ROGERS STATE UNIVERSITY
PHYSICAL PLANT

Request for Bids
Roof Replacement at
Stratton Taylor Library

Rogers State University
Claremore, OK

RFB 2425-17

ROGERS STATE UNIVERSITY
PHYSICAL PLANT

REQUEST FOR BID No.: RFB 2425-17

NON -MANDATORY PRE-BID MEETING DATE / TIME: April 9, 2025 at 10:00 am
PRE-BID MEETING LOCATION: Claremore Campus – Physical Plant Conference Room

BID DUE DATE:
May 14, 2025
BID OPENING TIME:
10:00am*
BID OPENING LOCATION: Claremore Campus – Physical Plant Conference Room
*Bids received more than ninety-six (96) hours before the time set for receiving bids as well as bids received after the time set for receipt of bids will not be considered, and will be returned unopened.

SEALED BIDS ARE TO BE SENT TO:
1701 W. Will
Rogers Blvd.
Claremore, OK
74017
Attention: Christie Lamberson – Procurement Coordinator
RE: RFB 2425-17 – Roof Replacement at the Stratton Taylor Library

Bid documents may be obtained by calling the purchasing contact listed below. Project documents can also be obtained online at http://www.rsu.edu/about/offices-services/purchasing/bids-proposals/. Sealed Bids are to be turned into the purchasing contact listed below before the due date and time. Late bids may be returned and not considered as a valid response. Contractors are encouraged to respond with a no-bid if they do not wish to be considered for this opportunity but do wish to remain on the active contact list. Electronic or unsealed bids are not acceptable.

UNIVERSITY CONTACTS:

Contractors are encouraged to contact the using Division's personnel to obtain clarification of the technical requirements of this "Request for bid". However, any modification to the requirements of this "Request for bid" must be enacted by the issuance of a written addendum from the Purchasing Department. Conflicting instructions given by personnel within the using Division, that are not substantiated by a written addendum issued by the Purchasing Department, will not be binding upon the University.

	For information regarding the general provisions of this 'Request for bid', contact:	For clarification of the technical requirements of this 'Request for bid', contact:
NAME:	**Christie Lamberson, Procurement Coordinator**	**Karl Reynolds Physical Plant Director or George Proctor Assistant Director**
TELEPHONE No.:	**918.343.7790**	**918-343-7818**
FAX No.:	**918.343.7817**	**918-343-7808**
E-MAIL ADDRESS:	**clamberson@rsu.edu**	**kreynolds@rsu.edu or gproctor@rsu.edu**

NON-MANDATORY PRE-BID MEETING:

1. Contractors are encouraged to attend a pre-bid meeting on Wednesday April 9, 2025 at 10:00 am at the Claremore Campus – Physical Plant Conference Room.

2. This meeting will include a tour of the library, located on the Claremore Campus.

BID STATUS AND SUBMISSION INFORMATION:

1. Rogers State University shall have the right to reject any or all bids and solicit contractors again as herein provided if the best interests of the people of the State of Oklahoma would be best served by so doing. Further, the University reserves the right to award on an all or none basis, by item or groups of items in order to achieve the overall lowest cost.

2. Offers may be withdrawn at any time prior to the closing date, but no respondent may withdraw a bid after that date.

3. RFBs must demonstrate an understanding of the scope of service to be provided and the ability to accomplish the tasks set forth and must include information that will enable the University to determine the respondent's overall qualifications.

4. Any bid received by Rogers State University or an officer or employee thereof after the time set for the opening of bids may be returned unopened and not considered as a valid response to the RFB.

5. The University reserves the right to request additional information or clarification on any matter included in the bid.

6. All signatures must be affixed and notarized on the forms and attachments provided in this bid.

7. All bids shall be sealed and opened only at the time and place mentioned herein.

8. Submission of a bid will constitute an incontrovertible representation by the contractor; that (s) he has complied with every requirement of this bid.

9. The University reserves the right to waive minor informalities in bids and to split the award if in the best interest of the University.

CONDITIONS:

1. The University reserves the right to require the successful contractor to execute a written agreement for the provision of the product(s) and / or service(s) offered as a result of this bid solicitation. The resulting contract will incorporate this RFB solicitation, the response thereto, all additional agreements and stipulations, and the results of any final negotiations. All of these documents will constitute the final contract.
2. The contract shall contain all specifications, terms, and conditions in the bid and the bid form except as amended in the 'Award Notice'.
3. All changes to the contract must be mutually agreed to, in writing, prior to execution.
4. The parties hereby agree that no trade usage, prior course of dealing or course of performance under other contracts shall be a part of this agreement or shall be used in the interpretation or construction of this agreement.
5. Any exceptions taken by the contractor which are not included in the 'Award Notice' will not be part of the contract.
6. No delay or failure to enforce any provision of this agreement shall constitute a waiver or limitations of the University's rights under any resulting contract.

7. By submitting a bid to Rogers State University, the Contractor is required to adhere to and submit the following forms at the time of the bid submittal:

   a. The contractor agrees to comply with Equal Employment Opportunity and Affirmative Action requirements as stipulated in Executive Order 11246 and Executive Order 11375 (see attached).

   b. Oklahoma laws require each contractor submitting a competitive offer to the State of Oklahoma for goods or services to furnish a notarized sworn 'Statement of Non-Collusion' (see attached).

   c. Each contractor shall execute and forward a 'Business Relationship Affidavit' with the bid (see attached).

   d. Oklahoma laws require each contractor submitting an offer to the State of Oklahoma for goods or services to furnish a notarized sworn "Sex Offender Affidavit" (see attached).

   e. Oklahoma laws require each contractor submitting an offer to the State of Oklahoma for goods or services to furnish a Bid Bond. (see attached)

8. By submitting a bid to Rogers State University, the contractor is required to adhere to and submit the following forms at the time of contract:

   a. Successful Suppliers shall, prior to beginning any work under any contract that may result under this RFP, as applicable, or as required by State or Federal law, acquire and have in effect minimum insurance coverage as set forth in the following table. The said minimum amounts are not intended to limit and do not or reduce any Supplier's liability:

Coverage Type:	Minimum Amount:
Workers' Compensation	Statutory
Commercial General Liability Insurance	$1,000,000
Property Damage	$1,000,000
Auto-Owned, Hired and Non-Owned	$1,000,000
Per-Occurrence for All Claimants and Coverage	$2,000,000

   b. Successful Suppliers shall carry on their work in accordance with the requirements of the workers compensation law of the State of Oklahoma, and shall not reject the provisions thereof during the life of the contract. Successful Suppliers shall also protect themselves using liability coverage against any and all claims for damages to persons or property which may arise out of operations under the contract, whether such operations be by the contractor, subcontractor, or anyone directly employed by either of them.

   c. Prior to commencement of work under any contract which may result from this RFP, Successful Suppliers shall purchase and maintain property insurance coverage for the full insurable value of the property at the site of such work. If the policy evidencing such insurance coverage stipulates a deductible amount, Successful Suppliers shall pay the difference attributable to such deductible in any payments made by the insurance carrier on claims paid by such carrier. The University will not purchase insurance relative to this RFP unless otherwise stated herein.

9. Successful Suppliers shall file certificates of such insurance with the University, and such related coverage shall be subject to the University's approval.

10. Rogers State University is exempt from State Sales Tax and Federal Excise Tax. The exemption authority is Oklahoma State Tax Code, Title 68, OS 1981, Article 13, Section 1356 and Federal Tax Exempt No. 736017987.

11. It is mutually agreed by and between the University and the contractor that the University's acceptance of the contractor's offer by the issuance of an 'Award Notice' shall create a contract between the parties thereto.

12. In the event of a conflict between the terms and conditions of the bid and information submitted by a contractor, the terms and conditions of this bid and resulting "contract" will govern.

Termination for Cause - The University may terminate the Contract for default or other just cause with a 30-day written request and upon written approval from the procuring agency. The University may terminate the Contract for default or any other just cause upon a 30-day written notification to the contractor.

The University may terminate the Contract, in whole not in part, without penalty or expense, at the end of any fiscal year of the University, if the legislature or other appropriate governmental entity fails to allocate sufficient funds to the University for the payments required or activities contemplated under the Contract.

The University may terminate the Contract immediately, without a 30-day written notice to the supplier, when violations are found to be an impediment to the function of an agency and detrimental to its cause, when conditions preclude the 30-day notice, or when the procuring agency determines that an administrative error occurred prior to Contract performance.

If the Contract is terminated, the University shall be liable only for payment for products and/or services delivered and accepted.

13. **Termination for Convenience -** The University may terminate the Contract, in whole or in part, for convenience if the procuring agency determines that termination is in the University's best interest. The procuring agency shall terminate the Contract by delivering to the supplier a Notice of Termination for Convenience specifying the terms and effective date of Contract termination. The Contract termination date shall be a minimum of 60 days from the date the Notice of Termination for Convenience is issued by the procuring agency.

14. To the extent applicable by Okla. Stat. Ann. tit. 25, §1313, or Exec. Order No. 12989, 8 USCA §1324a (Feb. 13, 1996) as amended in 73 Fed. Reg. 33285 (June 6, 2008), Consultant or Contractor certifies that it is registered with and participates in the Status Verification System (SEVIS"). Further, in accordance with Okla. Stat. Ann. tit. 68, §2385.32, Consultant or Contractor verifies that it and its employees are authorized to work in the United States in accordance with the employment authorization found in 8 U.S.C. §1324(a)(4)."

15. Public Record

    After response acceptance and execution of all contracts and agreements resulting from this RFB, each Respondents bid will become public record and will be available by written request to RSU Purchasing Department. 1701 W Will Rogers Blvd, Claremore, OK 74017, FAX 918-343-7817.

GRATUITIES AND KICKBACKS.

1. A Rogers State University official or employee, or their immediate relatives, shall not accept anything of value whether in the form of a gift, service, loan, donation or promise from any person which may impair his or her independence of judgment or action in the performance of his or her official duties.

2. No donation or payment of a gratuity or kickback shall be made by or on behalf of any person and be accepted by any Rogers State University official or employee as an inducement or reward for the action in procuring the award of any contract or order.

INDEMNIFICATION REQUIREMENTS.

1. The following requirements are mandatory for protecting the interests of the University:

2. The successful contractor shall keep the University free and clear from all liens asserted by any person or firm for any reason arising out of the furnishing of services or materials by or to the contractor.

3. The successful contractor shall indemnify and hold the University harmless from all contractors' performance under the resulting contract.

4. The resulting contract shall be construed under the laws of the State of Oklahoma and venue in any action to enforce the contract shall be in a court of competent jurisdiction in Oklahoma.

5. The actions of the successful contractor with third parties are not binding upon the University. The contractor is not a division of the University.

6. The Contractor shall protect and indemnify the University, its officers, and agents against any claims of liability arising from or based on any violation thereof.

OBSERVING LAWS AND REGULATIONS.

1. The Contractor shall remain fully informed of, and shall faithfully observe, all laws, national and state, and all ordinances and regulations affecting the responsibility to the University, or affecting the rights of his / her employees.

2. Provider shall not discriminate because of race, color, religion, sex, age, national origin, sexual orientation, genetic information, disability or status as a Vietnam veteran, as defined and prohibited by applicable law, in any of its policies, practices or

   procedures. In addition, each party affirms that it is an equal opportunity and affirmative action employer and shall comply with all applicable federal, state and local laws and regulations including, but not limited to, Executive Order 11246 as amended by 11375 and 12086; 12138; 11625; 11758; 12073; the Rehabilitation act of 1973, as amended; the Vietnam Era Veterans Readjustment Assistance Act of 1975; Civil Rights Act of 1967; Immigration Reform and Control Act of 1986; Public Law 95-507; the Americans With Disabilities Act and any additions or amendments thereto.

