No subcontracting of roofing installation will be permitted.
f. Evidence of compliance with Oklahoma Bill #2180 "Roofing Contractor Registration Act".

6. All products listed in this section are to be installed by a single installer with a minimum of five (5) years demonstrated experience in installing products of the same type and scope as specified.
7. Installer shall be capable of extending the Manufacturer's Labor and Materials guarantee.
8. Installer shall be capable of extending the Manufacturer's No Dollar Limit guarantee.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.
B. Store and dispose of hazardous materials, and materials contaminated by hazardous materials, in accordance with requirements of local authorities having jurisdiction.
C. When loading materials onto the roof, comply with the requirements to prevent overloading and possible disturbance to the building structure.
D. Contaminants such as grease, fats and oils shall not be allowed to come in direct contact with the roofing membrane.

1.8 USE OF THE PREMISES

A. Before beginning work, the roofing contractor must secure approval from the building owner's representative for the following:
   1. Areas permitted for personnel parking.
   2. Access to the site.
   3. Areas permitted for storage of materials and debris.
   4. Areas permitted for the location of cranes, hoists, and chutes for loading and unloading materials to and from the roof.

1.9 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
B. Refer to manufacturer's recommendations for general job site considerations.
C. Safety Data Sheets (SDS) must be always on location during the transportation, storage and application of materials.
D. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.
E. New roofing shall be complete and weathertight at the end of every workday.

1.10 WARRANTY

A. Provide manufacturer's "Edge-to-Edge Total System Warranty" covering both labor and all materials with no dollar limitation. The maximum wind speed coverage shall be peak gusts of 120 mph measured at 10 meters above ground level. Certification is required with bid submittal indicating the manufacturer has reviewed and agreed to such wind coverage.
   1. Duration: Thirty (30) years.
   2. Coverage to be extended to include roof edge metal.
   3. Warranty shall also include 32 man-hours of accidental puncture leak repair.
   4. Warranty shall also include leaks caused by hail up to 3" in diameter.
   5. Pro-rated system warranties shall not be accepted.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:
   1. Versico Roofing Systems
   2. Carlisle SynTec Systems
   3. Firestone Roofing Systems

2.2 SCOPE / APPLICATION

A. Roof System: Provide a waterproof roof system, capable of withstanding uplift forces as specified in this section.
   1. Membrane Attachment: Fully Adhered.
B. Base Flashing: Provide a waterproof, fully adhered base flashing system at all penetrations, plane transitions and terminations.
C. Insulation: Provide a roof insulation system beneath the finish membrane.

2.3 INSULATION

A. Expanded Polystyrene Flute Fill: A closed-cell lightweight expanded polystyrene (EPS) that meets ASTM C578, Type II. Nominal density of 1.50 lbs/cubic ft (pcf).
B. Expanded Polystyrene: Rigid board meeting or exceeding the requirements of ASTM C 578, Type II.
C. Tapered Expanded Polystyrene: Rigid board meeting or exceeding the requirements of ASTM C 578, Type II.
   1. Taper: As shown on the drawings. Insulation, crickets and saddles provided with taper as required for positive roof slope and as shown on drawings.
D. Cover board – DuraStorm VSH is an engineered composite building material made from a blend of plastic and cellulose fiber sourced from post-industrial and post-consumer waste streams.
   1. Compressive strength: 3,990psi
   2. Board thickness: ½"

2.4 FASTENERS AND PLATES

A. Insulation Fastener: a threaded, #14 fastener with a #3 phillips drive used with steel and wood roof decks.
B. Insulation Fastening Plates: a nominal 3 inch diameter metal plate used for insulation attachment.

C. Polymer Seam Plate: a 2” diameter plastic fastening plate incorporating barbs on the underside of the plate. This plate is required for membrane attachment installed in conjunction with steel roof decks.

2.5 INSULATION ADHESIVE

A. A spray or extruded applied, two-component polyurethane, low-rise expanding foam adhesive used for attaching approved insulations to compatible substrates.

2.6 ETHYLENE, PROPYLENE, DIENE TERPOLYMER (EPDM) MEMBRANE

A. White Non-Reinforced Membrane: Cured, non-reinforced EPDM membrane meeting the requirements of ASTM D 4637 Type I.
   1. Attachment Method: Fully Adhered.
   2. Color: White on Black.
   3. Membrane Thickness: 90 mil nominal.
   4. Width: 10 feet (3.05 m) maximum.
   5. Performance:
      a. Tensile Strength: 1685 psi (11.6 MPa) minimum.
      b. Tear Resistance: 200 lbf per in (35 kN per m) minimum.
      c. Elongation: 480 percent.

2.7 FLASHING ACCESSORIES

A. Pipe Seals: Factory applied adhesive tape on the deck flange, for use with white EPDM roofing systems.
B. Pourable Sealer Pocket: Pre-fabricated Pourable Sealer Pocket consisting of a 2 inch wide plastic support strip with pre-applied, adhesive backed uncured EPDM Flashing.
C. Inside/Outside Corner: A 7 inch by 9 inch precut 60-mil thick white Uncured EPDM Flashing with a 30-mil pre-applied adhesive tape.
D. Coverstrip: A nominal 40-mil (1.1 mm) black, semi-cured EPDM membrane laminated to a nominal 30-mil (0.76 mm) cured, pre-applied adhesive tape for flashing gravel stops, metal edgings and Seam Fastening Plates.
E. "T" Joint Covers: A factory cut 6 inch by 6 inch or 12 inch by 12 inch uncured 40-mil thick EPDM flashing laminated to a nominal 30-mil pre-applied adhesive tape, used to overlay field splice intersections and to cover field splices at angle changes.
F. White Cured Flashing: A cured .060 inch (1.5 mm) thick non-reinforced (seamless) white-on-black EPDM membrane used to flash gravel stops, metal edgings, walls/curbs and Seam Fastening Plates used for additional membrane securement when the use of RTS is not feasible.
G. Uncured EPDM Flashing: Formable 60-mil (1.5 mm) thick uncured EPDM flashing.
H. Provide any and all details required by the manufacturer to obtain a 30 year NDL warranty.

2.8 CLEANERS, PRIMERS, ADHESIVES AND SEALANTS

A. Weathered Membrane Cleaner: Clear, solvent-based cleaner used to loosen and remove contaminants from the surface of exposed EPDM membrane prior to the application of Seam Adhesive or EPDM Primer.
B. Splice Adhesive: A high-strength, butyl-based contact cement which is used for splicing adjoining sections of EPDM membrane (cured or uncured).

C. QA Seam Tape: 3 inch (76mm) or 6 inch (152mm) wide by 100 foot (30.5 M) long splice tape used for splicing adjoining sections of EPDM membrane. Complies with the South Coast Air Quality Management District Rule 1168.
D. Peel & Stick White Seam Tape: A 3 inch (76mm) wide by 100 foot (30.5 M) long, cream colored splice tape used with White Systems. Complies with the South Coast Air Quality Management District Rule 1168.
E. Primer: A solvent-based primer used to prepare the surface of EPDM membrane for application of Seam Tape or QA products.
F. Substrate Adhesive: A high-strength, yellow colored, synthetic rubber adhesive used for bonding EPDM membranes to various surfaces.
G. Water Cut-Off Mastic: A one-component, low viscosity, self wetting, Butyl blend mastic used as a compression sealing agent between EPDM membranes or uncured flashing and applicable substrates.
H. Universal Single-Ply Sealant: A 100 percent solids, solvent free, one-part, polyether sealant that provides a weather tight sealant to a variety of building substrates; used as a termination bar sealant. Available in white only.
I. CAV-GRIP 3V Low-VOC Aerosol Contact Adhesive/Primer: a low-VOC, methylene chloride-free adhesive that can be used for a variety of applications including: adhering EPDM, horizontally, for the field of the roof and to vertical walls.

2.9 EDGINGS, TERMINATIONS, PIPE SUPPORTS

A. Pre-manufactured Coping and Facia: Roof edge systems shall be included in the Membrane manufacturer's warranty. System shall be engineered to withstand wind warranty requirements. Tested to meet ANSI/SPRI/FM 4435/ES-1.
   1. Material and thickness: 24 gauge steel
   2. Color: Manufacturers full range
B. Termination Bar: 1 inch (13 mm) wide, .098 inch (2.5mm) thick extruded aluminum bar pre-punched 6 inches (152 mm) on center with sealant ledge to support Lap Sealant.
C. Pipe Supports: Extruded EPDM pipe supports as manufactured by Carlisle SynTec Systems or approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.
B. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.
C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.
B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Do not commence work until all other work trades have completed jobs that require them to traverse the deck on foot or with equipment.

3.3 SUBSTRATE PREPARATION

A. Steel Deck:
   1. Manufacturer shall approve existing metal roof system for attachment and warranty purposes.
   2. Decks shall comply with the gauge and span requirements in the current Factory Mutual Approval Guide and be installed in accordance with Loss Prevention Data Sheet 1-28 or specific FM approval.
   3. Remove any surface corrosion and repair severely corroded areas. Properly fasten loose or inadequately secured decking.
   4. Identify any existing metal decking that is damaged or corroded. Receive owner approval to replace.

3.4 INSULATION - SYSTEM DESIGN

A. Flute Fill:
   1. Type: EPS meeting ASTM C578, Type VIII.
   2. Thickness: Thickness to fill metal panel profile.
   3. Attachment Method: loose laid.
B. Continuous Insulation Layer:
   1. Type: ASTM C 578, Type II.
   2. Thickness (in/mm): Two layers each 3” thick.
   3. Attachment Method: Mechanically attach first layer. Stagger and adhesively attach second layer.
C. Tapered System:
   1. Type: ASTM C 578, Type II.
   2. Overall Roof Slope: As shown on drawings
   3. Attachment Method: Adhered.
D. Cover Board:
   1. Type: DuraStorm VSH.
   2. Thickness (in/mm): ½”.
   3. Attachment Method: Adhered.

3.5 INSULATION PLACEMENT

A. Install flute fill and board insulation insulation or membrane underlayment over the substrate with boards butted tightly together with no joints or gaps greater than 1/4 inch (6 mm). Stagger joints both horizontally and vertically if multiple layers are provided.
B. Secure the first layer of insulation to the substrate with the required mechanical fasteners. Secure the second layer of insulation with insulation adhesive in accordance with the manufacturer's current application guidelines.
C. Do not install wet, damaged or warped insulation boards.
D. Stagger joints in one direction unless joints are to be taped. Install insulation boards snug. Gaps between board joints shall not exceed 1/4 inch (6 mm). Fill all gaps in excess of 1/4 inch (6 mm) with same insulation material.
E. Wood nailers shall be at least 3-1/2 inches (89 mm) wide or 1 inch (25 mm) wider than adjacent metal flange. Thickness shall equal that of insulation but not less than 1 inch (25 mm) thickness.
F. Miter and fill the edges of the insulation boards at ridges, valleys and other changes in plane to prevent open joints or irregular surfaces. Avoid breaking or crushing of the insulation at the corners.

G. Do not install any more insulation than will be completely waterproofed each day.

3.6 INSULATION ATTACHMENT

A. Securely attach insulation to the roof deck for Adhered or Mechanically Attached Roofing Systems. Attachment shall have been successfully tested to meet or exceed the calculated uplift pressure required by the International Building Code (ASCE-7) or ANSI/SPRI WD-1.
B. Enhance the perimeter and corner areas in accordance with FM Loss Prevention Data Sheet 1-29.
C. Install insulation layers applied with adhesive, coverage rate as necessary to achieve the specified attachment and uplift rating. Press each board firmly into place after adhesive develops strings when touched, typically 1-1/2 to 2 minutes after adhesive was applied, and roll with a weighted roller. Add temporary weight and use relief cuts to ensure boards are well adhered. Stagger the joints of additional layers by a minimum of 6 inches (152 mm).

3.7 MEMBRANE PLACEMENT AND ATTACHMENT (Fully Adhered)

A. Unroll and position membrane without stretching. Allow the membrane to relax for approximately 1/2 hour before bonding. Fold the sheet back onto itself so half the underside of the membrane is exposed.
B. Apply the Bonding Adhesive in accordance with the manufacturer's published instructions, to both the underside of the membrane and the substrate. Allow the adhesive to dry until it is tacky but will not string or stick to a dry finger touch.
C. Roll the coated membrane into the coated substrate while avoiding wrinkles. Brush down the bonded half of the membrane sheet with a soft bristle push broom to achieve maximum contact.
D. Fold back the unbonded half of the membrane sheet and repeat the bonding procedure.
E. Install adjoining membrane sheets in the same manner, overlapping edges appropriately to provide for the minimum splice width. It is recommended that all splices be shingled to avoid bucking of water.
F. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent bucking of water.