3. Provider shall participate in the E-Verify program as required by Oklahoma statutes to enforce the provision of Oklahoma's immigration law to prove the legal status of the provider's employees. The E-Verify website is: http://www.uscis.gov/portal/site/uscis/menuitem.eb1d4c2a3e5b9ac89243c6a7543f6d1a/?vgnextoid=75bce2e261405110VgnVC M1000007718190aRCRD&vgnextchannel=75bce2e261405110VgnVCM1000007718190aRCRD.The E-Verify program, formerly known as the Department of Homeland Security's Basic Pilot Program or the Employment Eligibility Verification System, is jointly administered by the Department of Homeland Security through the United States Citizenship and Immigration Services and the Social Security Administration. This Program allows participating employers to verify whether newly hired employees are authorized to work in the United States by checking the information provided by the employees on their Form I-9 against the Department of Homeland Security through the United States Citizenship and Immigration Services, and the Social Security Administration databases.

QUALIFICATIONS OF CONTRACTORS.

1. Rogers State University may make such investigations as deemed necessary to determine the ability of the contractor to perform the work or provide a product, and the contractor shall furnish to Rogers State University all such information and data for this purpose.

2. Rogers State University reserves the right to reject any bid if the evidence submitted by, or investigation of, such contractor fails to satisfy that they are qualified to carry out the obligations of the contract and to complete the work or provide the product contemplated therein.

3. Each contractor must complete and submit with bid an AIA A305 Contractors Qualification Statement. A sworn statement providing evidence such as financial data, previous experience and evidence of authority to conduct business in the jurisdiction where the project is located.

RECOMMENDED PREPARATION:

Before submitting a bid, it is recommended that each interested party perform the following actions:

1. Visit the site to familiarize himself / herself with local conditions that may in any manner affect cost, progress, or

performance of the work.

2. Familiarize himself / herself with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress, or performance of the work.

3. Make any investigations and tests the contractor may deem necessary to determine his/her bid for performance of the work in accordance with the time, price, and other terms and conditions of the contract documents.

4. Determine the bid documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the work.

5. Ensure all information required herein be submitted with the bid response. Failure to provide the information may result in rejection of the offer.

BID SUBMISSION FORMAT:

1. Each contractor shall include all requirements, terms or conditions they may have and shall not assume that an opportunity will exist to add such matters after the bid has been submitted. Unacceptable terms and conditions added by the contractor may cause the University to award to another contractor, despite other factors of the evaluation.
2. A bidder on public construction contract exceeding fifty thousand dollars ($50,000.00) shall accompany the bid with: A certified check, cashier's check or bid bond equal to five percent (5%) of the bid, which shall be d eposited with Rogers State University As a guaranty.

ASSURANCE OF COMPLETION

1. Unless otherwise provided in State law, the successful bidder shall furnish an assurance of completion prior to the execution of any contract under this solicitation in the form of a performance, payment, and defect bond in a penal sum of 100 percent of the contract price; or, as may be required or permitted by State law;

2. Bonds must be obtained from guarantee or surety companies acceptable to the U.S. Government and authorized to do business in the State of Oklahoma where the work is to be performed.

TIME OF COMPLETION

1. Upon receipt of "Letter of Award" contractor shall promptly submit to the University, an executed contract, insurances, and bonds.
2. Actual project work shall begin no earlier than May 12th, 2025. All work to be complete on or before June 27, 2025. Please be aware that the east parking lot will be replaced starting June 2, 2025.
3. Contractors will be able to mobilize materials and equipment prior to May 12th, 2025 Contractor shall coordinate with Physical Plant during this period for site access, and material storage areas.

BID FORM
RFB 2425-17– ROOF REPLACEMENT – LIBRARY

TO: ROGERS STATE
University Claremore,
Rogers County,
Oklahoma

To Whom It May Concern,

Having Carefully Examined the Specifications and Having Visited the Site & Examined all Conditions Affecting the Work, the Undersigned Proposes to Furnish All Labor, Materials, and Incidentals Called for by Said Documents for Complete Services Described Herein:

TOTAL BASE PRICE FOR LIBRARY ROOF REPLACEMENT

The Undersigned Agrees to Perform all Work Required by the Request for bid for the sum of:

($_____)

(_____Dollars)
(Amount shall be shown in both words and figures; in case of discrepancy, the amount in writing shall govern.)

ALTERNTE NO. 1 – METAL COPING AT PARAPET WALLS

The Undersigned Agrees to Perform all Work Required by the Request for bid for the sum of:

($_____)

(_____Dollars)
(Amount shall be shown in both words and figures; in case of discrepancy, the amount in writing shall govern.)

ACKNOWLEDGMENT OF ADDENDA (if applicable):

Addendum No. 1 Date_____ Addendum No. 2 Date_____ Addendum No. 3 Date_____

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I hereby certify that I have the authority to submit an offer of pricing on behalf of my company and that I have read and understand the terms and conditions of the bid.

_____ _____
(Typed or Printed Name) (Signature)

_____ _____
(Title) (Date)

_____ _____
(Company Name) (Federal Identification #)

_____ _____
(Company Address) (Company Telephone Number)

_____ _____
(Company City, State & Zip Code) (Company Fax Number

Subscribed and sworn to before me this_____day of_____, 2____.

_____ _____
(Notary Public (or Clerk or Judge) My Commission Expires):

Check-list of Items required at the time of bid submittal:

- ☐ Bid Bond
- ☐ Signed and notarized copy of the entire bid request
- ☐ Addendum (if any)
- ☐ Business-relationship affidavit
- ☐ Non-collusion affidavit
- ☐ Equal Employment Opportunity and Affirmative Action Affidavit
- ☐ Sex Offenders Affidavit
- ☐ Oklahoma Industrial Board Roofing Registration Number & Commercial Endorsement verification

Failure to provide necessary documents and/or bonds will invalidate your bid submittal.

Non Collusion Affidavit

State Of: _____

County Of: _____

_____,_____, of lawful age being first
duly sworn, on (Name) (title)

oath says that:

1 (s)he is the duly authorized agent of_____, the contractor and/or Contractor submitting the bid and/or procuring the contract which is attached to this statement, for the purpose of certifying the facts pertaining to the existence of collusion among contractors and between contractors and state officials or employees, as well as, facts pertaining to the giving or offering of things of value to the government personnel in return for special consideration in the letting of any contract to which this statement is attached;

2 (s)he is the fully aware of the facts and circumstances surrounding the making of the bid and/or the procurement of the contract to which this statement is attached and has been personally and directly involved in the proceedings leading to the submission of such bids; and

3 Neither the contractor nor anyone subject to the contractor's direction or control has been a party:

a) to any collusion among contractors in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from submitting a bid;
b) to any collusion with any state official or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract, or as to any other terms of such prospective contract, nor
c) in any discussions between contractors and any state official concerning exchange of money or other thing of value for special consideration in letting of a contract,
d) to paying giving or donating or agreeing to pay, give or donate to any officer or employee of the State of Oklahoma, any money to other thing of value, either directly or indirectly, in procuring the contract to which this statement is attached.

Subscribed and sworn before me this_____day of_____, 2_____.

_____
NOTARY PUBLIC (or CLERK or JUDGE)

(My commission expires)

Business Relationship Affidavit

BUSINESS RELATIONSHIPS AFFIDAVIT

STATE OF_____)
_____) SS. COUNTY OF____)

_____, Lawful age, being first duly sworn, on oath says that (s)he is the agent authorized by the vendor to submit the attached bid. Affiant further states that the nature of any partnership, joint venture, or other business relationship presently in effect or 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 or which existed within one (1) year prior to the date of this statement between any officer or director of the preparing 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.)

_____

Subscribed and sworn to before me this _____ day of _____, 2_____.

_____ _____
Notary Public (or Clerk or Judge) (My Commission Expires):

Executive Order 11246

IMPORTANT: THIS MUST BE READ, SIGNED, AND RETURNED WITH BID

Certificate of Compliance with Executive Order 11246 (as amended) for Contracts in Excess of $10,000.

In entering into any resulting contract over $10,000, the Contractor agrees to comply with the Equal Employment Opportunity requirements stipulated in Executive Order 11246 as amended by Executive Order 11375. These specific requirements state:

1. "Equal Opportunity Clause"

During the performance of this/these contract(s) the contractor agrees as follows:

A. The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; lay-off or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

B. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color or national origin.

C. The contractor will send to each labor union or representative or workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

D. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965 and the rules, regulations and relevant orders of the Secretary of Labor.

E. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

F. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or part and the contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

G. The contractor will include the provisions of Paragraphs A through G in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 207 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor.

The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter such litigation to protect the interests of the United States.

Executive Order 11246

(Continued)

2. Certification of Non-segregated Facilities

By the submission of this bid and/or acceptance of purchase order(s) during the above period, the contractor, offerer, applicant, or subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained.

He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The contractor, offerer, applicant, or subcontractor agrees that a breach of this certification is a violation of the equal opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color or national origin, because of habit, local custom, or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the equal opportunity clause; that he will retain such certifications in his files; and that he will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods).

3. Disabled Veteran and Vietnam Era Veteran Affirmative Action Program Requirements

In entering into any contract which exceeds $10,000, the contractor agrees to comply with Disabled Veteran and Vietnam Era Veteran Affirmative Action Program Requirements as stipulated in Public Law 93-508 and all amendments thereto. Failure to comply with the requirements of Public Law 93-508, Title 41, CFR60-250 and Title 41, CFR60-741 and all amendments thereto shall be deemed a material breach of this agreement and shall subject this contract to cancellation and rescission at the option of the University of Oklahoma. Copies of the applicable portions of this law are available from the University of Oklahoma Purchasing Office if required.

CERTIFICATION

If awarded this contract

_____

(Company)

agrees to comply with the provisions in Clauses I, II and III above.

_____

(Signature)

_____

(Date)

_____

(Title)

SECTION 00660

SEX OFFENDERS AFFIDAVIT

IMPORTANT: THIS MUST BE READ, SIGNED, AND COMPLETED AT THE TIME OF CONTRACT

Sex Offenders Affidavit

State of _____

SS.

County of _____

The undersigned (Architect, Supplier, Engineer or Supervisory Official), of lawful age, being duly Sworn, on oath says that no employee allowed to be working on School Premises under the Authority of the undersigned, has been convicted in this state, the United States or another state of:

Any sex offense subject to the Sex Offenders Registration Act in this state or subject to another state/s or the federal sex offender registration; or

Any felony offense except as provided in Subsection C of Section 4, 70 O.S 1991, Section 6-101.48 or when ten (10) years has elapsed since the date of the original conviction or the employee has received a Presidential or Gubernatorial pardon for the criminal offense.

(Contractor or Supplier) (Signature)

Subscribed and Sworn to Before Me this

_____Day of_____, _____

Notary Public_____

My Commission Number:_____

My Commission Expires:_____

SECTION 01010
SUMMARY OF WORK

1.1 WORK INCLUDED

A. Shingle Roofs:

1. Remove one (1) square of existing composition roofing system down to the deck.
2. Repair damaged roof decking as indicated on siuth side of clock tower...
3. Install new composition roofing, lacing back into existing roof shingles..

B. Built-Up Bitumen Roofs:

1 Remove modified bitumen roof & parapet wall systems down to the deck.
2 Manipulate gas, electric, and condensation lines as required.
3 R&R Pitch pan / pocket.
4 R & R vent stack boots as required with TPO systems applications.
5 Detach & reset air conditioning units as required.

C. 135 Mil TPO Roof

1. Install high density Glass Matt Gypsum, 1/2 inch thick, factory primed all sides
2. Install tapered ISO insulation 3 1/2 "max. 2" min. thickness.
3. R&R parapet wall only – TPO
4. Reuse existing Counterflashing.
5. R & reinstall all roof top HVAC and other equipment necessary to install new roof materials. Include is manipulation of electric, gas, conduits, condensate drainpipes, and other equipment existing upon roof.
6. R & reinstall lightning protection as required to install for new roof.

1.1 ALTERNATE WORK

A. Alternate No. 1 – Provide and install metal coping on all parapet walls to cap block.

1.3 QUALITY ASSURANCE

Prior to start of work, contractor will provide "shop drawings" and a copy of manufacturer's installation recommendations for all products or systems that require a submittal, as indicated in the project manual.