3.8 MEMBRANE SPLICING (Adhesive Splice)

A. Fold the top sheet back and clean the dry splice area (minimum 3 inches wide) of both membrane sheets by wiping with a clean rag.
B. Apply Primer to the mating surfaces with a scrub pad, at a rate of approximately 450 square feet per gallon for a 3 inch (76 mm) wide seam, and allow to dry.
C. Apply Seam Adhesive in accordance with the manufacturer's current application guidelines, and roll the top sheet onto the mating surface.
D. Roll the splice with a 2 inch (51 mm) wide steel roller and wait at least 2 hours before applying Lap Sealant to the splice edge following the manufacturer's requirements.
E. Field splices shall be overlaid with uncured flashing.

3.9 MEMBRANE SPLICING (Tape Splice)

A. Overlap adjacent sheets and mark a line 1/2 inch (13 mm) out from the top sheet.
B. Fold the top sheet back and clean the dry splice area a minimum of 3 inches (76 mm) on both membrane sheets.
C. Apply Primer to the mating surfaces with a scrub pad, at a rate of approximately 450 square feet per gallon for a 3 inch (76 mm) wide seam, and allow to dry.

D. Apply 3 inch (76 mm) wide Seam Tape to bottom sheet with the edge of the release film along the marked line. Press tape onto the sheet using hand pressure. Overlap tape roll ends a minimum of 1 inch (25 mm).
E. Remove the release film and press the top sheet onto the tape using hand pressure.
F. Roll the seam toward the splice edge with a 2 inch (51 mm) wide steel roller.
G. Install QA "T" Joint Cover, a 6 inch wide (152 mm) section of VersiGard QA Flashing or VersiGard Non-QA Flashing over all field splice intersections. When using Non-QA Flashing, seal edges of flashing with Lap Sealant.
H. The use of Lap Sealant with tape splices is optional except at tape overlaps and cut edges of reinforced membrane where Lap Sealant is required. Refer to manufacturer for 30 year warranty requirements.

3.10 FLASHING

A. Wall and curb flashing shall be cured EPDM membrane. Continue the deck membrane as wall flashing where practicable.
B. Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.

3.11 PIPE SUPPORTS

A. Install pipe supports at 6’ minimum spacing under all gas piping, condensate lines and other lines supported by the roof system.

3.12 WALKWAYS

A. Install walkways at all traffic concentration points (such as roof hatches, access doors, HVAC units, rooftop ladders, etc.) and all locations as identified on the Contract Drawings.
B. Adhere walkway pads to the EPDM membrane in accordance with the manufacturer's current application guidelines.

3.13 DAILY SEALS

A. On phased roofing, when the completion of flashings and terminations is not achieved by the end of the work day, a daily seal shall be performed to temporarily close the membrane to prevent water infiltration.
B. Use Pourable Sealer or other acceptable membrane seal in accordance with the manufacturer's requirements.

3.14 CLEAN UP

A. Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris shall be disposed of in a legally acceptable manner.
B. Prior to the manufacturer's inspection for warranty, the applicator shall perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

3.15 PROTECTION

A. Provide protection, such as 3/4 inch (19 mm) thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.
B. Protect installed products until completion of project.
C. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 076200

SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Manufactured reglets with counterflashing.
   2. Formed roof-drainage sheet metal fabrications.
   3. Formed low-slope roof sheet metal fabrications.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each of the following
   1. Underlayment materials.
   2. Elastomeric sealant.
   3. Butyl sealant.
   4. Epoxy seam sealer.

B. Shop Drawings: For sheet metal flashing and trim.
   1. Include plans, elevations, sections, and attachment details.
   2. Detail fabrication and installation layouts, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled Work.
   3. Include identification of material, thickness, weight, and finish for each item and location in Project.
   4. Include details for forming, including profiles, shapes, seams, and dimensions.
   5. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
   6. Include details of termination points and assemblies.
   7. Include details of expansion joints and expansion-joint covers, including showing direction of expansion and contraction from fixed points.
   8. Include details of roof-penetration flashing.
   9. Include details of edge conditions, including eaves, ridges, valleys, rakes, crickets, flashings, and counterflashings.
   10. Include details of special conditions.
   11. Include details of connections to adjoining work.

C. Samples: For each exposed product and for each color and texture specified, 12 inches long by actual width.

1.4 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of coping and roof edge flashing that is ANSI/SPRI/FM 4435/ES-1 tested and FM Approvals approved.

B. Evaluation Reports: For copings and roof edge flashing, from an agency acceptable to authority having jurisdiction showing compliance with ANSI/SPRI/FM 4435/ES-1.

C. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance data.

B. Special warranty.

1.6 QUALITY ASSURANCE

A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance. Product must be approved by roofing material manufacturer in order to provide 30 year total systems warranty.
   1. For copings and roof edge flashings that are ANSI/SPRI/FM 4435/ES-1 tested and FM Approvals approved, shop shall be listed as able to fabricate required details as tested and approved.

1.7 WARRANTY

A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
   1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
      a. Color fading more than 5 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.
   3. Roofing material manufacturer must approve product and include it in 30 year total systems warranty.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, shall 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 shall not rattle, leak, or loosen, and shall 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 copings and roof edge flashings tested in accordance with ANSI/SPRI/FM 4435/ES-1 and capable of resisting the following design pressure:
   1. Design Pressure: 120 mph wind speed at 10 meters above ground and FM 1-90 wind uplift rating.

D. FM Approvals Listing: Manufacture and install copings and roof edge flashings that are listed in FM Approvals' "RoofNav" and approved for windstorm classification, Class 1-90. Identify materials with name of fabricator and design approved by FM Approvals.

E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change: 120 deg F, ambient.

2.2 SHEET METALS

A. Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.

B. Metallic-Coated Steel Sheet: Provide zinc-coated (galvanized) steel sheet in accordance with ASTM A653/A653M, G90 coating designation or aluminum-zinc alloy-coated steel sheet in accordance with ASTM A792/A792M, Class AZ50 coating designation, Grade 40; prepainted by coil-coating process to comply with ASTM A755/A755M.
   1. Surface: Smooth, flat.
   2. Exposed Coil-Coated Finish:

      a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (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.

   3. Color: As selected by Architect from manufacturer's full range.
   4. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil.

2.3 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Sheet Underlayment: Minimum 30 mils thick, consisting of a slip-resistant polyethylene- or polypropylene-film top surface laminated to a layer of butyl- or SBS-modified asphalt adhesive, with release-paper backing; specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer in accordance with underlayment manufacturer's written instructions. Product must be compatible with roof membrane system.
   1. Low-Temperature Flexibility: ASTM D1970/D1970M; passes after testing at minus 20 deg F or lower.

B. Slip Sheet: Rosin-sized building paper, 3 lb/100 sq. ft. minimum.

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 or manufactured item 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 or manufactured item.
   1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.

      a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM sealing washers under heads of exposed fasteners bearing on weather side of metal.
      b. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.

C. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.

D. Elastomeric Sealant: ASTM C920, elastomeric polyurethane or silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

E. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

F. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.

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 feet 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, non-expansion-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 same material as accessory being anchored or 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. 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-foot-long sections. Furnish with 6-inch-wide, joint cover plates. Shop fabricate interior and exterior corners.
1. Fabricate from the following materials:
a. Metallic-coated steel sheet: 0.040 inch thick.

B. Copings: Fabricate in minimum 96-inch-long, but not exceeding 12-foot-long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and drill elongated holes for fasteners on interior leg. Miter corners, fasten and seal watertight. Shop fabricate interior and exterior corners.
1. Fabricate from the following materials:

a. Metallic-coated sheet steel: 0.040 inch thick.

C. Base Flashing: Shop fabricate interior and exterior corners. Fabricate from the following materials:
   1. Metallic-coated sheet steel: 0.028 inch thick.

D. Counterflashing: Shop fabricate interior and exterior corners. Fabricate from the following materials:
   1. Metallic-coated sheet steel: 0.040 inch thick.

E. Roof-Penetration Flashing: Fabricate from the following materials:
   1. Metallic-coated sheet Steel: 0.028 inch thick.

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.

B. Install slip sheet, wrinkle free, over underlayment before installing sheet metal flashing and trim.
   1. Install in shingle fashion to shed water.
   2. Lap joints not less than 4 inches.

3.2 INSTALLATION, 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 spaced not more than 12 inches o.c.
   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.

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. Coat concealed side of sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
   2. 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 feet 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 wood blocking or sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws 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 manufacturer's warranty.

G. Rivets: Rivet joints where necessary for strength.

3.3 INSTALLATION OF ROOF FLASHINGS

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.
   3. Anchor to resist uplift and outward forces in accordance with recommendations in FM Global Property Loss Prevention Data Sheet 1-49 for FM Approvals' listing for required windstorm classification.

C. Copings:
   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.

      a. Interlock exterior bottom edge of coping with continuous cleat anchored to substrate at 24-inch centers.
      b. Anchor interior leg of coping with washers and screw fasteners through slotted holes at 24-inch centers.
   3. Anchor to resist uplift and outward forces in accordance with recommendations in FM Global Property Loss Prevention Data Sheet 1-49 for specified FM Approvals' listing for required windstorm classification.

D. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending minimum of 4 inches over base flashing. Install stainless steel draw band and tighten.

E. 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.

F. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with butyl sealant and clamp flashing to pipes that penetrate roof.

3.4 INSTALLATION OF WALL FLASHINGS

A. Install sheet metal wall flashing to intercept and exclude penetrating moisture in accordance with cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.

B. Opening Flashings in Frame Construction: Install continuous head, sill, jamb, and similar flashings to extend 4 inches beyond wall openings.

3.5 INSTALLATION TOLERANCES

A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet 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 079200

JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Nonstaining silicone joint sealants.
2. Urethane joint sealants.
3. Mildew-resistant joint sealants.

1.2 ACTION SUBMITTALS

A. Product Data: For each joint-sealant product.

B. Samples: For each kind and color of joint sealant required.

C. Joint-Sealant Schedule: Include the following information:

1. Joint-sealant application, joint location, and designation.
2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.
4. Joint-sealant color.

1.3 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Preconstruction laboratory test reports.

C. Preconstruction field-adhesion-test reports.

D. Field-adhesion-test reports.

E. Sample warranties.

1.4 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.

1.5 PRECONSTRUCTION TESTING

A. Preconstruction Laboratory Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.

1. Adhesion Testing: Use ASTM C 794 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
2. Compatibility Testing: Use ASTM C 1087 to determine sealant compatibility when in contact with glazing and gasket materials.
3. Stain Testing: Use ASTM C 1248 to determine stain potential of sealant when in contact with masonry substrates.

B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates. Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

1.6 WARRANTY

A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. 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: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, GENERAL

A. Colors of Exposed Joint Sealants: As selected by Architect f rom manufacturer's full range.

1. Basis-of-Design Product: Subject to compliance with requirements, provide product from one of the following or comparable product by one of the following:
   a. Dow Corning Corporation
   b. Sika Corporation; Joint Sealants.
   c. Tremco Incorporated.

2.2 NONSTAINING SILICONE JOINT SEALANTS

A. Nonstaining Joint Sealants: No staining of substrates when tested according to ASTM C 1248.

B. Silicone, Nonstaining, S, NS, 100/50, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

2.3 URETHANE JOINT SEALANTS

A. Urethane, S, NS, 100/50, T, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Uses T and NT.

2.4 JOINT-SEALANT BACKING

A. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), Type O (open-cell material), Type B (bicellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

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.

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 laitance and form-release agents from concrete.
2. 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.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience.

C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces.

3.2 INSTALLATION OF JOINT SEALANTS

A. General: Comply with ASTM C 1193 and joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Install sealants after walls have been painted.

C. Install sealant backings of kind 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.

D. 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.

E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.

1. Provide concave joint profile per Figure 8A in ASTM C 1193 unless otherwise indicated.

3.3 FIELD QUALITY CONTROL

A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:

1. Extent of Testing: Test completed and cured sealant joints as follows:

   a. Perform 10 tests for the first 1000 feet of joint length for each kind of sealant and joint substrate.
   b. Perform one test for each 1000 feet of joint length thereafter or one test per each floor per elevation.

2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

B. 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.

3.4 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Locations:

    a. Expansion joints in CMU walls.
    b. Perimeter of all exterior window frames adjacent to roof and in walls that are to be painted.
    c. Miscellaneous locations as required.

2. Joint Sealant: Silicone, nonstaining.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

B. Joint-Sealant Application: Horizontal traffic surfaces.

1. Joint Locations:

    a. Miscellaneous locations as needed.
    b. Other joints as indicated on Drawings.

2. Joint Sealant: Urethane.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

END OF SECTION

SECTION 086200

UNIT SKYLIGHTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Domed plastic unit skylights

1.2 REFERENCES

A. Aluminum Association (AA):
   1. AA M12C22A41 - Anodized Plus Finish.
   2. AA M12C22A32/A34 - Color anodized: Class II, Color Anodic Finish.

B. American Architectural Manufacturer's Association (AAMA):
   1. AAMA 501.2 - Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.
   2. AAMA 605.2 - Voluntary Specification for High Performance Organic Coatings.
   3. AAMA 607.1 - Voluntary Guide Specifications and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum.
   4. AAMA 612 - Voluntary Specifications and Performance Requirements and Test Procedures for Combined Coatings of Anodic Oxide and Transparent Coatings on Architectural Aluminum, for Finishes such as Anodized Plus.

C. ASTM International (ASTM):
   1. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
   2. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass Kind HS, Kind FT Coated and Uncoated Glass.
   3. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
   4. ASTM E773 - Standard Test Method for Accelerated Weathering of Sealed Insulating Glass Units.
   5. ASTM E774 - Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units.

D. American Welding Society (AWS): AWS Structural Welding Code.

1.3 SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Indicate materials, finishes and installation procedures recommended by manufacturer.
   4. Indicate compliance with specified design criteria.
   5. Indicate compliance with performance requirements.

6. Include product specific glazing details.

B. Shop Drawings:
   1. Indicate material types, gauges and finishes, fabrication details and installation details.
   2. Show glazing types, methods of attachment and thermal movement provisions.

C. Indicate compliance with specified structural design criteria.
   1. Submitted design calculations shall bear seal of a professional engineer licensed in the State in which the skylight is to be installed.
   2. Certify that engineer has reviewed shop drawings.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications:
   1. Skylight manufacturer shall have a minimum of ten years experience in design, fabrication and installation of custom aluminum skylight systems and shall have a certified quality assurance program.

B. Installer Qualifications:

C. Installer shall be trained and approved by manufacturer.

D. Installer shall have five years experience with skylight type, size and complexity.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.7 WARRANTY

A. Performance Warranty: Provide manufacturer's written warranty covering skylight work. Warranty shall cover defective materials, workmanship and performance.
   1. 5 years.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: American Skylights, Inc.

B. Other Manufacturers submit for approval prior to bid.

2.2 SKYLIGHT PERFORMANCE

A. Load:
   1. Deflection of framing members shall not exceed L/180 or 1 inch (25 mm) whichever is less.
   2. Polycarbonate unit skylights shall meet the requirements of uniform load test ASTM E330 that requires glazing to withstand a positive and negative test pressure of 30 psf.

B. Air Infiltration:
   1. Polycarbonate unit skylights shall meet the requirements of ASTM E283 that allows a maximum air infiltration of 0.06 cfm (.0017 cu. m/m) of the total glazed surface area.

C. Water Infiltration:
   1. Polycarbonate unit skylights shall meet the requirements of ASTM E547/E331 that allows for no water infiltration at a test pressure of 12 psf (571 Pa).

2.3 PLASTIC SKYLIGHT

A. Dade County Thermally Broken Curb Mount: Double domed polycarbonate thermally broken curb mount skylight unit. Sizes as shown on drawings.
   1. Model DTCM-60 Dade County Thermal Break Curb Mount as manufactured by American Skylights.
   2. Performance Test: Report No. 65541.01-801-18. Architectural Testing, Inc., 130 Derry Court, York, PA 17402.
   3. NOA: Product Control Notice of Acceptance (NOA) 09-0316.02. Miami-Dade County Building Code Compliance Office.
   4. Performance Requirement:
      a. Impact Resistance: Unit skylights shall meet the requirements of Protocol PA-201-94.
      b. Static Air Pressure: Unit skylights shall meet the requirements of Protocol PA-202-94.
      c. Water Infiltration: Unit skylights shall meet the requirements of Protocol PA-202-94.
      d. Structural Loads: Unit skylights shall meet the requirements of Protocol PA-202-94; Design Load = 60.0 psf (2.9 kPa).
      e. Cyclic Wind Pressure Loading: Unit skylights shall meet the requirements of Protocol PA-203-94; Design Load = 60.0 psf (2.9 kPa).
   5. Assembly: Skylights shall be factory assembled and factory glazed.
      a. Polycarbonate Domes: As manufactured by Sheffield Hyzod.
      b. Curb Mount Frame: Frame shall be fabricated from .060 inch by 1.5 inches by 1.75 inches (1.5 mm by 38 mm by 44 mm) T6063-T5/T6 aluminum extrusion. Frame shall have an integral condensation gutter. Corners shall be welded using the heliarc process.
      c. Domes shall be secured to frame with a fully welded retainer cap, thickness of .060 inch (1.5 mm).

d. Dow Corning 795 structural silicone sealant shall be applied continuously around perimeter of skylight between extruded aluminum retaining angle and top dome.
e. Schnee-Morehead 5127 Sealant Tape shall be applied continuously between polycarbonate bottom dome and .080 inch (2.0 mm) T6063 extruded aluminum frame.
f. Fasteners: Fasteners used in the factory assembly process shall be stainless steel. Fasteners and screws used for securing skylight to structure shall be stainless steel and shall be provided by the Contractor.

2.4 FABRICATION

A. Rectangular and Square Curb Mount:
   1. Thermally broken curb mount frame shall be fabricated from 6063-T5/T6 aluminum extrusion.
      a. Thickness shall be minimum .060 inch (1.5 mm) with a polyurethane thermal break to reduce thermal transfer and reduce condensation on the interior of the frame.
   2. All corners shall be welded using the heliarc process.
   3. Aluminum Finish:
      a. Mill finish.

B. Polycarbonate Domes:
   1. Domes shall be secured to frame with a fully welded retainer cap, minimum thickness of .125 inch (3.0 mm).
   2. Polycarbonate domes shall be:
      a. Double Dome Color: Clear/Clear.

C. Glazing Gaskets and Sealants: Glazing to be separated from frame by a continuous extruded black Santoprene gasket.

D. Fasteners: Screws and fasteners used in the factory assembly process shall be stainless steel. Fasteners and screws used for securing skylight to structure shall be suitable for substrate.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 CLEANING

A. General Cleaning: Installer shall remove all protective coverings from frames and domes and shall leave installation free from debris and sealant markings.

B. Final Cleaning: Final cleaning in accordance with manufacturers recommendations. Cleaning instructions shall be located on manufacturer's label.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 099000

PAINTING

PART 1 - GENERAL

1.1 DESCRIPTION

A. Definitions:
   1. "Paint" and "painting" refer to applied coatings.

B. Work included:
   1. Paint HM window Frames.
   2. Paint CMU wall surfaces
   3. Other surfaces as noted on the drawings.

1.2 QUALITY ASSURANCE

A. American Society for Standards and Testing: 1. ASTM-D3134.

1.3 SUBMITTALS

A. Product data:
   1. Manufacturer's data for each paint type to be applied indicating conformance to specifications.
      a. Name of material.
      b. Contents by volume.

B. Samples:
   1. Manufacturers complete range of colors for selection.
   2. Gloss samples.

C. Project information:
   1. Letter stating VOC compliance of materials to local regulations.

D. Contract closeout information:
   1. Maintenance data.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver in original labeled containers.

B. Protect from freezing or damage.

C. Store materials in place designated by Owner.

D. Keep storage neat and clean.

E. Repair damage thereto or to surroundings.

F. Remove rags and waste from building daily.

G. Avoid danger of fire.

1.5 JOB CONDITIONS

A. Install when temperature and humidity conditions are appropriate per manufacturer of product.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Acceptable manufacturers:
   1. Provide paint as product of one manufacturer as far as possible.
   2. Contractor may propose products for use, produced by an approved manufacturer when he believes proposed product is equivalent to product listed in specification.
   3. Contract Administrator must agree that proposed product is equivalent.
   4. If Contract Administrator does not agree that proposed product is equivalent, Contractor will provide product listed in specification.
   5. Paint and coating systems listed are Sherwin Williams unless noted otherwise.
      a. Use comparable quality paints by approved manufacturer.
   6. Paints:
      a. Base:
         1) Sherwin Williams.
      b. Optional:
         1) ICI Paint Stores.
         2) PPG Architectural Finishes.
         3) MAB Paints and Coatings.
         4) Diamond Vogel Paint.
         5) Moore, Benjamin.
         6) Tnemec.
   7. Galvanized metal cleaners:
      a. Great Lakes.
   8. Other manufacturers must submit their products to the Architect 10 days prior to the bid date for approval to be considered as an equal.

B. Paints: As specified in paragraphs "Schedule – Paint Systems".
   1. Use best quality by approved manufacturers.
   2. Unspecified products: Use best quality by reputable, recognized manufacturers.
   3. Colors: As noted in color schedule and as indicated in Section 15190.
      a. Specifier: Do not include provision for accent colors if no accent walls or graphics are expected. Check with Interiors.
   4. Following is a listing of surfaces and type of paint to be applied.
   5. Submit gloss samples for approval prior to use.
   6. Add flatteners if necessary, to achieve specified gloss.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine surfaces carefully for defects which cannot be corrected and might prevent satisfactory results.

B. Commencing of work in a specific area constitutes acceptance of surfaces, and responsibility for performance.

3.2 PREPARATION - GENERAL

A. Assure that surfaces are clean and dry.

B. Assure that surfaces are free of foreign materials which will affect adhesion or appearance.

C. Remove mildew and neutralize surface.

D. Eliminate efflorescence before painting.

E. Before painting, test surfaces with moisture meter.

F. Paint when moisture is within paint manufacturer's acceptable limits.

3.3 MATERIAL PREPARATION

A. Mix and prepare materials per manufacturer’s specifications.

B. Stir, agitate, or blend materials to produce a mixture of uniform density as required for application of materials.

3.4 PREPARATION - FERROUS METAL SURFACES AND HOLLOW METAL

A. Follow requirements of SSPC SP1 and SP3.

B. Wire brush or grind as necessary to remove shoulders at edge of sound paint to prevent telegraphing.

C. Touch up damaged shop coats.

3.5 APPLICATION - GENERAL

A. Paint surfaces as specified in paragraphs "Schedule - Paint Systems".

B. Provide complete coverage and hide.
   1. Paint systems are to cover.
   2. When color or undercoats show through, apply additional coats at no additional cost until paint film is of uniform finish and color.

C. Employ only skilled mechanics.

D. Mix and apply as recommended by manufacturer.

E. If Contract Administrator so directs, do not apply succeeding coats until he has an opportunity to observe previous coat.

F. Remove and protect hardware, accessories, plates, fixtures, finished work, and similar items; or provide ample in-place protection.

G. Upon completion of painting, carefully replace removed items and/or remove protection.

H. Apply materials under adequate illumination.

I. Evenly spread and smoothly flow on for full, smooth cover.

J. Assure that coats are dry before recoating.

K. Touch up suction or hot spots in plaster, gypsum wallboard, concrete block, and concrete before painting.

L. Touch up abraded areas of shop prime coats before subsequent coats are applied.

3.6 APPLICATION - EXTERIOR

A. Do not paint when surface temperature is below 50 degF, while surface is damp, or during cold, rainy or frosty weather.

B. Avoid painting surfaces exposed to hot sun.

3.7 SURFACES NOT TO BE PAINTED

A. Anodized aluminum, stainless steel, chromium plate, glass, copper, bronze, or similar materials.

B. Moving parts of valves, operating units, mechanical and electrical parts, such as valve and damper operators, sending devices, motor, and fan shafts.

C. Code labels, such as UL, FM.

D. Equipment identification or rating plates.

E. Items having complete factory finish.

3.8 PROTECTION AND CLEANUP

A. Protect adjacent work against damage by painting and finishing work.

B. Clean, repair or replace, and repaint damaged work as directed by Contract Administrator.

C. Provide "WET PAINT" signs.

D. Remove temporary protective wrappings, after completion of operations.

E. Clean paint spattered surfaces.

F. Use care not to damage finished surfaces.

G. Remove surplus materials, scaffolding and debris.

H. Leave areas broom clean.

3.9 SCHEDULE - PAINT SYSTEMS

A. CMU (Concrete Masonry)
   1. Primer: LX12W0050 – Loxon Water Blocking Primer.
   2. First coat: B65W00721 – Pro Industrial Waterbased Acrolon 100 Polyurethane.
   3. Second coat: B65W00721 – Pro Industrial Waterbased Acrolon 100 Polyurethane.