1.4 EXAMINATION OF SITE

Failure to Visit Site will not relieve Contractor from necessity of furnishing materials or performing work that may be required to complete work in accordance with the project manual without additional cost to RSU.

NOTE: Contractor will have access to roof from interior of building. East parking lot will not b available ofr mobilization, but the south parking will be available for workers and materials.

1.5 CONTRACTOR USE OF PREMISES

A. Contractor's may utilize University provided utilities.

B. Restrict access to extent required, allowing for ongoing activities at site.

C. Operations of Contractor are limited to areas where work is indicated.

1. Take precautions to allow for continued operations including public access and other outside activities on the occupied portions of the site.

2. Schedule and coordinate such operations with RSU Physical Plant Director.

END OF SECTION

SECTION 01015
EXISTING CONDITIONS

1.1 EXISTING CONDITIONS

A. Dimensions: Contractor shall verify dimensions at site for built-in work, and for work adjoining that of other trades and for dimensions shown to existing structures or installations.

B. Possession, use, and responsibility for site: Keep the building site free of rubbish at all times. Remove all waste and site debris promptly.

C. Existing conditions: In submitting a bid, Contractor acknowledges that he has visited the site and reviewed existing conditions. While every attempt has been made to identify locations of work items, the Contractor is to remedy as specified all problems discovered that are of the same nature as Work Items listed in the Specifications.

D. Demolition:

1. Contractor shall use extreme care in the demolition, removal, repair or relocation of existing items in order to protect remaining items from damage. Replace any items or areas so damaged with matching, new items of equal quality.

2. Where operations involve the demolition, removal or repair of existing items in the exterior envelope of existing structures, the Contractor shall provide temporary protection as required to maintain the structure in a weather tight, structurally sound, environmentally stable condition at the end of each day and/or end of activity that is associated with these operations.

END OF SECTION

1.1 QUALITY ASSURANCE

A. Reference Standards: For products or workmanship specified or indicated by association, trade or Federal Standards comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.

B. No provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change duties and responsibilities of RSU or Contractor or any of their consultants, agents or employees from those set forth in Contract Documents, nor shall it be effective to assign to Physical Plant Director any duty or authority to supervise or direct furnishing or performance of Work or any duty or authority to undertake responsibilities contrary to provisions of General Conditions.

C. Where wording of referenced standard is permissive, or where requirements of more than one reference standard apply, provide under more restrictive and higher requirement.

D. Comply with recommendations of reference standards even though they are not mandatory in standard.

E. Notify Physical Plant Director of any conflicts between referenced standards and requirements specified in Specifications or indicated on Drawings before proceeding with work.

F. Detailed Requirements: Be familiar with and verify detailed requirements of referenced standards to verify that items and their installation provided under Work of this Contract meet or exceed standard's requirements.

G. Tolerances: Tolerances may vary from standards of different sections. Make adjustments necessary to assure proper fitting of different elements. Tolerances may be plus or minus as indicated but in sum shall be compensating, not cumulative.

H. Effective Date: Date of standard is that in effect as of documents date except when specific date is specified or when standard is part of applicable code which includes edition date.

I. Copies: When required by individual sections obtain copy of standard. Maintain copy at job site during work.

J. Certificates: When required by Contract Documents, or when requested in writing by Physical Plant Director, submit Certificate of Compliance or Manufacturer's Certificate that materials or workmanship, or both comply with requirements of referenced standard.

SECTION 01200
PROJECT MEETINGS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Participation IS NOT required in pre-bid conference

B. Participation IS required at preconstruction conference.

C. Contractor administration of progress meetings and pre-installation conferences required.

1.2 RELATED REQUIREMENTS

A. Section 01010 – Summary of Work
B. Section 01015 – Existing Conditions
C. Section 01091 – Reference Standards
D. Section 01340 – Submittals
E. Section 01600 - Material and Equipment
F. Section 01700 - Contract Close Out

1.3 PREBID AND PRECONSTRUCTION CONFERENCES

A. RSU Physical Plant Director will administer pre-bid conference at RSU offices for clarification of RSU and Contractor responsibilities in use of site and for review of administrative procedures. The bidders will then be taken to the site to review the buildings.

B. RSU Contract Administrator will administer the preconstruction conference at RSU offices. Project start and completion date will be determined and other administrative procedural responsibilities will be reviewed.

1.4 PROJECT MEETINGS

Schedule and administer Project meetings through progress of the Work as deemed necessary by the RSU Physical Plant Director.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01340
SUBMITTALS

PART 1 - GENERAL

1.1 MANUFACTURED ARTICLES:

Manufactured articles, materials, equipment to be applied, installed, connected, erected, used, cleaned, conditioned as directed by manufacturer's printed instructions unless otherwise specified. Where materials are specified by more than one name for one use, select any of those specified. Keep copies of such printed recommendations at job site, and deliver one to RSU.

1.2 CONSTRUCTION SCHEDULE:

Within seven (7)) days of award of contract or initial endorsement, submit for approval, construction schedule to RSU Physical Plant Director.

1.3 SUBCONTRACTOR LIST:

Prepare a list of proposed subcontractors including material suppliers. Submit for approval before sub-contracts are awarded. No sub-contractors to be employed on work unless approved by RSU.

1.4 CHANGE ORDERS:

If during construction, RSU authorizes additional work, contractor will provide detailed estimates listing all items of labor and material with quantities and unit prices extended for each item. This applies to all sub-contract work as well as work done by the General Contractor and to all estimates.

1.5 SHOP DRAWINGS AND SAMPLES:

Transmit each shop drawing, sample, or submittal to RSU with Contractor's transmittal form or letter, not by sub- contractor's or supplier's form. Identify each item submitted with Contractor's name, date, project, material, quantity and other pertinent data.

1.6 SHOP DRAWINGS - SUBMITTAL

A. Material list identifying materials and equipment to be used. Submit not less than three (3) copies to RSU for approval. Materials found to be acceptable and not requiring further clarification shall be approved on basis of the materials listed. Materials rejected must be re-submitted as an amendment to the material list. Material requiring the submittal of additional information will be marked for second stage submittal. Material list shall include:

   1. Specification sub-section number and title.
   2. Manufacturers, type, model and size.
   3. Identification of vendor for specifically fabricated items such as structural or miscellaneous steel, reinforcing, doors and frames, millwork, etc.

B. Samples, colors, patterns, textures for approval or selection: Submit all materials required for color selection or approval.
   No selections possible by RSU until all materials received so complete coordination possible. Submit sufficient samples to show range of shades, tones, values, pattern, texture and other features as specified or directed. Label or tag each sample or set of samples indicating:

   1. Manufacturer, brand name, catalog or manufacturer's no.
   2. Project title.
   3. Intended use.

Two copies manufacturer's catalog sheets showing illustrated cuts of items furnished, scale details, sizes, dimensions, capacities, controls, performance characteristics, wiring diagrams and all other pertinent information. One copy of approved and/or disapproved submissions will be returned to Contractor. Contractor shall make corrections as required and furnish two corrected copies to RSU and others as needed.

SECTION 01600
MATERIAL AND EQUIPMENT

1.1 REQUIREMENTS INCLUDED

A. Products
B. Transportation and Handling
C. Storage and Protection
D. Product Option
E. Substitutions

1.2 RELATED REQUIREMENTS

A. Section 01010 – Summary of Work
B. Section 01015 – Existing Conditions
C. Section 01090 – Reference Standards
D. Section 01340 – Submittals
E. Section 01700 - Contract Close Out

1.4 PRODUCTS

A. Products include material, equipment, and systems.

B. Comply with Specifications and referenced standards as minimum requirements.

1.5 TRANSPORTATION AND HANDLING

A. Transport products by methods to avoid product damage; deliver in undamaged condition in manufacturer's unopened containers or packaging, dry.

B. Provide equipment and personnel to handle products by methods to prevent soiling or damage.

C. Contractor shall be aware of vandalism and theft and is advised not to leave tools or materials unattended at the job site.

1.6 STORAGE AND PROTECTION

Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.

1.7 PRODUCT OPTIONS

A. Products specified by naming one or more manufacturers with a provision for substitution: Submit a request for substitution for any manufacturer not specifically named.

1.8 SUBSTITUTIONS

A. All products proposed for use, including those specified by required attributes and performance shall require approval of RSU before being incorporated into the work. Do not substitute materials, equipment, or methods unless substitution has been specifically approved by RSU.

B. Submit to RSU, according to the requirements of this section, all substitution requests ten (10) days prior to bid opening date. Substitutions are reviewed for general compliance with specifications. The Contractor is responsible for conforming quantities, dimensions, site conditions, coordinating with other trades and complying with applicable building codes and local ordinances.

C. RSU will determine acceptability of proposed substitution, and will notify Contractors of acceptable or rejection in writing within a reasonable time.

END OF SECTION

SECTION 01700
CONTRACT CLOSE-OUT

1.1 REQUIREMENTS INCLUDED

A. Close-Out Procedures.

B. Project Record Documents.

1.2 CLOSE-OUT PROCEDURES

When Contractor considers work has reached final completion, submit written certification that Contract Documents have been reviewed, Work has been inspected, and that work is complete in accordance with Contract Documents and is ready for RSU to inspect.

1.3 FINAL CLEANING

A. Execute final cleaning prior to final project assessment.

B. Remove waste and surplus materials, rubbish, and construction facilities from the Project and from the site. Contractor shall not use waste containers at the site.

C. Clean exterior surfaces exposed to view of all foreign substances.

D. Clean interior surfaces exposed to view; remove temporary labels, stains and foreign substances.

1.4 PROJECT RECORD DOCUMENTS

A. Store documents separate from those used for construction. Keep documents current; do not permanently conceal work until required information has been recorded.

B. At Contract Close-Out:

1. Submit documents with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor.

2. Submit set of drawings reflecting changes as indicated on Project Record Drawings.

3. Warranty – Contractor shall provide a Two (2) year maintenance warranty for all materials and labor associated with the content of the contract.

4. Contractor to provide Manufacturer's warranties for the all roofing systems of the contract.

END OF SECTION

SECTION 02050
DEMOLITION

PART 1 GENERAL

1.1 WORK INCLUDED

A. Remove multi-ply modified roof system down to deck at all areas. (see photos)
B. Remove asphalt shingle roof system down to deck at south side of clock tower. (see photo)
C. Remove and Replace items as indicated in "Scope of Work" (see photos and related SOW action items)

PART 2 PRODUCTS -NOT

USED PART 3 EXECUTION

3.1 PROTECTION

A. Contractor shall use extreme care in the demolition, removal, repair or relocation of existing items in order to protect remaining items from damage. Replace any item or areas so damaged with matching, new items of equal quality.

B. Where operations involve the demolition, removal or repair of existing items in the exterior envelope of existing structures, the Contractor shall provide temporary protection as required to maintain the structure in a stable condition at the end of each day and/or end of activity that is associated with these operations.

C. Do not close or obstruct egress width to any building or site exit. If egress is to be closed or obstructed contractor is to provide temporary means of egress.

D. Rogers State University reserves the right to replace or repair any damaged item, article, building, lawn, shrubs, trees, vehicles, etc. at the Contractors expense, in the event of the Contractor's failure to do so. Rogers State University has the obligation to notify the Contractor prior to any action.

3.2 DEMOLITION

A. Remove existing roof material to the existing deck. When finished the deck shall be free from all dirt, debris, gravel, felts etc.

B. A thorough inspection of the existing roof deck shall be made by the Contractor. Any defective decking shall be replaced.

C. A thorough inspection of the existing flue vent pipes and flue caps shall be made by the Contractor. Parts with minor rusted areas shall be considered salvageable and shall be sanded clean then painted with a rust inhibitor type primer. Any flue pipes or caps with areas which are rusted through or are severely bent or dented shall be considered defective. Any defective or missing flue pipes or caps shall be replaced

3.3 CLEAN UP

A. Remove all debris immediately from the job site.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Flat Polyisocyanurate Roof Insulation.