B. Ferrous metals not galvanized – Window Frames:
   1. Primer: B66W01310 – ProIndustrial ProCryl Primer White.
   2. First coat: B53W01151 – ProIndustrial Water Based Urethane Alkyd Semi-Gloss.
   3. Second coat: B53W01151 – ProIndustrial Water Based Urethane Alkyd Semi-Gloss.

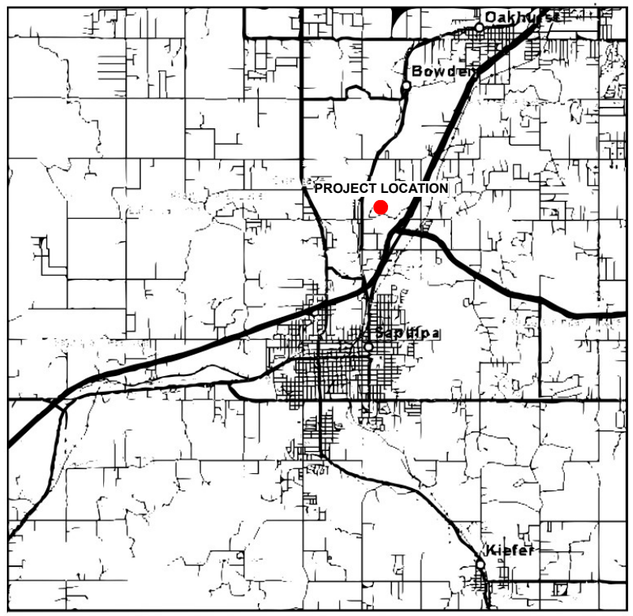
END OF SECTION

Creek County Justice Center

ROOF REPLACEMENT

BID DOCUMENTS

11/2/21



9175 Ridgeview St, Sapulpa, OK 74066

48 HOURS BEFORE YOU DIG...
CALL OKIE: 1-800-522-6543

LOCATIONS OF UNDERGROUND UTILITY LINES WERE OBTAINED FROM THE UTILITY OWNERS AND HAVE BEEN SHOWN TO THE EXTENT KNOWN. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS WERE TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS EXACT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALL "OKIE" 48 HOURS PRIOR TO ANY EXCAVATION TO DETERMINE AND VERIFY THE EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES HEREIN, PRIOR TO FURTHER CONSTRUCTION.

11/3/2021 10:52:27 AM

ARCHITECT:

BKL ENGINEERS | ARCHITECTS

ARCHITECTURE | CIVIL | STRUCTURAL

C.A. 0049 (ARCH) RENEWAL DATE: 06-30-2023
C.A. 00262 (PE) RENEWAL DATE: 06-30-2022

1623 E. 6TH ST.
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BKL PROJ. NO.: 790

PREPARED BY:

JENNIFER HAMMOCK
PRINCIPAL
BKL, INCORPORATED

STATE OF OKLAHOMA
JENNIFER HAMMOCK
LICENSED ARCHITECT

11/2/21

PREPARED FOR:

BOARD OF COUNTY COMMISSIONERS:
CREEK COUNTY
COMM. NEWT STEPHENS

SHEET LIST:

ABBREVIATIONS:

ABV..... ABOVE
AFF..... ABOVE FINISH FLOOR
AC..... ACOUSTICAL
ACT..... ACOUSTICAL CEILING TILE
ASASS..... ADA SHOWER SEAT
ADD..... ADDENDUM
ADDL..... ADDITIONAL
ADH..... ADHESIVE
ADJ..... ADJUSTABLE
ADMIN..... ADMINISTRATION
A/C..... AIR CONDITIONING
AHU..... AIR HANDLING UNIT
AL..... ALUMINUM
ALUM..... ALUMINUM
ALT..... ALTERNATE
ANCH..... ANCHOR
AB..... ANCHOR BOLT
ANG..... ANGLE
ANOD..... ANODIZED
APPROX... APPROXIMATE
ARCH..... ARCHITECT, ARCHITECTURAL
A/E..... ARCHITECT-ENGINEER
AD..... AREA DRAIN
ASB..... ASBESTOS
ASP..... ASPHALT
ASSY..... ASSEMBLY
AUTO..... AUTOMATIC

BCS..... BABY CHANGING STATION
BD..... BOARD
BDRM..... BEDROOM
BEL..... BELOW
BK..... BRICK
BKT..... BRACKET
BL..... BUILDING LINE
BLDG..... BUILDING
BLK..... BLOCK, BLOCKING
BM..... BEAM
BNCHMK... BENCH MARK
BO..... BY OWNER
BOD..... BOTTOM OF DECK
BOM..... BOTTOM OF MULLION
BOT..... BOTTOM
BP..... BRICK PAVER
BR..... BACKER ROD
BS..... BATH STATION PULL CORD
BSMT..... BASEMENT
BT..... BENT

CAB..... CABINET
CO2..... CARBON DIOXIDE
CPT..... CARPET
CO..... CASED OPENING
CSG..... CASING
CI..... CAST IRON
CLG..... CEILING
CHPTP..... CLG HUNG PLASTIC TLT PARTITION
CSS..... CEILING SUPPORT SYSTEM
CEM..... CEMENT
CTR..... CENTER
CL..... CENTER LINE
C/C..... CENTER TO CENTER
CER..... CERAMIC
CT..... CERAMIC TILE
CR ..... CHAIR RAIL
CHKBD..... CHALK BOARD
BLK..... BLOCK, BLOCKING
BM..... BEAM
BNCHMK... BENCH MARK
BO..... BY OWNER
BOD..... BOTTOM OF DECK
BOM..... BOTTOM OF MULLION
BOT..... BOTTOM
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CHPTP..... CEILING HUNG PLASTIC TOILET PARTITION
CSS..... CEILING SUPPORT SYSTEM
CEM..... CEMENT
CTR..... CENTER
CL..... CENTER LINE
C/C..... CENTER TO CENTER
CER..... CERAMIC
CT..... CERAMIC TILE
CR ..... CHAIR RAIL
CHKBD..... CHALK BOARD
C, CHAN.... CHANNEL
CIR..... CIRCLE, CIRCULAR
CLOUT..... CLEAN OUT
CLR..... CLEAR, CLEARANCE
CLO..... CLOSET
CH..... COAT HOOK
CR..... COLD ROLLED
COL..... COLUMN
C-FRZ..... COMMERCIAL FREEZER
C-FRG..... COMMERCIAL REFRIGERATOR
COMPT..... COMPARTMENT
COMPR..... COMPRESSED, COMPRESSOR
C-FRG..... COMMERCIAL REFRIGERATOR
C-FRZ..... COMMERCIAL FREEZER
CONC..... CONCRETE
CMU..... CONCRETE MANONRY UNIT
CMP..... COMPOSITE METAL PANEL
COND..... CONDITION
CONN..... CONNECTION
CONST..... CONSTRUCTION
CP/CI..... CONTRACTOR PROVIDED / CONTRACTOR INSTALLED
CPI..... CONTRACTOR PROVIDED AND INSTALLED
CJ..... CONTROL JOINT
CONT..... CONTINUE, CONTINUOUS
CONTR..... CONTRACTOR
CONV..... CONVENIENCE
COR..... CORNER
CG..... CORNER GUARD
CORR..... CORRIDOR, CORRUGATED
CNTR..... COUNTER
CFL..... COUNTER FLASHING
CS..... COUNTERSUNK
CRS..... COURSES
CUBE..... CUBICAL
CW..... CURTAINWALL
CTRK..... CURTAIN TRACK

DP..... DAMPROOFING
DBA..... DEFORMED BAR ANCHOR
DEMO..... DEMOLISH, DEMOLITION
DEPT..... DEPARTMENT
DTL..... DETAIL
DIAGM..... DIAGRAM
DIAGL..... DIAGONAL
DIA..... DIAMETER
DIM..... DIMENSION
DO..... DITTO
DIV..... DIVISION
DB..... DOCK BUMPER
DR..... DOOR
DBL..... DOUBLE
DN..... DOWN
DS..... DOWNSPOUT
DRN..... DRAIN
DWG..... DRAWING
DWGS..... DRAWINGS

EA..... EACH
EW..... EACH WAY
E..... EAST
ELAST..... ELASTIC, ELASTOMERIC
ELEC..... ELECTRIC
EWC..... ELECTRIC WATER COOLER
EL..... ELEVATION
ELEV..... ELEVATOR
ENCL..... ELNCLOSED, ENCLOSURE
E/E..... END TO END
ENGR..... ENGINEER
ENT..... ENTRY, ENTRANCE
EM..... ENTRY MAT

EPX..... EPOXY
EQ..... EQUAL
EQMT..... EQUIPMENT
ESC..... ESCAPE
ESCL..... ESCULATOR
ETR..... EXISTING TO REMAIN
EPDM..... ETHYLENE PROPYLENE DIENE MONOMER
EXC..... EXCAVATE
EF..... EXHAUST FAN
EXIST..... EXISTING
EXPAN..... EXPANSION
EJ..... EXPANSION JOINT
EXP JT..... EXPANSION JOINT
EXP..... EXPOSED
EXT..... EXTERIOR
EIFS..... EXTERIOR INSULATION FINISH SYSTEM
EB, EXB..... EXPANSION BOLT

FWC..... FABRIC WALL COVERING
FAB..... FABRICATE, FABRICATED, FABRIC
FB..... FACE BRICK
FOS..... FACE OF STUD
F/F..... FACE TO FACE
FSTN..... FASTENER
FG..... FIBERGLASS
FV..... FIELD VERIFY
FIN..... FINISH
FF..... FINISH FLOOR
FA..... FIRE ALARM
FDC..... FIRE DEPARTMENT CONNECTION
FE..... FIRE EXTINGUISHER
FEB..... FIRE EXTINGUISHER ON WALL BRACKET
FEC..... FIRE EXTINGUISHER IN WALL CABINET
FHVC..... FIRE HOSE VALVE CABINET
FR..... FIRE RATED
FRTD..... FIRE RETARDANT
FIXT..... FIXTURE
FLASH..... FLASH
FLEX..... FLEXIBLE
FL..... FLOOR
FD..... FLOOR DRAIN
FLRG..... FLOORING
FMPTP..... FLOOR MOUNTED PLASTIC TOILET PARTITION
FLOUR..... FLUORESCENT
FW..... FOOD WELL
FT..... FOOT, FEET
FTG..... FOOTING
FDN..... FOUNDATION
FRM..... FRAME, FRAMING
FS..... FURNISH
FURR..... FURRED, FURRING

GALV..... GALVANIZED
GI..... GALVANIZED IRON
G..... GAS
GA..... GAUGE
GC..... GENERAL CONTRACTOR
GFRC..... GLASS FIBER REINFORCED CONCRETE
GL..... GLASS, GLAZED, GLAZING
GB..... GRAB BARS
GR..... GRADE
GRA..... GRANITE
GND..... GROUND
GRT..... GROUT
GB..... GYPSUM BOARD
GYP BD..... GYPSUM BOARD
GMGSB..... GLASS-MAT GYPSUM SHEATHING BOARD

HDCP..... HANDICAP
HR..... HANDRAIL
HS..... HAND SINK
HDW..... HARDWARE
HDWD..... HARDWOOD
HD..... HEAD, HEADER
HTR..... HEATER
HVAC..... HEATING, VENTILATION, & AIR CONDITIONING
HVY..... HEAVY
HT..... HEIGHT
HPT..... HIGH POINT
HC..... HOLLOW CORE
HM..... HOLLOW METAL
HSS..... HOLLOW STRUCTURAL SECTIONS
HORZ..... HORIZONTAL
HB..... HOSE BIB
HOSP..... HOSPITAL
HW..... HOT WATER
H..... HYDROGEN

IM..... ICE MACHINE
IMPR..... IMPREGNATE
INCAND... INCANDESCENT
INCIN..... INCINERATOR
IN..... INCH, INCHES
IND..... INDUSTRIAL
INFO..... INFORMATION
ID..... INSIDE DIAMETER
INST..... INSULATE, INSULATION
INT..... INTERIOR, INTERNAL
INV..... INVERT
ISOL..... ISOLATION

JAN..... JANITOR
JT..... JOINT
JST..... JOIST
JCT..... JUNCTION
JB, J-BOX.. JUNCTION BOX

KIT..... KITCHEN
KD..... KNOCK DOWN
K/O..... KNOCK OUT
KOP..... KNOCK OUT PANEL

LAB..... LABORATORY
LAM..... LAMINATE, LAMINATED
LAND..... LANDING
LAV..... LAVATORY
HLAV..... LAVATORY, HANDICAPPED
L..... LEFT
LH..... LEFT HAND
LHR..... LEFT HAND REVERSE
LT..... LIGHT
LTG..... LIGHTING
LGMF..... LIGHT GAUGE METAL FRAMING
LWT..... LIGHT WEIGHT
LWTC..... LIGHT WEIGHT CONCRETE
LIN..... LINEAR
LDIF..... LINEAR DIFFUSER
LIQ..... LIQUID
LKS..... LOCK & KEY SWITCH
LOC..... LOCATION
LKR..... LOCKER
LG..... LONG
LLH..... LONG LEG HORIZONTAL
LLV..... LONG LEG VERTICAL
LOUV..... LOUVER
LP..... LOW POINT
LBR..... LUMBER
LVT..... LUXURY VINYL TILE

MACH..... MACHINE
MAN..... MANUAL
MH..... MANHOLE
MFR..... MANUFACTURER
MFD..... MANUFACTURED
MK..... MARK
MKBD..... MARKER BOARD
MAS..... MASONRY
MO..... MASONRY OPENING
MAT..... MATERIAL
MAX..... MAXIMUN
MECH..... MECHANICAL
MED..... MEDICAL
MA..... MEDICAL AIR
MG..... MEDICAL GAS
MV..... MEDICAL VACUMM
MCF..... MEDIUM DENSIY FIBER BOARD
MEMB..... MEMBRANE
MTL..... METAL
MEZZ..... MEZZANINE
MLWK..... MILLWORK
MIN..... MINIMUM
MIR..... MIRROR
MU..... MIRROR UNIT
MISC..... MISCELLANEOUS
MD..... MODEL, MODULE
MONO..... MONOLITHIC
MBHUS..... MOP/BROOM HOLDER UNIT W/ SHELF
MTD..... MOUNT, MOUNTED
MILL..... MULLION
MULT..... MULIPLE

NAT..... NATURAL
NEO..... NEOPRENE
N..... NITROGEN
N2O..... NITROGEN OXIDE
NRC..... NOISE REDUCTION COEFFICIENT
NOM..... NOMINAL
NC..... NON-SLIP
N..... NORTH
NA..... NOT APPLICABLE
NIC..... NOT IN CONTRACT
NTS..... NOT TO SCALE
NO, #..... NUMBER

OFF..... OFFICE
OC..... ON CENTER
OPNG..... OPENING
OPP..... OPPOSITE
OH..... OPPOSITE HAND
ORIG..... ORIGINAL
OD..... OUTSIDE DIAMETER
O/O..... OUT TO OUT
O/A..... OVERALL
OFRD..... OVERFLOW ROOF DRAIN
O/H..... OVERHEAD
OFOI..... OWNER FURNISH/OTHER INSTALL
OFCI..... OTHER FURNISH/CONTRACTOR INSTALLED
OX, O2..... OXYGEN

PNT..... PAINT
PNTD..... PAINTED
PTS..... PAINT STAIN
PNL..... PANEL
PTD..... PAPER TOWEL DISPENSER
PTWD..... PAPER TOWEL DISPENSER/WASTE RECEPTACLE
PARA..... PARAGRAPH
PAR..... PARALLEL
PBD..... PARTICLE BOARD
PTN..... PARTITION
PED..... PEDESTAL, PEDESTRIAN
PERF..... PERFORATE (D)
PERP..... PERPENDICULAR
PC WKST.. PERSONAL COMPUTER WORKSTATION
PC..... PIECE
PLAS, PL... PLASTER
PLAM..... PLASTIC LAMINATE
PL..... PLATE
PLAT..... PLATFORM
PLB..... PLUMBING
PLWD..... PLYWOOD
PTS..... PNEUMATIC TUBE STATION
PT..... POINT
POL..... POLISH
PSF..... POUNDS PER SQUARE FOOT
PWR..... POWER
PC..... PRECAST CONCRETE
PEMB..... PRE-ENGINEERED METAL BUILDING
PRE FAB... PREFABRICATED
PFN..... PREFINISHED
PREP..... PREPARATION
PRT..... PRINTER
PROD..... PRODUCTION
PROJ..... PROJECT, PROJECTOR
PS..... PROJECTION SCREEN
PL..... PROPERTY LINE
PUR..... PURLIN (S)
POLYS..... POLYSTYRENE

QTY..... QUANTITY
QT..... QUARRY TILE

R, RAD..... RADIUS
RCV..... RECIEVER
RECEPT.... RECEPTACLE
REC..... RECESSED
RE, REF... REFERENCE
RFGR..... REFRIGERATOR
REG..... REGISTER, REGULATOR
REBAR..... REINFORCING BAR
REINF..... REINFORCE, REIN FORCING
REPRO..... REPRODUCE
REQ..... REQUIRE (D)
RESIL..... RESILIENT
RESI..... RESISTANT
RW..... RETAINING WALL
RET..... RETURN
REV..... REVISE, REVISION
RT..... RIGHT
RH..... RIGHT HAND
RHR..... RIGHT HAND REVERSE
R..... RISER
RBHK..... ROBE HOOK
RD..... ROOF DRAIN
RTU..... ROOF TOP UNIT
R/H..... ROOF HATCH
RM..... ROOM
RO..... ROUGH OPENING
RB..... RUBBER BASE

SNDU..... SANITARY-NAPKIN DISPOSAL UNIT
SS..... SANITARY SEWER
SCHED..... SCHEDULE, SCHEDULED
SCW..... SCREW (S)
SLNT..... SEALANT
SCD..... SEAT COVER DISPENSER
SECTION... SECTION
SEP..... SEPARATE
SHTHG..... SHEATHING
SHT..... SHEET
SV..... SHEET VINYL
SHL..... SHELF, SHELVES
SCR..... SHOWER CURTAIN, ROD, AND HOOKS
SHWR..... SHOWER ROD
SIM..... SIMILAR
SGL..... SINLED PLY
1SU..... SINK UNIT - SINGLE
2SU..... SINK UNIT - DOUBLE
3SU..... SINK UNIT - TRIPLE
SDISH..... SOAP DISH
SC..... SOLID CORE
SDSF..... SOLID SURFACE
SAFB..... SOUND ATTENUATING FIRE BATTS
STC..... SOUND TRANSMISSION COEFFICIENT
S..... SOUTH
SP..... SPANDREL
SPEC..... SPECIFICATION (S)
SQ..... SQUARE
SQFT, SF... SQUARE FOOT
STAG..... STAGGERED
SST..... STAINLESS STEEL
STD..... STAINDARD
STA..... STATION
STL..... STEEL
STIFF..... STIFFENER
STIR..... STIRRUP
ST..... STONE
STOR..... STORAGE
STORFT.... STOREFRONT
SD..... STORM DRAIN
STR..... STRUCTURE, STRUCTURAL
SUP..... SUPPLY, SUPPORT
SUR..... SURFACE
SL..... SURGICAL LIGHT
SUS..... SUSPEND (ED)
SCG..... SUSPENDED CEILING GRID
SW..... SWITCH
SYM..... SYMMETRICAL
SYS..... SYSTEM

TBD..... TACKBOARD
TEL..... TELEPHONE
TV..... TELEVISION
TEMP..... TEMPERED
THK..... THICK
TRHD..... THRESHOLD
THRU..... THROUGH
TGL..... TINTED GLASS
TLT, TOIL... TOILET
TTD..... TOILET TISSUE (ROLL) DISPENSER
T&G..... TONGUE AND GROVE
T&B..... TOP AND BOTTOM
TO..... TOP OF
TBM..... TOP OF BEAM
TOC..... TOP OF CURB
TOM..... TOP OF MULLION
TOS..... TOP OF STEEL
TOW..... TOP OF WALL
TB..... TOWEL BAR
TRK..... TRACK
T, TRD..... TREAD
TRTD..... TREATED
TD..... TRENCH DRAIN
TS..... TUBULAR STEEL
TYP..... TYPICAL

UC..... UNDERCOUNTER
UG..... UNDERGROUND
DL..... UNDERWRITERS LABORATORIES, INC.
UNF..... UNFINISHED
UH..... UNIT HEATER
UNO..... UNLESS NOTED OTHERWISE
UR..... URINAL
UTIL..... UTILITY

VS..... VACUUM SLIDE
V..... VALVE
VB..... VALVE BOX
VAR..... VARIES, VARIABLE
VIC..... VARIABLE INTENSITY CONTROL
VIF..... VERIFY IN FIELD
VTR..... VENT THROUGH ROOF
VERT..... VERTICAL
VEST..... VESTIBULE
VIN..... VINYL
VT..... VINYL TILE
VCT..... VINYL COMPOSITION TILE
VWC..... VINYL WALL COVERING
VOL..... VOLUME

WSCT..... WAINSCOT
WCAB..... WALL CABINET
WAD..... WARM-AIR DRYERS
W RCPT.... WASTE RECEPTACLE
WC..... WATER CLOSET
WH..... WATER HEATER
WP..... WATER PROOFING
WR..... WATER RESISTANT
WS..... WEATHER STRIP(ING)
WWF..... WELDING SIRE FABRIC
W..... WEST
WHC..... WHEEL CHAIR
WF..... WIDE FLANGE
W..... WIDE WIDTH
WDW..... WINDOW
WGL..... WIRE GLASS
W/..... WITH
W/O..... WITHOUT
WD..... WOOD
WI..... WROUGHT IRON

XT..... X-RAY TRACK SUPPPORT

YD..... YARD
YP..... YIELD POINT
YS..... YIELD STRENGTH

SYMBOLS

KEY NOTE (1.1)
WINDOW NUMBER (?)
PARTITION TYPE (?)
REVISION INDICATION AND KEY (?)
LEVEL AND ELEVATION INDICATION
DRAWING KEY, INDICATION AND SCALE
PLAN NORTH ARROW (N)
SECTION KEY (? ?)
ELEVATION (? ? ? ? ?)
DETAIL SECTION KEY (? ?)
DETAIL PLAN KEY (4 / A1-01)

(CMU) CONCRETE MASONARY UNIT
GYPSUM BOARD PARTITION.
EXISTING PARTITION
DEMOLISHED PARTITION.
GRID LINE
CENTER LINE

MATERIALS

CONCRETE
CONCRETE MASONRY UNIT
BRICK
GYPSUM, PLASTER, MORTAR
EARTH
AGGREGATE BASE
STEEL
ALUMINUM
RIGID INSULATION
INSULATION BATT
BLOCKING
BLOCKING - SHIM
PLYWOOD
WOOD

COPING WIDTHS:

A 8" NOMINAL COPING
B 14" NOMINAL COPING
C 18" NOMINAL COPING

GENERAL NOTES:

1. ARCHITECTURAL SHEETS ARE DRAWN ACCORDING TO A PLAN NORTH.
2. FOR ITEMS PROVIDED "BY OTHERS" PROVIDE AND INSTALL BLOCKING, MECHANICAL, ELECTRICAL, AND PLUMBING. REFERENCE MEP DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION COORDINATION.
3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT APPLICABLE CITY AND COUNTY STANDARDS. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS GOVERNING SAFETY, HEALTH AND SANITATION. THE CONTRACTOR SHALL PROVIDE ALL SAFEGUARDS, SAFETY DEVICES, AND PROTECTIVE EQUIPMENT AND TAKE ANY OTHER NEEDED ACTIONS TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT.
4. AREAS DISTURBED BY THE CONSTRUCTION OUTSIDE THE LIMITS OF THE CONSTRUCTION SHALL BE RETURNED TO THEIR PREVIOUS CONDITION AT CONTRACTOR'S EXPENSE AS DIRECTED BY ENGINEER. ORANGE PROTECTIVE FENCING SHALL BE INSTALLED AROUND THE DRIP LINE OF ALL TREES TO REMAIN WITHIN THE LIMITS OF CONSTRUCTION AND STAGING AREA. ALL AREAS DISTURBED WITHIN AND BEYOND THE LIMIT OF CONSTRUCTION LINE SHALL BE RE-VEGETATED.
5. COORDINATE THE CONSTRUCTION STAGING AREA WITH THE OWNER'S REPRESENTATIVE. IF REQUIRED THE AREA SHALL BE STABILIZED WITH AGGREGATE BASE TO A DEPTH OF 6" . THE GRAVEL IS TO BE REMOVED AT THE COMPLETION OF PROJECT. ALL COSTS TO BE INCLUDED IN LINE ITEM MOBILIZATION, DEMOBILIZATION, AND MISCELLANEOUS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE INCURRED TO THE EXISTING ROADWAY PAVEMENT, CURBS, SIDEWALKS, VEGETATION, DRIVEWAYS, LIGHTING, AND AMENITIES DURING CONSTRUCTION IF CAUSED BY CONSTRUCTION ACTIVITIES PERFORMED BY THE CONTRACTOR OR SUBCONTRACTORS.
7. FIELD VERIFY ALL EXISTING CONDITIONS TO DETERMINE, SIZE, LOCATION, TYPE, AND CONFIGURATIONS OF ALL ITEMS ON ROOF AND RELATED TO THE SCOPE OF WORK.
8. REMOVE ALL ORGANIC DEBRIS FROM ROOF AND ROOF DRAINS.
9. COORDINATE REROOFING OPERATIONS TO PREVENT WATER INFILTRATION INTO BUILDING DURING CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ANY WATER DAMAGE TO CONTENTS OF THE BUILDING DURING REROOFING OPERATIONS. ROOF SHALL BE SEALED AT THE END OF EACH DAYS WORK TO PREVENT WATER INTRUSION.
10. IF EXISTING STRUCTURAL DECK IS SHOWING SIGNS OF RUST OR FAILURE, NOTIFY ARCHITECT PRIOR TO PRECEDING.
11. REMOVE ANY ABANDONED ROOFTOP EQUIPMENT OR ITEMS. COORDINATE WITH OWNER.
12. COORDINATE ANY MECHANICAL FASTENERS WITH ELECTRICAL CONDUIT THAT MAY BE REINSTALLED.
13. CONTRACTOR WILL BE RESPONSIBLE TO REPAIR ANY EXISTING ELECTRICAL DAMAGED DURING REROOFING OPERATIONS.
14. SUBMIT TAPERED INSULATION SHOP DRAWING PLANS PRIOR TO INSTALLATION.
15. FLASH ANY PENETRATIONS THROUGH ROOF.
16. ALL METAL OR PVC PIPING AND CONDUITS SHALL BE ELEVATED ABOVE ROOF MEMBRANE AT ALL POINTS ON SUPPORT UNITS.