B. Tapered Polyisocyanurate Roof Insulation.

1.2 RELATED SECTIONS

A. Section 07510 - Built-Up Roofing.

1.3 REFERENCES

A. ASTM C 1289 - Standard Specification for Faced Rigid Cellular Thermal Insulation Board.

B. ASTM D 312 - Standard Specification for Asphalt Used in Roofing.

C. ASTM D 1621 - Test Methods for Compressive Properties of Rigid Cellular Plastics.

D. ASTM D 2126 - Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.

E. UL 263 - Fire Tests of Building Construction and Materials.

F. UL 790 - Tests for Fire Resistance of Roof Covering Materials.

G. UL 1256 - Fire Test of Roof Deck Constructions.

1.4 SYSTEM DESCRIPTION

A. Performance Requirements:
   1. UL Assemblies:
      a. Component of Class A Roof System - UL 790.

B. Physical properties (Foam Core Only):
   1. Compressive Strength: ASTM D 1621 and ASTM C 1289, Type II, 20 psi minimum for Grade 2 and 25 psi for Grade 3.
   2. Dimensional Stability: ASTM D 2126, 2 percent linear change (7 days).
   3. Moisture Vapor Transmission: ASTM E 96, < 1 perm.
   4. Water Absorption: ASTM C 209, < 1 percent by volume.
   5. Service Temperature: Minus 100 degrees to 250 degrees F.
   6. Foam Core R Values: Based on Long Term Thermal Resistance in accordance with ASTM C 1289.

1.5 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. Installation methods.

B. Shop Drawings: Roof plan showing slopes, layout of boards.

C. Verification Samples: For each finish product specified, two samples, representing actual product.
   1. Submit 6 by 6 inch samples of each board type required.
   2. Submit samples of each fastener type required.

D. Manufacturer's Certificates: Manufacturer's certification that materials meet or exceed specification requirements.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer shall be a company that regularly manufactures polyisocyanurate and fully assembled insulation panels in-house with no outside fabrication operations.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store products as recommended by the manufacturer and protect until ready for installation.

B. Stack insulation on pallets off the ground or roof deck.

C. For jobsite storage slit or remove packaging to permit ventilation and cover with breathable tarpaulin or other suitable waterproof coverings.

1.8 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. Do not install insulation on roof deck when water of any type is present. Do not install insulation or roofing materials when substrate is damp or wet or when proper adhesive temperature cannot be maintained.

1.9 COORDINATION

A. Coordinate work with installation of roof covering and associated roof penetrations and counterflashings installed by other sections as work of this section proceeds.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Hunter, GAF, Firestone, or approved equals.

B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MATERIALS

A. Tapered Foam Roof Insulation with Fiber-Reinforced Facers: Closed-cell polyisocyanurate foam core and bonded to fiber-reinforced facers on both sides; conforming to ASTM C 1289, Type II, Class 1 with square edges.
   1. Blowing Agent: Zero ODP, 3rd generation.
   2. FM Approval, Wind Uplift Classification: 1-90.
   3. Compressive Strength: 20 pounds per square inch Grade 2.
   4. R Value: Provide Insulation with LTTR (Long Term Thermal Resistance) in accordance with ASTM C 1289-12.
   a. Minimum insulation thickness: 2” on the flat before taper starts.
   5. Slope of tapered board shall be:

a. 1/8 inch per foot.
b. Slope as indicated on the Shop Drawings.

PART 3 EXECUTION

3.1 EXAMINATION

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

B. Examine roof deck for suitability to receive insulation. Verify that substrate is dry, clean, and free of foreign material that will damage insulation installation.

C. Verify that scuppers, roof curbs, nailers, equipment supports, vents, and other roof accessories are secured properly and installed in conformance with drawings and submittals.

D. Verify that deck is structurally sound to support installers, materials, and equipment without damaging or deforming work.

E. 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 specified insulation in accordance with manufacturer's latest printed instructions.

B. Do not leave installed insulation exposed to weather. Cover and waterproof immediately after installation.

C. Seal exposed insulation joints at the end of each day. Remove seal when work resumes.

D. Remove installed insulation that has become wet or damaged and replace with new solid and dry insulation material.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Protect installed insulation traffic by use of protective covering materials during and after installation.

C. Cover the top and edges of unfinished roof panel work to protect it from the weather and to prevent accumulation of water in the cores of the panels. Only apply enough insulation per day that can be covered by the finished roofing system.

D. Do not leave panels exposed to moisture. Wet panels shall be removed or allowed to completely dry prior to application of vapor barrier and/or roof covering.

E. Repair or replace damaged products before Substantial Completion.

END OF SECTION

PART 1 GENERAL

3.5 SECTION INCLUDES

A. High profile laminate asphalt shingles.
   1. Legacy – Impact Resistant

B. Underlayment and accessories.

3.6 RELATED SECTIONS

A. Section 02 41 16.13 - Building Demolition.

B. Section 06 10 00 - Rough Carpentry.

C. Section 07 61 00 - Sheet Metal Roofing.

3.7 REFERENCES

A. ASTM International (ASTM):
   1. ASTM C209 - Standard Test Methods for Cellulosic Fiber Insulating Board.
   2. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
   3. ASTM D226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
   4. ASTM D1621 - Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
   5. ASTM D1970 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
   6. ASTM D2126 - Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.
   7. ASTM D3018 - Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules.
   8. ASTM D3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
   9. ASTM D3462 - Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules.
   10. ASTM D4586 - Standard Specification for Asphalt Roof Cement, Asbestos- Free.
   11. ASTM D4601 - Standard Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing.
   12. ASTM D4869 - Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing.
   13. ASTM D6757 - Standard Specification for Underlayment Felt Containing Inorganic Fibers Used in Steep-Slope Roofing.
   14. ASTM D7158 - Standard Test Method for Wind Resistance of Asphalt Shingles (Uplift Force/Uplift Resistance Method).
   15. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
   16. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
   17. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings.

B. Canadian Standards Organization (CSA).
   1. CSA A123.5 - Asphalt Shingles.
   2. CSA A123.3 - Underlayment.

C. ICC Evaluation Service (ICC-ES).
   1. ICC Approval - ESR-1561: Roofing Felt and Underlayment.
   2. ICC Approval - ESR-3150: Asphalt Shingles.
   3. ICC-ES AC188: Acceptance Criteria for Roof Underlayments.

D. Intertek Testing Services (ITS).
   1. Fire Resistance Directory, Current Edition.
   2. Code Compliance Research Report - CCRR-1082: Roofing Felt and Underlayment.

E. Underwriters Laboratory (UL):
   1. UL 790 - Standard Test Methods for Fire Tests of Roof Coverings.
   2. UL 2218 - Impact Resistance of Prepared Roof Covering Materials.

3.8 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative 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. Samples for Selection and Verification: For the following products, of sizes indicated: For each product specified, two complete sets of color samples representing manufacturer's full range of available colors and patterns.
   1. Asphalt Shingles: Full size.
   2. Asphalt Starter Shingles: Full size.
   3. NEX Polymer Modified Fiberglass Hip and Ridge Shingles: Full size.
   4. Synthetic Underlayment: 12 inches square.
   5. NEX Polymer Modified Self-Adhering Fiberglass Reinforced Underlayment: 12 inches square.
   6. NEX Polymer Modified Fiberglass Reinforced Underlayment: 12 inches square.
   7. Nails Used for Fastening Shingles: 5 of each nail type and size.

3.9 QUALITY ASSURANCE

A. Primary Roofing Materials Manufacturer Requirements:
   1. Manufacturer specified asphalt shingles for a minimum of twenty (20) years.
   2. Manufacturer shall be an associate member in good standing of either the National Roofing Contractors Association (NRCA), Western States Roofing Contractors Association (WSRCA), or the Midwest Roofing Contractors Association (MRCA).

B. Applicator: Company specializing in applying asphalt shingle roofing with minimum ten (10) years documented experience and approved by materials manufacturer. Contractor must also carry with them the State of Oklahoma CIB Commercial Applicator registration.

C. Fire-Resistance Characteristics: Where indicated, provide asphalt shingles and related roofing materials identical to those of assemblies tested for fire resistance per test method below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify products with appropriate markings of applicable testing agency.

D. Exterior Fire-Test Exposure: Class A; ASTM E108 or UL 790, for application and roof slopes indicated.

3.10 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.

3.11 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.

3.12 PROJECT MEETINGS

A. Pre-Construction Meeting:
   1. Prior to the start of the roofing project, the Owner will hold a job-site meeting and roof tour to review the scope of work.
   2. Authorized representatives of the Owner, the Roofing Contractor (Project Superintendent), the asphalt shingle manufacturer, other Subcontractors whose work complements, penetrates, or is mounted on the roof or will use the roof as a work platform, will be in attendance.
   3. The agenda for the meeting shall include:
      a. A review of the submittals.
      b. Distribution of approved submittals.
      c. A walkover inspection of the roof.
      d. Establishment of a schedule for the work.
      e. Selection of staging and storage locations.

B. Final Inspection: Following the completion of the work, a final inspection shall be scheduled by Owner's Representative. Any uncompleted work shall be noted on a punch list. Final payment shall be made only after punch list is completed.

3.13 WARRANTY

A. Standard Warranty: Shingles subjected to terms and conditions of the standard Manufacturer's Limited Warranty. Wind warranty coverage is subject to the shingles being sealed.
   1. Warranty Length: 50 years for Legacy
   2. Limited Term Resistance to Wind: 110 mph for Legacy Shingle.

B. Contractor Maintenance Warranty for Polymer Modified Shingles: Contractor agrees to repair or replace components of asphalt shingle roofing system that fail in materials or workmanship within specified warranty period. Includes asphalt shingles, flashings, roof insulation, nail base, and other components of roofing system.
   1. Warranty Length: 2 years from date of Substantial Completion.

C. Upon project completion and acceptance by Owner, the Roofing Contractor shall promptly provide executed copies of the specified warranties.

D. Furnish a list containing the names and contact telephone numbers of the Roofing Contractor's Service Manager, Superintendent, and Project Manager and the Roofing Contractor's current mailing address.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Malarkey Roofing Products, which is located at: 3131 N. Columbia Blvd. P.O. Box 17217; Portland, OR 97217; Toll Free Tel: 800-545-1191; Tel: 503-283-1191; Fax: 503-289-7644;

B. Substitutions: No substitutions regarding shingle manufacturer. Substitutions are allowed for other roofing related products that conform to Malarkey roof warranties

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 SHINGLES

A. High Profile Laminate Shingles:

   .

   1. Legacy (272) as manufactured by Malarkey Roofing Products.
      a. Malarkey Legacy shingles hold a Class A Fire Rating.
      b. As manufactured, Legacy meets the requirements of:
         1) ASTM D7158 Class H, ASTM D3462, ASTM D3161 Class F, ASTM D3018 Type I, ASTM E108 Class A, UL 2218 Class 4 Impact Resistance, ICC-ES AC438, and CSA A123.5.
         2) ICC Approval: ESR-3150.

3) FBC Approval: No. 14809.
4) Listed with UL and Intertek/WHI.

c. Performance:
1) Limited Material Warranty: 50 years.
2) Limited Wind Warranty: 15 years. 110 mph.
3) NEX polymer mix includes recycled rubber and plastics.
4) SEBS polymer modified asphalt laminate adhesive.
5) SEBS asphalt seal-down adhesive.
6) 3M Smog-Reducing Granules.

B. Color: Malarkey "Storm Gray"

2.3 UNDERLAYMENT

A. NEX Polymer Modified, Self-Adhering Fiberglass Underlayment:
1. Product: Malarkey 401 Arctic Seal.
2. As manufactured, 401 Arctic Seal meets the requirements of ASTM D1970.
3. Self-adhering sheet shall be nominal 55 mils thick.
4. Self-adhering sheet shall be 36 inches in width.
5. One (1) roll covers two (2) squares of roof.
6. NEX polymer mix includes recycled rubber and plastics.

2.4 RELATED PRODUCTS

A. Continues Ridge Vent – Shingle Over Style.

B. NEX Polymer Modified 10 inches High-Profile Hip and Ridge: Malarkey No. 224 EZ-Ridge XT Scotchgard.

C. NEX Polymer Modified Full-Width Perforated Starter Shingle: Malarkey Smart Start No. 210.

D. Plastic Roof Cement conforming to ASTM D4586.

E. Fasteners: Hot Dip Galvanized nails with minimum 3/8 inch head.

PART 3 EXECUTION

3.1 DELIVERY, STORAGE, AND HANDLING IMPORT

A. New and dry roof materials delivered to the job site in containers unopened and undamaged. Manufacturer's products stamped with labels, names, and run codes of manufacture and testing laboratory.

B. Store underlayment materials on ends only. Discard rolls which may have been flattened, creased, or otherwise damaged. Place materials on pallets or wood sleepers. Do not stack palletized materials.

C. Cover underlayment rolls with weatherproof materials secured to prevent materials from becoming exposed to moisture. Use breathable tarps.

D. Disperse materials stored on the roof surface to avoid concentrated loading. Set larger concentrations over structural members.

1.1 APPLICATION OF SHINGLES

E. Laminate Shingle Application; 8 inches Offset - Diagonal Pattern:
1. Starter courses: Use Malarkey starter shingles or self-sealing 3-tab shingles with the tabs cut off; apply to eave and rake edges of roof.
2. Cut 6 inches off the length of the first starter shingle and apply at a lower corner of roof. The starter course shall overhang the edge metal 1/4 to 3/4 inch. Fasten with four (4) nails, 1-1/2 inches to 3 inches up from the eave with one fastener 1 inch from each end and the remaining two evenly spaced on the same line as the end fasteners.
3. Continue starter course across the roof with a full-length shingles, butting them loosely together to

avoid buckling.

4. First course: Start with a full shingle applied directly over the starter course at the same lower corner of the roof, and secure with fasteners.
5. Second course: Cut 8 inches off one end of a full shingle and apply the remaining piece over the underlying, first course shingle. Align the bottom edge along a line level with the "sawtooth" overlay in the preceding course, exposing the first course 5-5/8 inches. Secure with fasteners.
6. Succeeding Courses: Courses three through five are begun with partial shingles, each progressively 8 inches shorter, establishing the overall diagonal pattern or stair-step effect. (Pieces cut from shingles along one rake edge can be used to finish off courses on the opposite rake.)
7. Apply a full shingle adjacent to each of the first five courses to extend the pattern. Butt the shingles loosely together to prevent buckling.
8. Courses six through ten repeat the process beginning with a full shingle and repeating the 1-to-5 course cycle on up the roof.
9. Strike a chalk line every six courses or so to ensure straight courses. Shingles may be laid from either lower corner of the roof. Start at the rake edge and follow layout and cutting instructions as required for proper application. Installation of shingles with a 4-inch offset is also acceptable. Offsets must be no less than 4 inches.

3.2 FASTENERS

A. 3-tab Nailing Pattern: Nails must be placed just below the seal-down strip and centered over the shingle cutouts. End fasteners are placed approximately 1 inch in from each end of the shingle and the remaining nails over the shingle cutouts. Fasteners shall be seated flush to the shingle surface and not overdriven to cut into shingles. When fastening, butt shingles loosely together to prevent buckling.
   1. Fasteners per shingle: Four (4).
   2. Fasteners per shingle/high wind areas: Six (6), including starter shingles.
   3. Steep slope fastening (roof decks > 21:12): Six (6), including starter shingles, and hand-sealing of tabs with ASTM D4586.

B. Laminate Nailing Pattern: Nails must be placed within the nailing zone, 1 inch in from each end of the shingle and the remaining nails evenly spaced on the same line as the end nails. Fasteners shall be seated flush to the shingle surface and not overdriven to cut into shingles. When fastening, butt shingles loosely together to prevent buckling.
   1. Fasteners per shingle: Four (4).
   2. Fasteners per shingle/high wind areas: Six (6), including starter shingles.
   3. Steep slope fastening (roof decks > 21:12): Six (6), including starter shingles, and hand-sealing underneath with ASTM D4586.

END OF SECTION

SECTION 07 54 23

TPO THERMOPLASTIC SINGE-PLY ROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. TPO Thermoplastic Single-Ply Roofing, 135 mil Fleeceback TPO

B. Membrane Flashings.

C. Metal Flashings.

D. Roof Insulation.

1.2 RELATED SECTIONS

A. Section 03 30 00 - Cast-in-Place Concrete.

B. Section 06 10 00 - Rough Carpentry.

C. Section 07 53 23 - Ethylene-Propylene-Diene-Monomer Roofing.

D. Section 07 54 00 - Thermoplastic Membrane Roofing.

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

F. Section 07 70 00 - Roof and Wall Specialties and Accessories.

J. Section 22 30 00 - Plumbing Equipment.

1.3 CODE COMPIANCE AND REFERENCES

All installed roofing systems must meet the Code and Regulatory Requirements and Recommendations of the most current edition of:

1. The International Code Council (all Codes) including the International Building Code and its References, for example ANSI-SPRI ES-1 certification requirements.

2. All adopted Codes of the Oklahoma State Fire Marshall

3. All recommendations of the National Roofing Contractors Association, (NRCA)

4. Sheet Metal and Air Conditioning Contractor's National Association, (SMACNA)

5. All requirements of the State of Oklahoma Roofing Program and the State of Oklahoma Roof Warranty, Roofing System Manufacturer's Warranty, (RSMW)

6. All applicable American Society for Testing and Materials, (ASTM) Standards, (partial list below)

7. The requirements of U.L. 790 and U.L. 580

8. FM Global Approval Standards 4450, 4470, 4471, 4435, 4451, and 4454

9. All applicable FM Loss Prevention Data Sheets, including FM Data Sheets 1-34, 1-28, 1-29, and 1-49 10.

10. Contractor shall be registered with the Oklahoma Industrial Board and be in good standing.

The State Of Oklahoma Has Adopted the International Building Codes of 2009 with revisions. These apply, ANSI/SPRI WD-1, “Wind Design Standard for Roofing Assemblies.

B. ASTM International (ASTM):

1. ASTM C 208 - Standard Specification for Cellulosic Fiber Insulating Board.

2. ASTM C 1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.

3. ASTM D 6878 - Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing.

C. Factory Mutual (FM Global):

1.Approval Guide.

a. Factory Mutual Standard 4470 - Approval Standard for Class 1 Roof Covers.

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. 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 SUBMITTALS

A. Submit under provisions of Section 01340

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 Shop Drawings:

1.Submit approved plan, section, elevation or isometric drawings which detail the appropriate methods for all flashing conditions found on the project.

2.Coordinate approved drawings with locations found on the Contract Drawings.

1.5 QUALITY ASSURANCE

A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum twenty (20) years documented experience.

B. Applicator: Company specializing in applying TPO roofing with minimum ten (10) years documented experience and approved by materials manufacturer. Contractor must also carry with them the State of Oklahoma CIB Commercial Applicator registration. Installer must be capable of extending the Manufacturer's No Dollar Limit guarantee.

1.6 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. Material Safety Data Sheets (MSDS) must be on location at all times during the transportation, storage and application of materials.

D. When loading materials onto the roof, the Authorized Roofing Applicator must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.

1.7 PROJECT CONDITIONS

A. Proceed with roofing work only when weather conditions are in compliance with the manufacturers recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturers requirements and recommendations.

B. 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.

C. Provide protection, such as 3/4 inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.

D. 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.

E. New roofing shall be complete and weather tight at the end of the work day.

F. Contaminants such as grease, fats and oils shall not be allowed to come in direct contact with the roofing membrane.

1.8 WARRANTY

A. At project closeout, provide to Owner or Owners Representative an executed copy of the manufacturer's Total System warranty, outlining its terms, conditions, and exclusions from coverage.

1. 135 mil fleeceback TPO, Mechanically fastened insulation, Fully Adhered cover board and TPO membrane – 30 year NDL
2. For 135 mil, coverage to be extended to include 2” hail damage in accordance with terms stated in the Warranty document.
3. Coverage to be extended to include accidental punctures in accordance with terms stated in the Warranty document.
4. Coverage to be extended to include hail damage in accordance with terms stated in the Warranty document.
5. Coverage to be extended to include roof edge metal water tightness in accordance with terms stated in the Warranty document.

B. 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.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Carlisle, Versico, GAF, Mule-Hide, Firestone, and John Manville,

B. Substitutions: Are NOT permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

2.2 SCOPE / APPLICATION

A. Roof System: Provide a waterproof roof system, capable of withstanding uplift forces as specified in the Design Criteria article of this section.

1. Membrane Attachment: Fully Adhered: 135 Mil Fleece back TPO

B. Base Flashing: Provide a waterproof, fully adhered base flashing system at all penetrations, plane transitions and terminations.

C. Insulation: Provide a tapered roof insulation system, mechanically fastened.

2.3 INSULATION

A. Polyisocyanurate: Rigid board with glass fiber reinforced facers (GRF) on both sides, meeting or exceeding the requirements of ASTM C 1289, Type II, Class 1.

Strength: Grade 2, 20 psi.

1. Thickness:
   a. Max 3 ½ " – Min 3"
   b. Min 2"

2. Taper slope – 1/8 in/ft

B. Cover Board: Water-resistant and silicone treated gypsum panel with embedded fiberglass facer on both sides, and pre-primed on one side. GP Gypsum Dens-Deck Prime.

1. Thickness: 1/2 inch.

2.4 FASTENING COMPONENTS

A. HD 14-10 Concrete Fastener: A #14 threaded fastener used for minimum 3,000 psi concrete decks.

B. CD-10 Concrete Fastener: A hammer-driven, non-threaded E-Coat fastener for use with structural concrete decks rated 3,000 psi or greater.

C. Lite-Deck Fastener: An oversized diameter metal fastener and associated 3 inch diameter Lite-Deck metal plate for use on adhered roofing systems to attach insulation to dense gypsum decks, cementitious wood fiber and lightweight insulating concrete.

D. Insulation Fastening Plates: A nominal 3 inch diameter metal plate used for insulation attachment.

2.5 FLASHING ACCESSORIES

A. Inside Corners: Pre-molded corner flashing for inside corners. 60 mil thickness. Color to match membrane. Special colors require custom fabrication process.

B. Outside Corners: Injection molded corner used for flashing outside corners. 60 mil thickness. Color to match membrane. Special colors require custom fabrication process.

C. TPO T-Joint Covers: Injection molded 60 mil thick TPO formed into a 4.5 inch diameter circle used to seal step-offs at splice intersections. Color to match membrane. Special colors require custom fabrication process.

D. TPO Curb Wrap Corners: Pre-fabricated corner flashings made from 60 mil thick reinforced Sure-Weld membrane. 6 inch wide base flange and a 12 inch overall height. Sizes available to fit curbs up to 6 foot by 6 foot in size. Color to match membrane. Gray, tan and special colors require custom fabrication process.

E. TPO Universal Corners: a pre-molded flashing for use in a variety of corner details, including inside and outside corners. Available in white, gray and tan and are 60-mil thick.

F. Molded Pipe Seals: A pre-molded flashing and clamping ring used for pipe penetrations. Available for 0.75 inch to 8 inch diameter pipes. Color to match membrane. Special colors not available.

G. TPO Split Pipe Seals: Pre-fabricated flashing consisting of 60 mil thick reinforced Detail Membrane for pipes 1 inch to 6 inch in diameter. A split (cut) and overlapped tab is incorporated to allow the pipe seal to be opened and wrapped around the pipe when it is not possible to pull a standard pipe flashing over a round penetration. Gray, tan and special colors require custom order fabrication. Custom sizes available on a special order basis.