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C.A. 0049 (ARCH) RENEWAL DATE: 06-30-23
C.A. 262 (PE) RENEWAL DATE: 06-30-22

Creek County Justice Center
ROOF REPLACEMENT
9175 Ridgeview St, Sapulpa, OK 74066

PROJECT NO.: 790
SUBMITTAL: FINAL
ISSUE DATE: 11/2/21

PROJ. MANAGER: JDH
DESIGNED BY: KDR
DRAWN BY: AMS

REVISIONS:

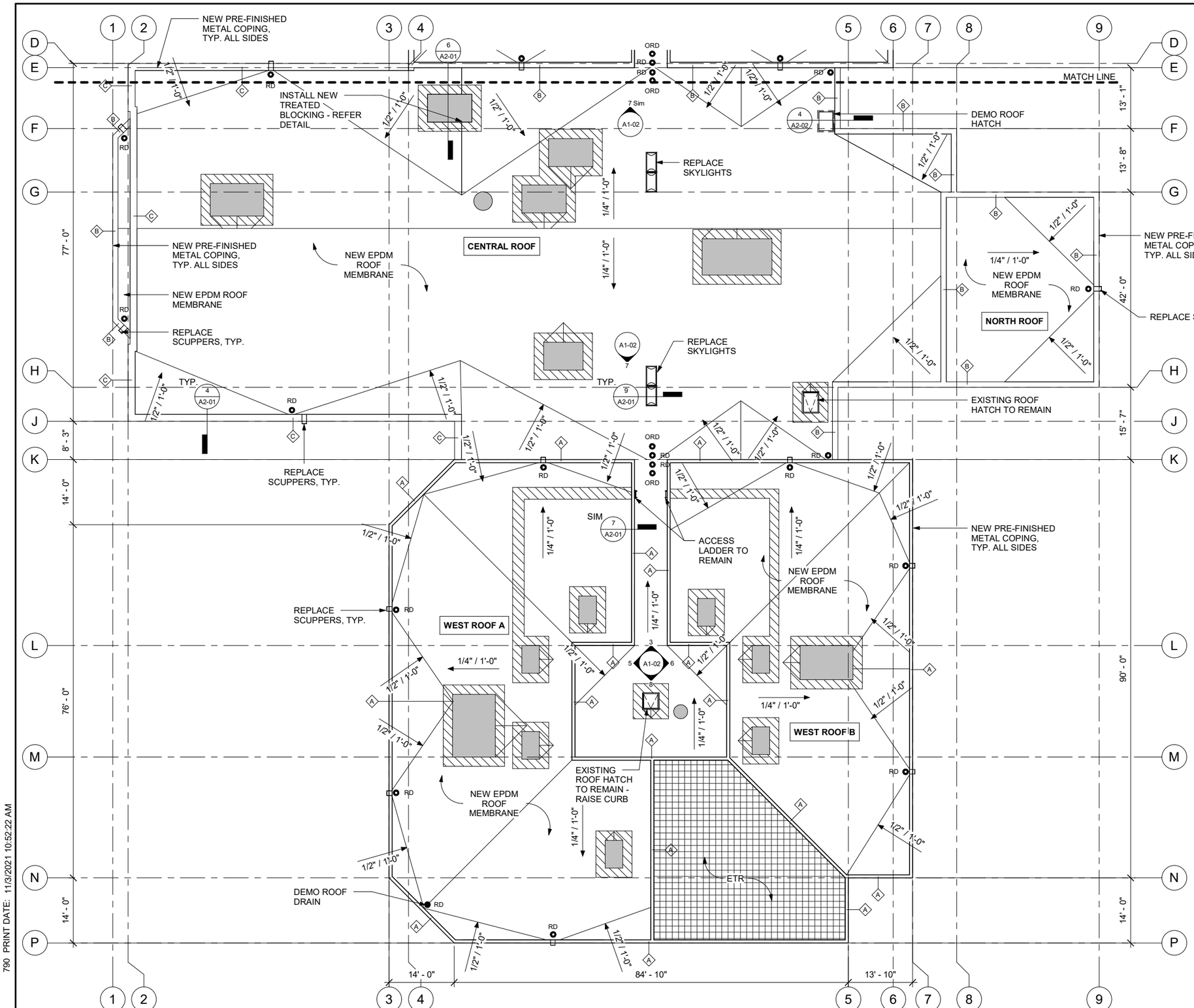
No.	Description	Date

STATE OF OKLAHOMA
JENNIFER HAMMOCK
LICENSED ARCHITECT
11/2/21

SHEET 2 OF 6

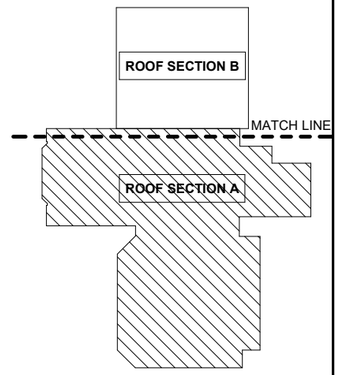
SYMBOLS, MATERIALS, & ABBREVIATIONS

G1-02



1 ROOF PLAN SECTION A

3/32" = 1'-0"



ROOF KEY PLAN

ROOF SYSTEMS

1. REMOVE EXISTING ROOF SYSTEM DOWN TO EXISTING DECK.
2. REMOVE EXISTING METAL COPING AND FLASHINGS.
3. REMOVE EXISTING METAL SCUPPERS.
4. REMOVE EXISTING PIPE HOUSINGS.
5. REMOVE EXISTING WOOD PIPE SUPPORTS.
6. ADD EPS INSULATION, 6" MIN. THICKNESS.
7. INSTALL 1/2"/FT. EPS TAPERED INSULATION FOR CRICKETS AS SHOWN.
8. INSTALL 1/2" COVERBOARD.
9. ADJUST ROOF DRAIN HEIGHTS AS NEEDED.
10. ADJUST VENT HEIGHTS AND CURB HEIGHTS AS NEEDED TO MEET 8" MIN. HEIGHT REQUIREMENTS.
11. INSTALL FULLY ADHERED EPDM MEMBRANE.
12. INSTALL NEW PREFINISHED METAL SCUPPERS.
13. INSTALL NEW PREFINISHED COPING AND FLASHINGS ON ENTIRE PERIMETER.
14. INSTALL NEW PIPE HOUSINGS PER DETAILS.
15. INSTALL COLLARS ON ALL ROOF PENETRATIONS.
16. INSTALL NEW EPDM PIPE SUPPORTS.
    - A. FOR PIPE DIAMETERS OF 2" TO 5" SPACE SUPPORTS AT 10' APART.
    - B. FOR PIPE DIAMETERS OF 1 1/2" SPACE SUPPORTS AT 8' APART.
    - C. FOR PIPE DIAMETERS LESS THAN 1 1/2" SPACE SUPPORTS AT 6' APART.

ROOF PLAN LEGEND

- MISC. MECH. SYSTEMS
- RD — ROOF DRAIN
- SCUPPER
- SKYLIGHT
- ROOF HATCH
- WALK PAD

BKL ENGINEERS | ARCHITECTS
C.A. 0049 (ARCH) RENEWAL DATE: 06-30-23
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LICENSED ARCHITECT
11/2/21

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ROOF PLAN - SECTION A

A1-01

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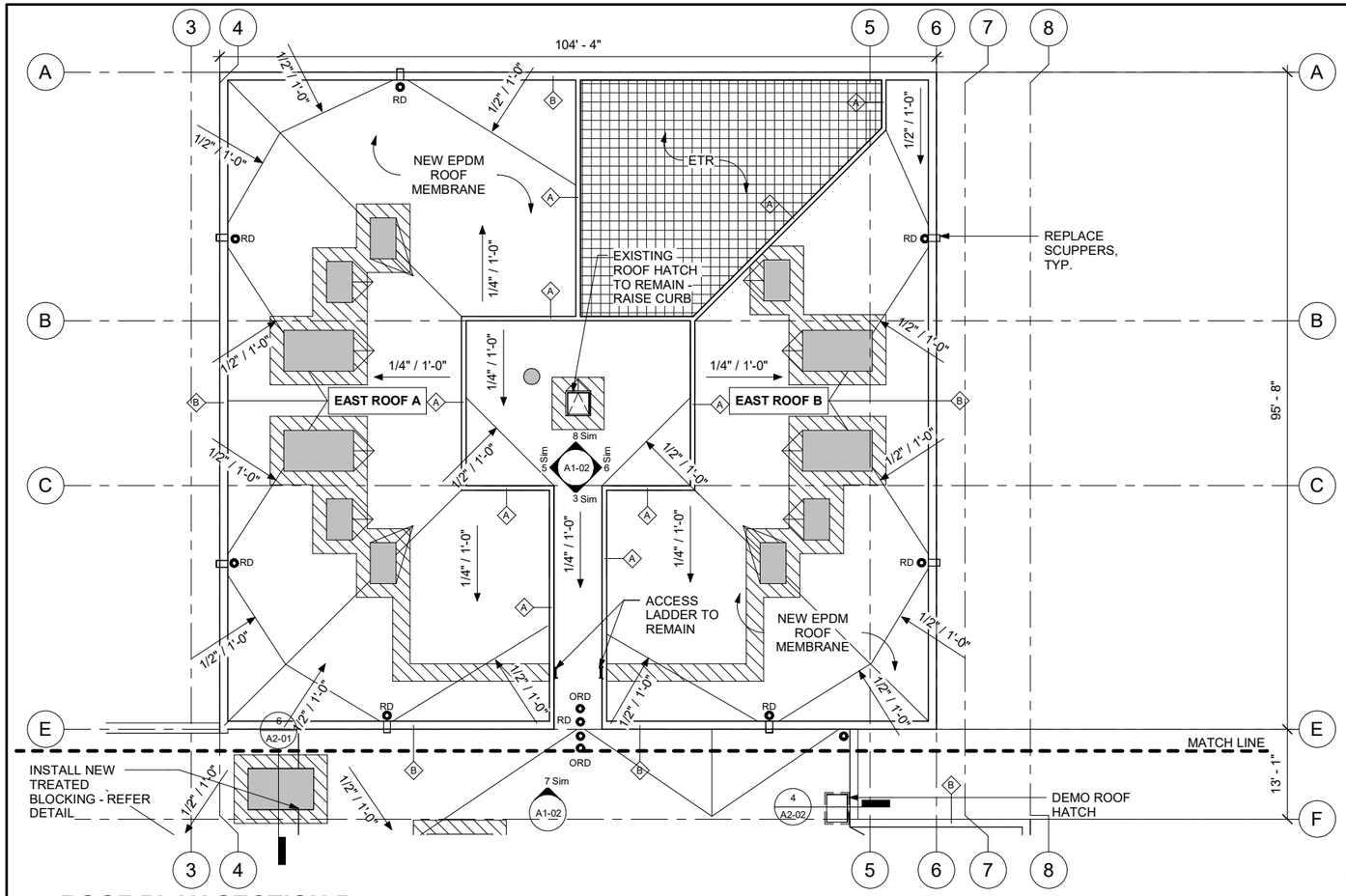
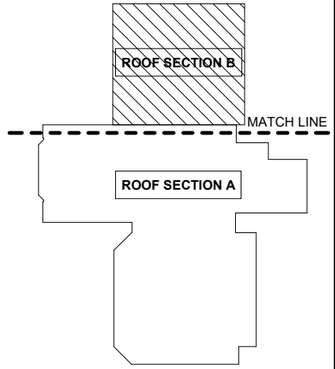


1 ROOF PLAN SECTION B

3/32" = 1'-0"

ROOF PLAN LEGEND

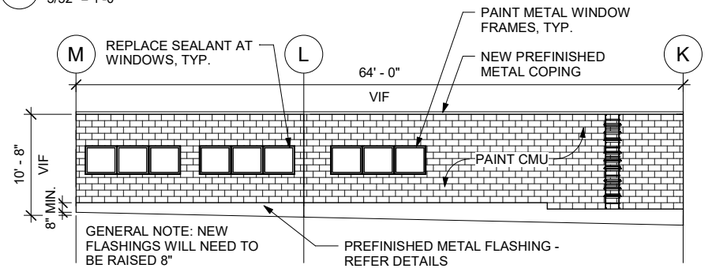
- MISC. MECH. SYSTEMS
- RD — ROOF DRAIN
- SCUPPER AND DOWNSPOUT
- SKYLIGHT
- ROOF HATCH
- WALK PAD



ROOF KEY PLAN

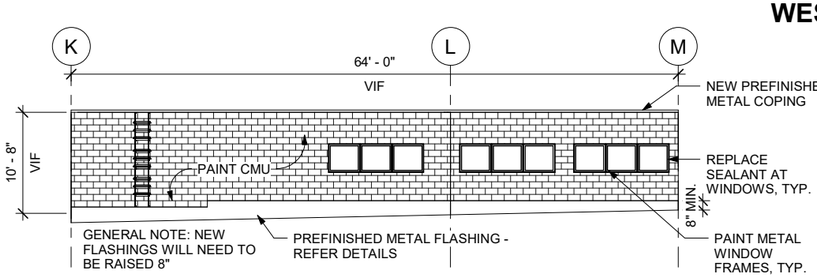
PAINT AROUND ALL EQUIPMENT AT WALL - SEAL ALL PENETRATIONS THROUGH WALL, ALL SIDES. CAULK AROUND ALL ITEMS THAT ARE IN CONTACT WITH THE WALL. (TYPICAL)

WEST ELEVATION



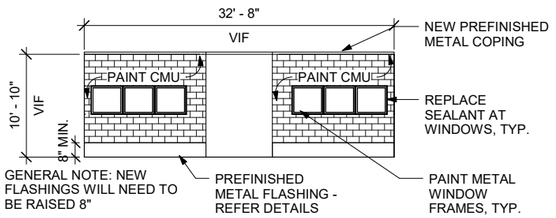
5 SOUTH ELEVATION

1/8" = 1'-0"



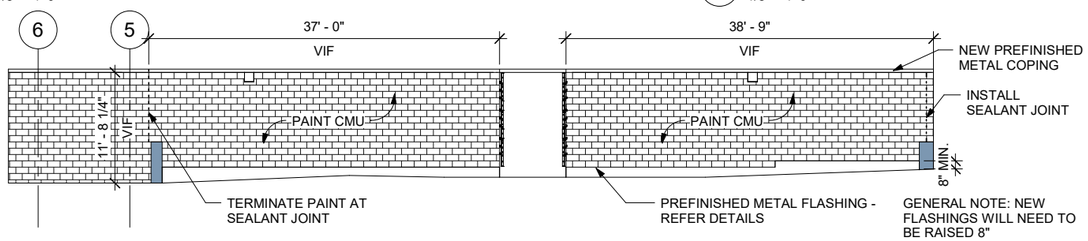
6 NORTH ELEVATION

1/8" = 1'-0"



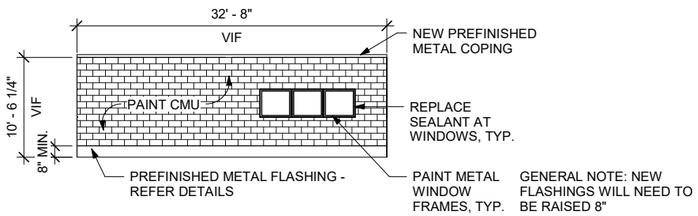
3 EAST & WEST ELEVATION

1/8" = 1'-0"



7 EAST & WEST ELEVATION

1/8" = 1'-0"



8 EAST & WEST ELEVATION

1/8" = 1'-0"

BKL ENGINEERS | ARCHITECTS
C.A. 0049 (ARCH) RENEWAL DATE: 06-30-23
C.A. 262 (PE) RENEWAL DATE: 06-30-22

Creek County Justice Center

ROOF REPLACEMENT

9175 Ridgeview St, Sapulpa, OK 74066

PROJECT NO.: 790
SUBMITTAL: FINAL
ISSUE DATE: 11/2/21

PROJ. MANAGER: JDH
DESIGNED BY: KDR
DRAWN BY: AMS

REVISIONS:

No.	Description	Date

STATE OF OKLAHOMA
JENNIFER HAMMOCK
LICENSED ARCHITECT
11/2/21

SHEET 4 OF 6

ROOF PLAN - SECTION B & ELEVATIONS

A1-02

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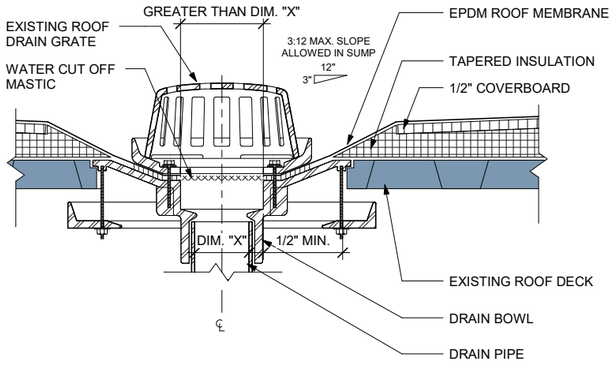
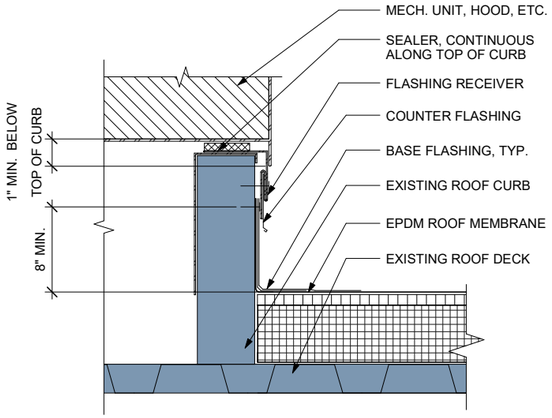
GENERAL NOTE:
MANUFACTURER DETAILS ARE TO TAKE PRECEDENCE OVER DETAILS SHOWN TO OBTAIN SPECIFIED WARRANTY.

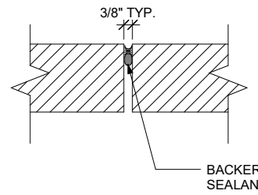


NOTES:
1. THE HOLE IN THE MEMBRANE SHALL EXCEED THE DIAMETER OF THE DRAIN PIPE BUT SHALL BE NO LESS THAN 1/2" FROM THE ATTACHMENT POINTS OF THE DRAIN CLAMPING RING.
2. REMOVE EXISTING LEAD FLASHING MATERIAL AND ENSURE THE DRAIN RING IS COMPLETELY CLEAN DOWN TO THE BARE METAL.
3. ALL BOLTS OF CLAMPS MUST BE IN PLACE TO PROVIDE CONSTANT COMPRESSION ON WATER CUT OFF MASTIC.
4. ADJUST DRAIN HEIGHT IF NEEDED.

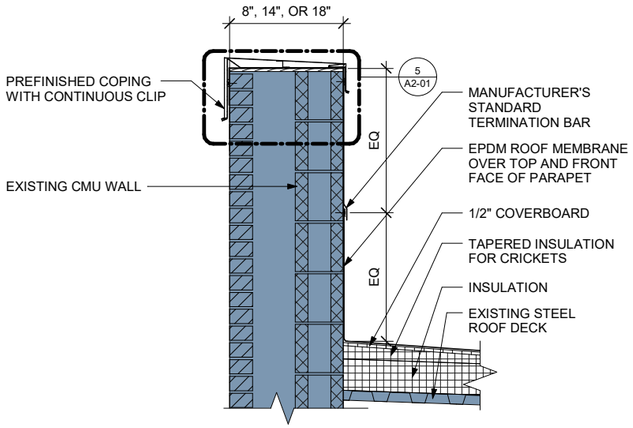
1 TYP. ROOF DRAIN DETAIL - REINSTALL EXISTING DRAINS
3" = 1'-0"



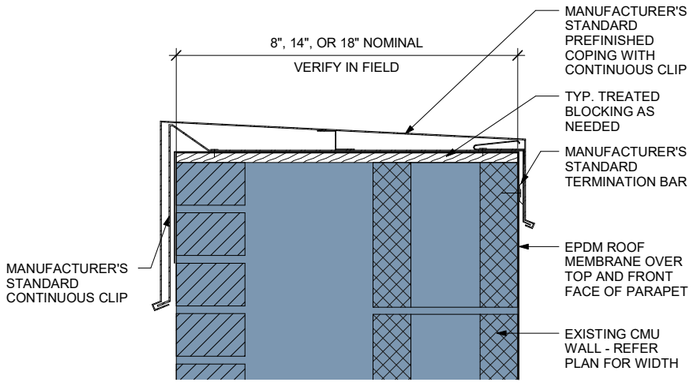
2 ROOF CURB DETAIL - EXISTING CURB
3" = 1'-0"



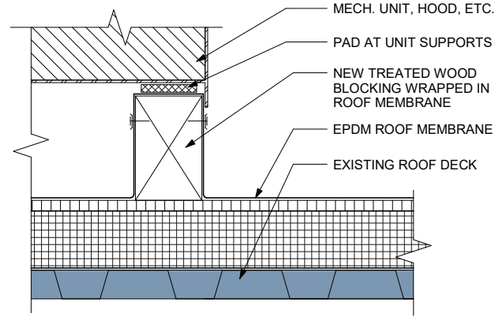
3 TYPICAL SEALANT JOINT
3" = 1'-0"



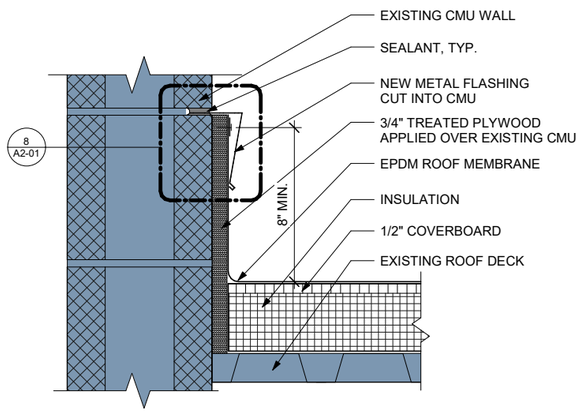
4 TYP. PARAPET DETAIL
1" = 1'-0"



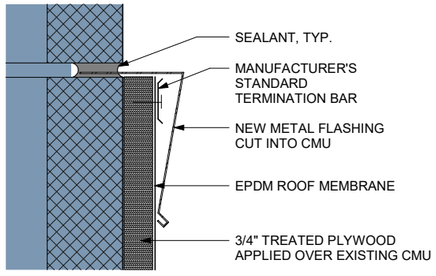
5 ENLARGED PARAPET DETAIL
3" = 1'-0"



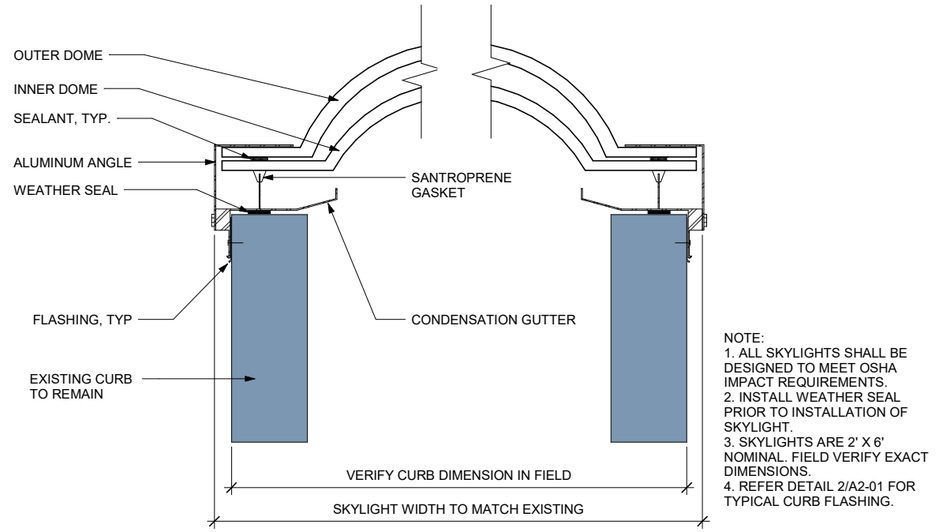
6 ROOF CURB DETAIL - NEW CURB
3" = 1'-0"



7 DETAIL AT WALL, CENTRAL ROOF
3" = 1'-0"



8 DETAIL AT WALL, ENLARGED
6" = 1'-0"



NOTE:
1. ALL SKYLIGHTS SHALL BE DESIGNED TO MEET OSHA IMPACT REQUIREMENTS.
2. INSTALL WEATHER SEAL PRIOR TO INSTALLATION OF SKYLIGHT.
3. SKYLIGHTS ARE 2' X 6' NOMINAL. FIELD VERIFY EXACT DIMENSIONS.
4. REFER DETAIL 2/A2-01 FOR TYPICAL CURB FLASHING.