H. TPO Split Square Tubing Wraps: Pre-fabricated flashings made of 60 mil thick reinforced Detail membrane for square tubing. A split (cut) and overlap tab are incorporated into these parts to allow the seals to be opened and wrapped around a square tubing penetration with an obstruction. Stock sizes include 3- inch, 4-inch, 5-inch and 6 inch diameter square tubing. Gray, tan and special colors require custom order fabrication. Custom sizes available on a special order basis.

I. TPO Molded Sealant Pockets:

1. A two-piece, interlocking injection molded, flexible pocket with a rigid polypropylene vertical wall and pre-formed deck flanges. Color to match membrane. Special colors not available.

2. Used with Thermoplastic One-Part Pourable Sealer as specified in this section for waterproofing pipe clusters or other odd shaped penetrations. The removable built-in extension legs allow the oval pocket to adjust from 7.5 inches to 11.5 inches in length while maintaining a 6-inch width.

J. Prefabricated Sealant Pockets: A two-piece, pre-fabricated, custom sized, sealant pocket that utilizes reinforced TPO membrane and coated metal to form a rigid, oversized sealant pocket with a weldable horizontal deck flange. Color - White. Gray, tan and special colors require custom order fabrication.

K. Sealant Pocket Extension Legs: Designed for use with the TPO Molded Sealant Pocket and the Pre-Fabricated Sealant Pocket to extend the length in increments of 10 inches. Fabricated from 45 mil thick reinforced TPO membrane and TPO coated metal. Can be used full length, cut to size for customized lengths or welded to each other for extra long applications. Color - White. Gray, tan and special colors require custom order fabrication.

L. Pressure-Sensitive Cover Strip: A nominal 6 inch wide by 40 mil thick non-reinforced TPO membrane laminated to nominal 35-mil thick cured synthetic rubber pressure-sensitive adhesive. Used in conjunction with TPO Primer to strip in flat metal flanges (i.e., drip edges or rows of fasteners and plates). Color to match membrane. Special colors not available.

M. TPO Pressure-Sensitive RUSS:

1. 6 inch RUSS: A nominal 6 inch wide, 45 mil thick reinforced TPO membrane with nominal 3 inch wide 35mil thick cured synthetic rubber pressure-sensitive adhesive laminated along one end. This product allows a continuous piece of membrane to be run up a parapet wall without fastener penetration through the field sheet at angle changes.

2. 10 inch RUSS: A nominal 10 inch wide, 45 mil thick reinforced TPO membrane with nominal 3 inch wide 35mil thick cured synthetic rubber pressure-sensitive adhesive laminated along both ends. The TPO 10-inch RUSS is used in place of narrow sheets to secure membrane in the perimeter roof area. The use of this product allows field membrane to be utilized over the entire roof area.

N. Sure-Weld Heat Weldable Walkway Rolls: Superior tear, puncture and weather resistance and designed to protect Sure-Weld membrane in those areas exposed to repetitive foot traffic or other hazards. Walkway material may be heat welded to Sure-Weld membrane using an automated heat welder or hand held heat welder. Walkway Rolls are 34 inches wide by 50 feet long and are nominal 180 mils thick. Color - White.

O. Non-Reinforced Flashing: Non-reinforced TPO flashing is a 60-mil thick non-reinforced TPO based membrane used for detail work where the use of pre-molded or pre-fabricated accessories are not feasible. Color - White.

2.6 CLEANERS, PRIMERS, ADHESIVES AND SEALANTS

A. Sure-Weld Bonding Adhesive: A high-strength solvent-based contact adhesive used for bonding Sure-Weld membrane to various porous and non-porous substrates.

1. Base: Synthetic Rubber.

2. Color: Yellow.

3. Solids: 20.0 percent.

4. VOC: 670 grams/liter.

B. Flexible FAST Adhesive: A spray or extruded applied, two-component, polyurethane, low-rise expanding foam adhesive used to securely bond FleeceBACK membranes to a variety of substrates.

C. Flexible FAST Dual Cartridge Adhesive: A two-component, polyurethane construction grade, low-rise expanding adhesive used to securely bond FleeceBACK membranes to a variety of substrates. The adhesive is extrusion applied 4 inch. 6 inch or 12 inch on center (depending on project conditions) using a portable applicator.

D. Flexible FAST Dual Tank Adhesive: A spray applied, two-component, polyurethane construction grade, low-rise expanding adhesive used to securely bond FleeceBACK membranes to a variety of substrates.

E. Flexible FAST 5-gallon Jug Adhesive: A two-component, polyurethane construction grade, low-rise expanding adhesive designed for bonding insulation to various substrates, packaged for use with the spray application rigs.

F. Aqua Base 120 Bonding Adhesive: a semi pressure-sensitive water based adhesive. Used as a one-sided, wet lay-in adhesive with Sure-Weld FleeceBACK 100 or 115 mil membranes or as a two-sided contact adhesive with non-fleece backed Sure-Weld TPO membranes.

G. Cut Edge Sealant: A medium solids content, free flowing polymeric material designed for sealing cut edges (exposed fabric) of Sure-Weld reinforced membrane.

H. Water Cut-Off Mastic: A one-component, low viscosity, self-wetting, Butyl blend mastic used as a compression sealing agent between membrane and applicable substrates.

I. Low VOC Primer: Manufacturer's recommended low VOC primer.

J. TPO Primer: Solvent-based product designed to prepare TPO membrane for improved adhesion to TPO surfaces prior to the application of pressure-sensitive products and sealant pockets.

K. Universal Single-Ply Sealant: A 100 percent solids, solvent free, VOC free, one-part polyether sealant that provides a weather tight seal to a variety of building materials. It is used for general caulking such as above termination bars and metal counter flashings and at scupper details.. Available in white only.

2.7 THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE

A. Membrane Thickness: 80 mil nominal.

a. Thickness over Scrim: 0.020 inches.

b. Breaking Strength (ASTM D 751): 250 lbf/in minimum.

c. Tear Resistance (ASTM D 751): 55 lbf/in minimum.

d. Elongation (ASTM D 751): 25 percent.

Field Sheet Dimensions:

a. Width: 12 feet maximum.

b. Length: 75 feet maximum.

B. Sure-Weld FleeceBACK Membrane: TPO membrane with a 55-mil fleece bonded to the underside.

1. Color: White.

2. Membrane Thickness: 135 mil nominal / 80 mil over fleece.

3. Sheet Dimensions:

a. Width: 12 feet maximum.

b. Length: 75 feet maximum, for 135-mil membrane.

4. Performance:

a. Breaking Strength: FB 100 - 300 lbf minimum / FB 115 - 400 minimum.

b. Tear Strength: 55 lbf/in minimum.

c. Elongation: 25 percent.

2.8 FLASHING ACCESSORIES

A. Inside Corners: Pre-molded corner flashing for inside corners. 60 mil thickness. Color to match membrane. Special colors require custom fabrication process.

B. Outside Corners: Injection molded corner used for flashing outside corners. 60 mil thickness. Color to match membrane. Special colors require custom fabrication process.

C.TPO Curb Wrap Corners: Pre-fabricated corner flashings made from 45 mil thick reinforced membrane. 6 inch wide base flange and a 12 inch overall height. Sizes available to fit curbs up to 6 foot by 6 foot in size. Color to match membrane. Gray, tan and special colors require custom fabrication process.

D. Molded Pipe Seals: A pre-molded flashing and clamping ring used for pipe penetrations. Available for 0.75 inch to 8 inch diameter pipes. Color to match membrane. Special colors not available.

E. Split Pipe Seals: Pre-fabricated flashing consisting of 45 mil thick reinforced membrane for pipes 1 inch to 6 inch in diameter. A split (cut) and overlapped tab is incorporated to allow the pipe seal to be opened and wrapped around the pipe when it is not possible to pull a standard pipe flashing over a round penetration. Gray, tan and special colors require custom order fabrication. Custom sizes available on a special order basis.

F.TPO Square Tubing Wraps: Pre-fabricated flashings made of 45 mil thick reinforced Sure-Weld membrane for square tubing. A split (cut) and overlap tab are incorporated into these parts to allow the seals to be opened and wrapped around a square tubing penetration with an obstruction. Stock sizes include 3- inch, 4-inch, 5-inch and 6 inch diameter square tubing. Gray, tan and special colors require custom order fabrication. Custom sizes available on a special order basis.

G.TPO Molded Sealant Pockets:

1. A two-piece, interlocking injection molded, flexible pocket with a rigid polypropylene vertical wall and pre-formed deck flanges. Color to match membrane. Special colors not available.

2. Used with Thermoplastic One-Part Pourable Sealer as specified in this section for waterproofing pipe clusters or other odd shaped penetrations. The removable built-in extension legs allow the oval pocket to adjust from 7.5 inches to 12 inches in length while maintaining a 6-inch width.

H.TPO Pressure-Sensitive RUSS:

1. 6 inch RUSS: A nominal 6 inch wide, 45 mil thick reinforced TPO membrane with nominal 3 inch wide 35mil thick cured synthetic rubber pressure-sensitive adhesive laminated along one end. This product allows a continuous piece of membrane to be run up a parapet wall without fastener penetration through the field sheet at angle changes.

I. Non-Reinforced Flashing: Non-reinforced TPO flashing is a 60-mil thick non-reinforced TPO based membrane used for detail work where the use of pre-molded or pre-fabricated accessories are not feasible. Color - White, gray and tan. Special colors require lead time and 5,000 square foot minimum.

2.9 CLEANERS, PRIMERS, ADHESIVES AND SEALANTS

A. FAST 100 or 100-LV Adhesive: A spray or extruded applied, two-component, polyurethane, low-rise expanding foam adhesive used to securely bond FleeceBack membranes to a variety of substrates.

B. FAST Dual Cartridge Adhesive: A two-component, polyurethane construction grade, low-rise expanding adhesive used to securely bond FleeceBack membranes to a variety of substrates. The adhesive

is extrusion applied 4 inch, 6 inch or 12 inch on center (depending on project conditions) using a portable applicator.

C. Cut Edge Sealant: A medium solids content, free flowing polymeric material designed for sealing cut edges (exposed fabric) of reinforced membrane.

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.

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 INSULATION - SYSTEM DESIGN

1. Thickness:
   a. Markham - Max 3 ½ " – Min 3"
   b. Herrington Hall – Max 8" to Min 4"
   c Health Sciences – Max 8" to Min 4"
2. Taper slope – 1/8 in/ft
3. Attachment Method: Fully adhered

3.4 INSULATION PLACEMENT

A. Install insulation or membrane underlayment in multiple layers over the substrate with boards butted tightly together with no joints or gaps greater than 1/4 inch. Stagger joints both horizontally and vertically if multiple layers are provided.

B. Secure insulation to the substrate with the required mechanical fastners 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. Fill all gaps in excess of 1/4 inch with same insulation material.

E. 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.

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

3.5 INSULATION ATTACHMENT

A. Securely attach insulation to the roof deck. Attachment must 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 the International Building Code (ASCE-7) or ANSI/SPRI WD-1.

C. Install insulation layers, maximum 4 feet by 4 feet, utilizing mechanical fasteners necessary to achieve the specified attachment and uplift rating. Stagger the joints of additional layers by a minimum of 6 inches..

3.6 MEMBRANE PLACEMENT AND ATTACHMENT (Fully Adhered)

A. Position and unroll successive sheets and align to provide for a minimum 3 inch wide splice.

B. Fold adjacent sheets in half lengthwise to expose an approximate 12 foot wide substrate area.

C. Membrane which will have the adjacent sheet spliced over it should be adhered to the substrate first. In this fashion, selvage edge splice area will not be contaminated by setting splice edge into the FAST Adhesive.

D. Spray or extrude adhesive onto the substrate and allow to foam up approximately 1/8 inch.. Wait for the adhesive to achieve "string" when a small object is lifted out of the adhesive.

E. Place the membrane into adhesive 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.

F. Apply adhesive to the substrate and continue process described above until all sheets are fully bonded, allowing for necessary splice overlaps at selvage edges. At end laps (along the width of the sheet) membrane shall be butted together which will be overlaid with 6 inch wide reinforced membrane hot air welded along all edges. Pressure-Sensitive Cover strip is not permitted in this situation.