9 TYP. SKYLIGHT DETAIL
3" = 1'-0"

BKL ENGINEERS | ARCHITECTS
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STATE OF OKLAHOMA
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SHEET 5 OF 6

ENLARGED DETAILS

A2-01

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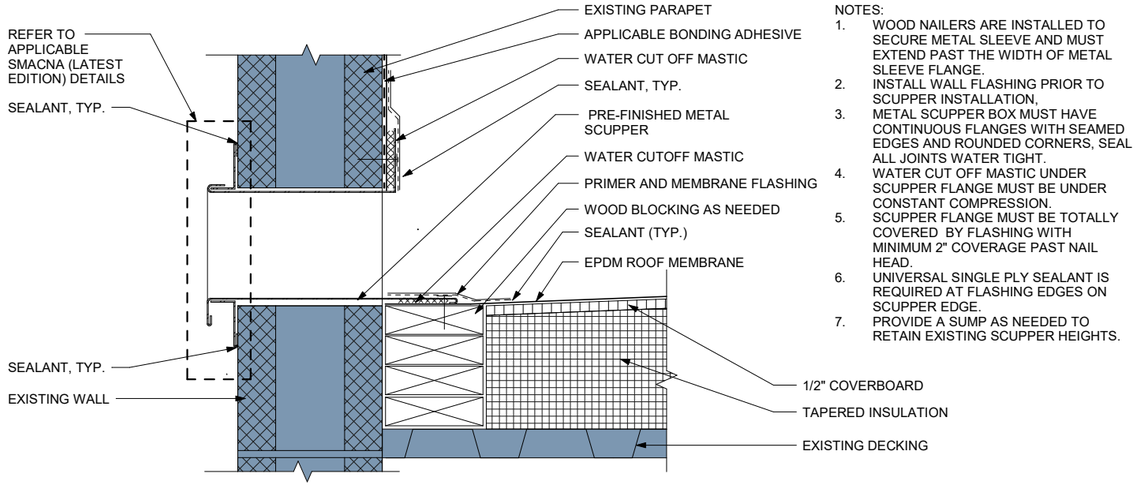
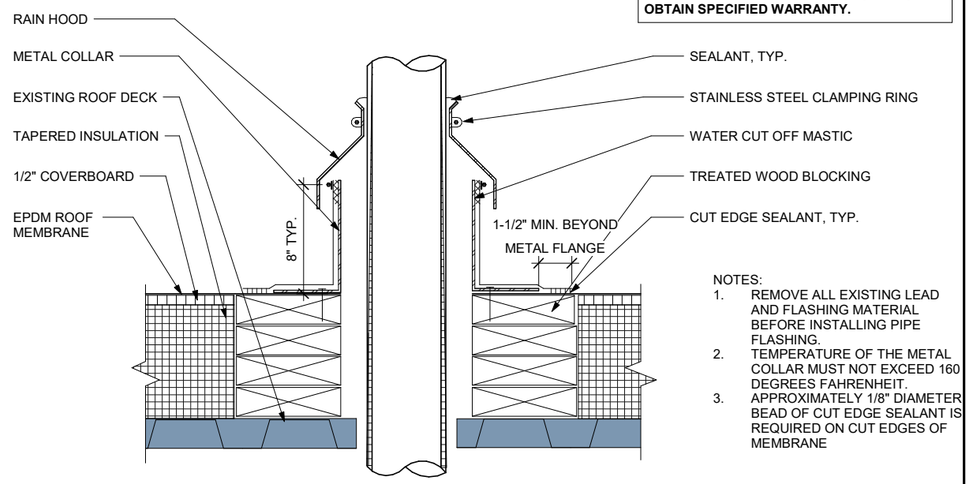


NOTES:
1. WOOD NAILERS ARE INSTALLED TO SECURE METAL SLEEVE AND MUST EXTEND PAST THE WIDTH OF METAL SLEEVE FLANGE.
2. INSTALL WALL FLASHING PRIOR TO SCUPPER INSTALLATION,
3. METAL SCUPPER BOX MUST HAVE CONTINUOUS FLANGES WITH SEAMED EDGES AND ROUNDED CORNERS, SEAL ALL JOINTS WATER TIGHT.
4. WATER CUT OFF MASTIC UNDER SCUPPER FLANGE MUST BE UNDER CONSTANT COMPRESSION.
5. SCUPPER FLANGE MUST BE TOTALLY COVERED BY FLASHING WITH MINIMUM 2" COVERAGE PAST NAIL HEAD.
6. UNIVERSAL SINGLE PLY SEALANT IS REQUIRED AT FLASHING EDGES ON SCUPPER EDGE.
7. PROVIDE A SUMP AS NEEDED TO RETAIN EXISTING SCUPPER HEIGHTS.

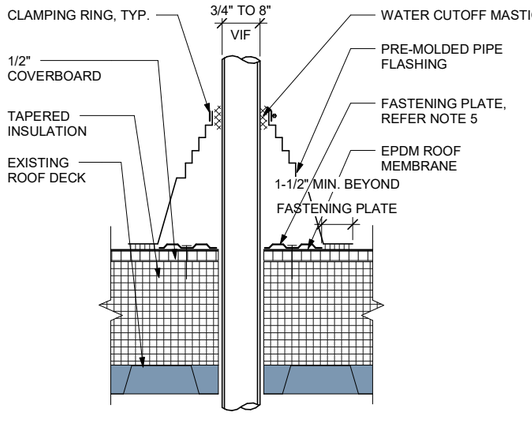
1 SCUPPER DETAIL
3" = 1'-0"

GENERAL NOTE:
MANUFACTURER DETAILS ARE TO TAKE PRECEDENCE OVER DETAILS SHOWN TO OBTAIN SPECIFIED WARRANTY.



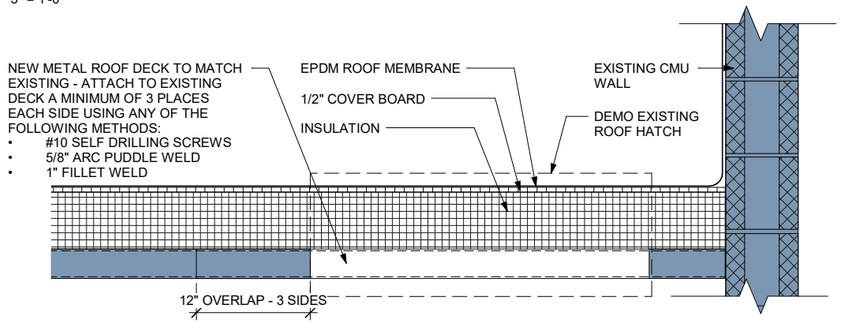
NOTES:
1. REMOVE ALL EXISTING LEAD AND FLASHING MATERIAL BEFORE INSTALLING PIPE FLASHING.
2. TEMPERATURE OF THE METAL COLLAR MUST NOT EXCEED 160 DEGREES FAHRENHEIT.
3. APPROXIMATELY 1/8" DIAMETER BEAD OF CUT EDGE SEALANT IS REQUIRED ON CUT EDGES OF MEMBRANE

2 TYP. HOT STACK DETAIL
3" = 1'-0"

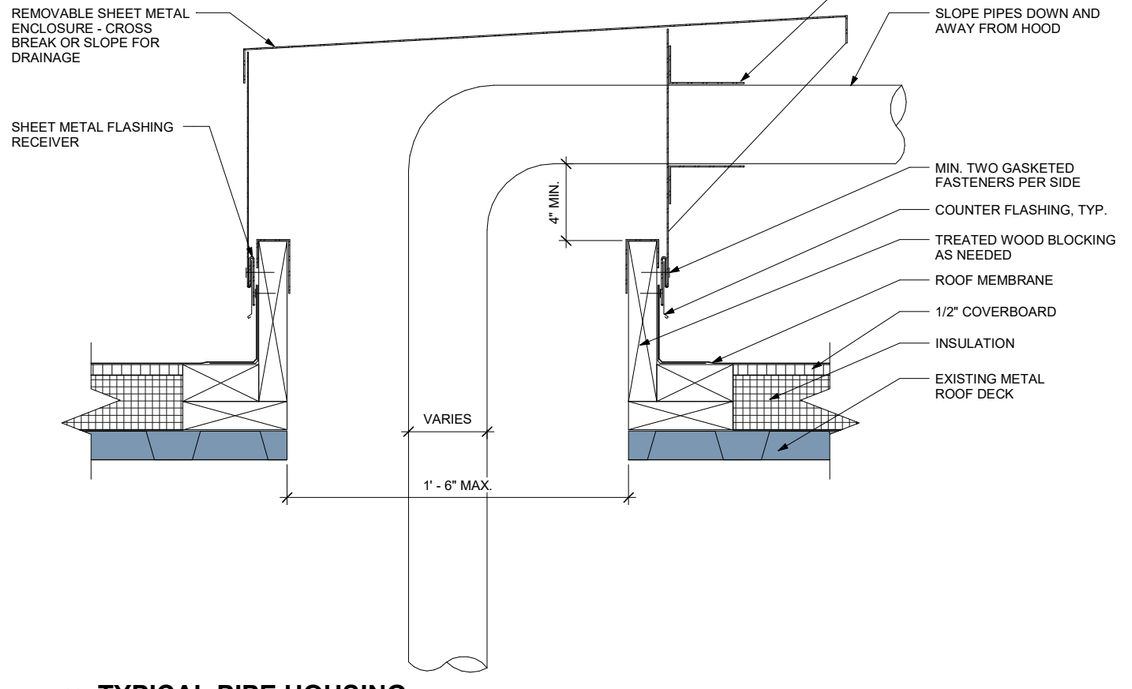


NOTES:
1. REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING PRE-MOLDED PIPE FLASHING
2. TEMPERATURE OF PIPE MUST NOT EXCEED 160 DEGREES FAHRENHEIT.
3. PIPE SEAL MUST HAVE INTACT RIB AT TOP OF EDGE, REGARDLESS OF PIPE DIAMETER.
4. INSTALL A MINIMUM OF FOUR FASTENERS AND PLATES AROUND THE PIPE, EQUALLY SPACED. IF FASTENERS AND PLATES CANNOT BE INSTALLED AS SHOWN, THEY MAY ALSO BE POSITIONED OUTSIDE THE PIPE MAX. 12" O.C. AND FLASHED WITH MEMBRANE/ CUT EDGE SEALANT.
5. FASTENERS AND PLATES ARE NOT REQUIRED ON ADHERED SYSTEMS UNLESS PIPE DIAMETER EXCEEDS 18"

3 TYP. COLD PIPE DETAIL
3" = 1'-0"



4 ROOF HATCH INFILL
1 1/2" = 1'-0"



5 TYPICAL PIPE HOUSING
3" = 1'-0"

BKL ENGINEERS | ARCHITECTS
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Creek County Justice Center
ROOF REPLACEMENT
9175 Ridgeview St, Sapulpa, OK 74066

PROJECT NO.: 790
SUBMITTAL: FINAL
ISSUE DATE: 11/2/21
PROJ. MANAGER: JDH
DESIGNED BY: KDR
DRAWN BY: AMS

REVISIONS:

No.	Description	Date

STATE OF OKLAHOMA
JENNIFER HAMMOCK
LICENSED ARCHITECT
11/2/21

SHEET 6 OF 6

ENLARGED DETAILS

A2-02

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