3.7 SEAM WELDING

A. Hot-air weld membrane using an Automatic Hot Air Welding Machine or Hot Air Hand Welder in accordance with the manufacturer's current guidelines. At all splice intersections, roll the seam with a silicone roller to ensure a continuous hot air welded seam.

C. Probe all seams once the hot air welds have thoroughly cooled (approximately 30 minutes).

D. Repair all seam deficiencies the same day they are discovered.

E. Apply Cut Edge Sealant on all cut edges of reinforced membrane (where the scrim reinforcement is exposed) **after seam probing is complete. Cut Edge Sealant is not required on vertical splices.**

3.8 WALKWAYS

A. Install walkways at all traffic concentration points (such as roof hatches, access doors, rooftop ladders, etc.) and all locations similar to existing conditions..

3.9 FLASHING

A. Flashing of parapets, curbs, expansion joints and other parts of the roof must be performed using reinforced membrane or prefabricated accessories. Non-reinforced membrane may be used for flashing

pipe penetrations, Sealant Pockets, and scuppers, as well as inside and outside corners, when the use of pre-molded or prefabricated accessories is not feasible.

B. Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.

3.10 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 must be performed to temporarily close the membrane to prevent water infiltration.

3.11 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 must be disposed of in a legally acceptable manner.

B. Prior to the manufacturer's inspection for warranty, the applicator must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

3.12 PROTECTION

A. Protect installed products until completion of project.

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

END OF SECTION

The intent is to not replace metal flashing, roof edge metal or counter flashing. Verify existing conditions, should there be deterioration of existing flashing, contractor should be prepared to replace as required.

Alternate 1 includes for contractor to provide and installs metal coping at ALL parapet wall conditions. It is the intent that the existing cap block will not be removed.

Counterflashing may be reused if not damaged from roof membrane demo.

Contractor shall have lightning protection removed and reinstalled by licensed professional.

Lightning protection

Area 1 – Contractor responsible to remove and reinstall all roof top HVAC equipment, gas, electrical, lightning protection, etc. as required to installed new TPO roofing systems.

Area 2 – Contractor responsible to remove and reinstall all roof top HVAC equipment, gas, electrical, lightning protection, etc. as required to installed new TPO roofing systems.

Area 3 – Contractor responsible to remove and reinstall all roof top HVAC equipment, gas, electrical, lightning protection, etc. as required to installed new TPO roofing systems.

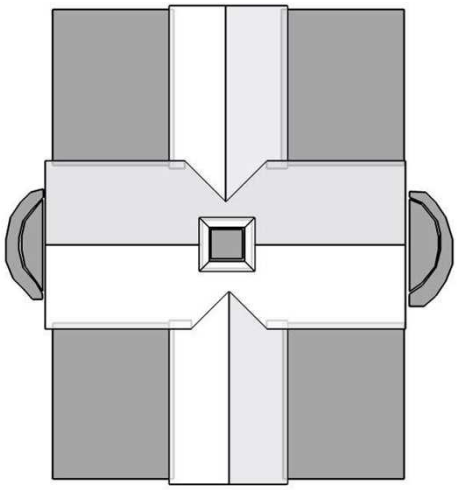
Area 4 – Contractor responsible to remove and reinstall all roof top HVAC equipment, gas, electrical, lightning protection, etc. as required to installed new TPO roofing systems.

Contractor to remove up to one square of shingles in the crack. Repair roof decking as needed to prevent future cracking. Install new shingles as specified, lacing new shingles into existing adjacent shingles.

Roof edge metal to remain unless damaged due to parapet wall membrane demo.

It is the intent of this project to remove roof membrane from parapet walls and replace with new TPO membrane.

1701 W Will Rogers Blvd, Claremore, OK 74017-3259



In this 3D model, facets appear as semi-transparent to reveal overhangs.

Building: Stratton Taylor Library

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MEASUREMENTS

Total Roof Area =16,482 sq ft
Total Roof Facets =19
Predominant Pitch =4/12
Number of Stories >1
Total Ridges/Hips =227 ft
Total Valleys =68 ft
Total Rakes =0 ft
Total Eaves =527 ft
Total Penetrations =26
Total Penetrations Perimeter = 369 ft
Total Penetrations Area = 459 sq ft

Measurements provided by www.eagleview.com

Certified Accurate

www.eagleview.com/Guarantee.aspx

1701 W Will Rogers Blvd, Claremore, OK 74017-3259

IMAGES

The following aerial images show different angles of this structure for your reference.

Top View

IMAGES

North Side

South Side

IMAGES

East Side

West Side

1701 W Will Rogers Blvd, Claremore, OK 74017-3259

LENGTH DIAGRAM

Total Line Lengths:

Ridges = 209 ft

Hips = 18 ft

Valleys = 68 ft

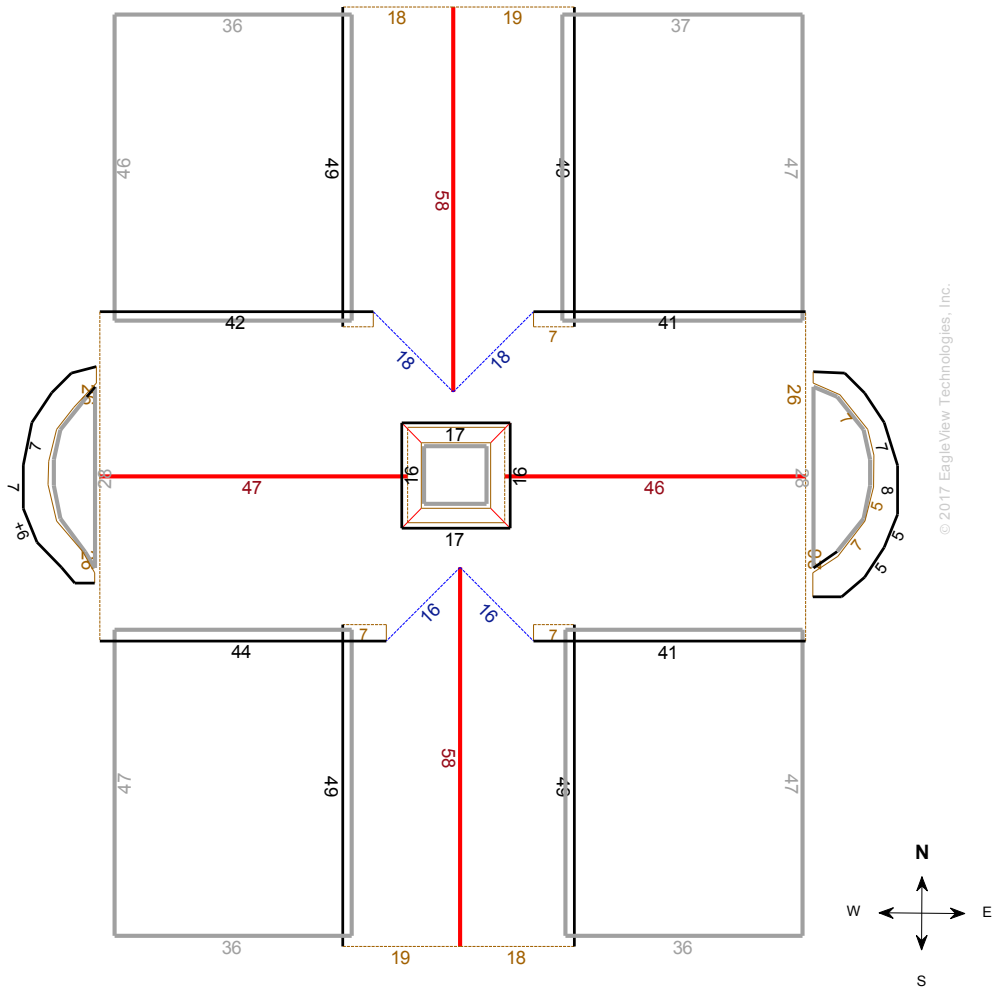
Rakes = 0 ft

Eaves = 527 ft

Flashing = 160 ft

Step flashing = 236 ft

Parapets = 813 ft

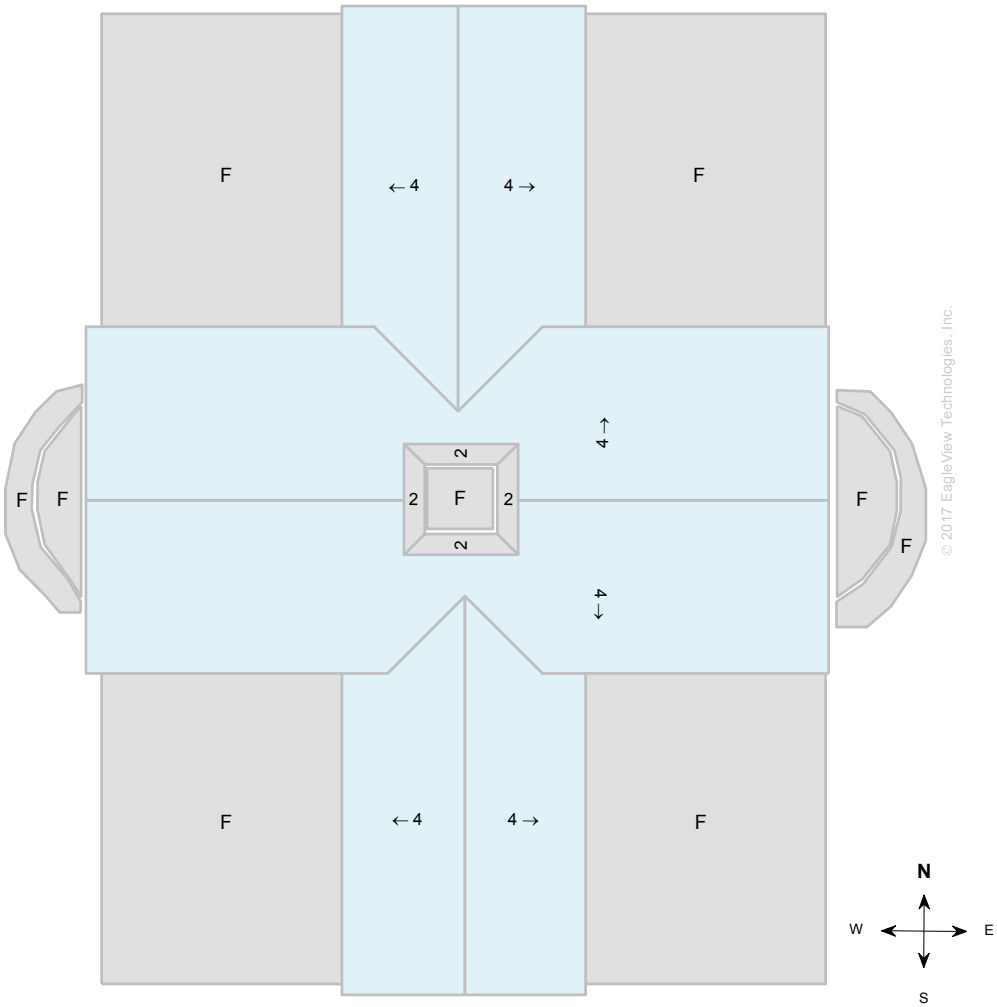


Note: This diagram contains segment lengths (rounded to the nearest whole number) over 5 feet. In some cases, segment labels have been removed for readability. Plus signs preface some numbers to avoid confusion when rotated (e.g. +6 and +9).

1701 W Will Rogers Blvd, Claremore, OK 74017-3259

PITCH DIAGRAM

Pitch values are shown in inches per foot, and arrows indicate slope direction. The predominant pitch on this roof is 4/12.

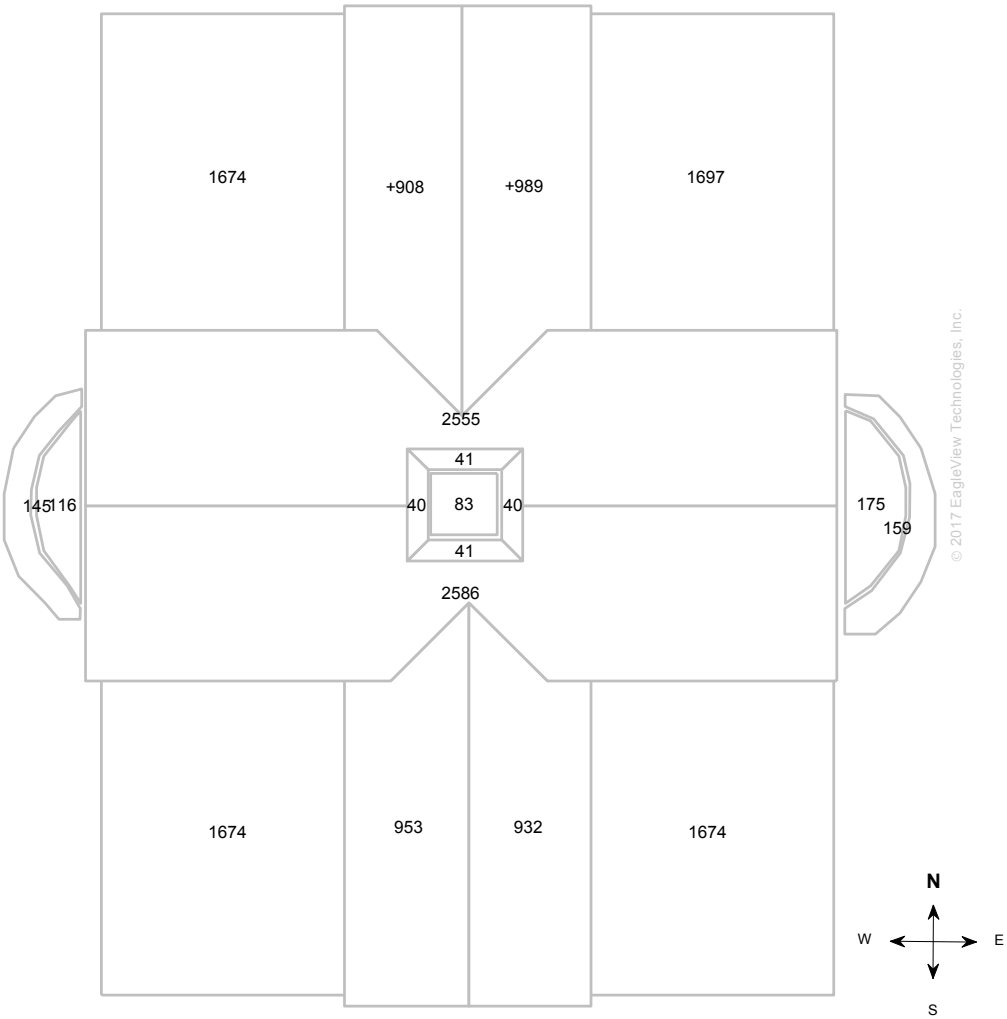


Note: This diagram contains labeled pitches for facet areas larger than 20 square feet. In some cases, pitch labels have been removed for readability. Blue shading indicates a pitch of 3/12 and greater. Gray shading indicates flat, 1/12 or 2/12 pitches. If present, a value of "F" indicates a flat facet (no pitch).

1701 W Will Rogers Blvd, Claremore, OK 74017-3259

AREA DIAGRAM

Total Area = 16,482 sq ft, with 19 facets.



Note: This diagram shows the square feet of each roof facet (rounded to the nearest foot). The total area in square feet, at the top of this page, is based on the non-rounded values of each roof facet (rounded to the nearest square foot after being totaled).

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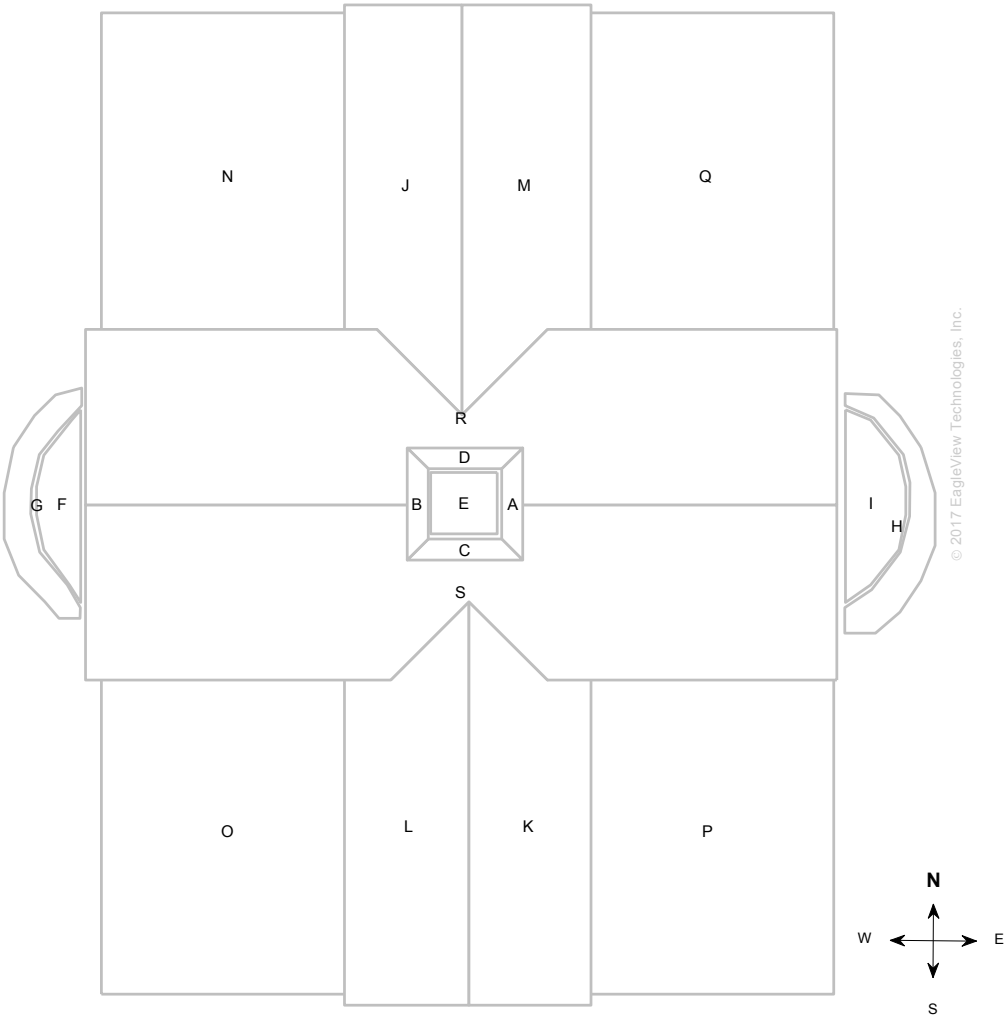
NOTES DIAGRAM

Roof facets are labeled from smallest to largest (A to Z) for easy reference.



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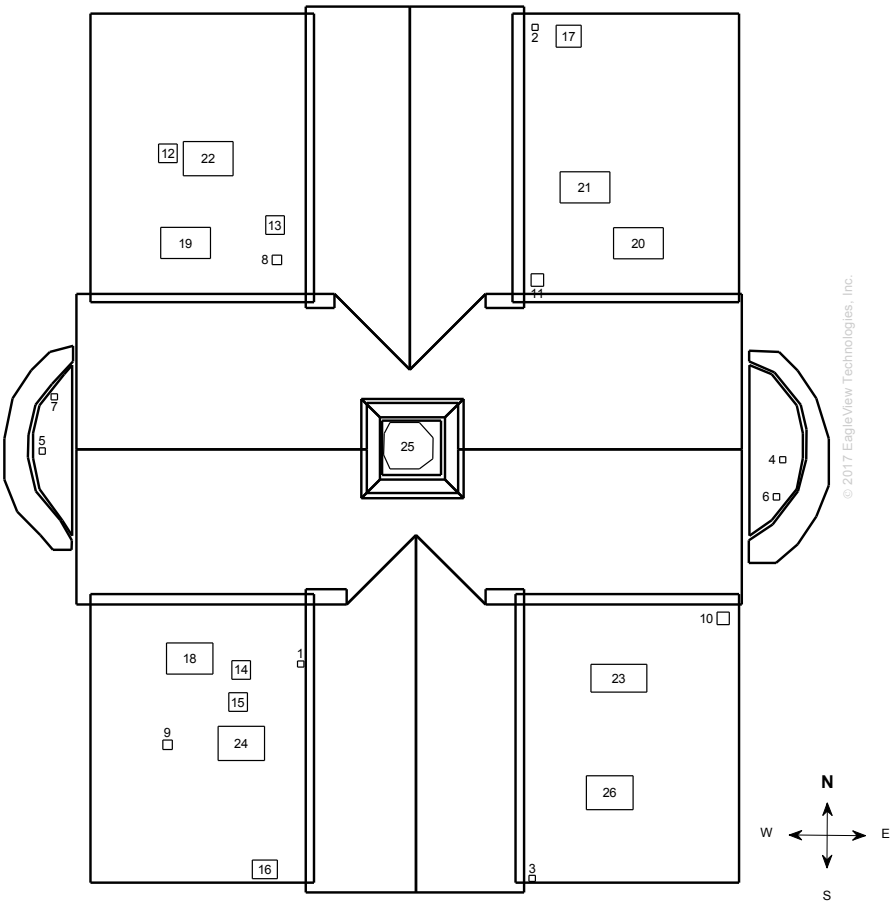
PENETRATIONS NOTES DIAGRAM

Penetrations are labeled from smallest to largest for easy reference.

Total Penetrations = 26
Total Penetrations Perimeter = 369 ft

Total Penetrations Area = 459 sq ft
Total Roof Area Less Penetrations = 16,023 sq ft



REPORT SUMMARY

Areas per Pitch			
Roof Pitches	0/12	2/12	4/12
Area (sq ft)	7396.9	161.2	8923.5
% of Roof	44.9%	1%	54.1%

The table above lists each pitch on this roof and the total area and percent (both rounded) of the roof with that pitch.

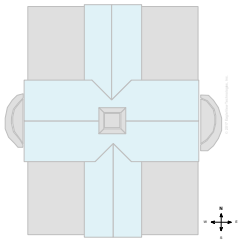
Waste Calculation Table							
Waste %	**0%**	**10%**	**12%**	**15%**	**17%**	**20%**	**22%**
Area (sq ft)	16,482	18,130	18,460	18,954	19,284	19,778	20,108
Squares	164.8	181.3	184.6	189.5	192.8	197.8	201.1

This table shows the total roof area and squares (rounded up to the nearest decimal) based upon different waste percentages. The waste factor is subject to the complexity of the roof, individual roofing techniques and your experience. Please consider this when calculating appropriate waste percentages. Note that only roof area is included in these waste calculations. Additional materials needed for ridge, hip, valley, and starter lengths are not included.

Penetrations	1-7	8	9	10-11	12-15	16	17	18	19-21	22
Area (sq ft)	1	2.2	2.3	4	9	12	14	37.5	40	41.2
Perimeter (ft)	4	6	6	8	12	14	15	25	26	26
	23	24	25	26						
Area (sq ft)	41.3	52.9	40.5	44						
Perimeter (ft)	26	26.7	27	27						

Any measured penetration smaller than 3x3 feet may need field verification. Accuracy is not guaranteed. The total penetration area is not subtracted from the total roof area.

* Rakes are defined as roof edges that are sloped (not level).
** Eaves are defined as roof edges that are not sloped and level.



Total Roof Facets = 19
Total Penetrations =26

Lengths, Areas and Pitches
Ridges = 209 ft (4 Ridges)
Hips = 18 ft (4 Hips).
Valleys = 68 ft (4 Valleys)
Rakes* = 0 ft (0 Rakes)
Eaves/Starter** = 527 ft (32 Eaves)
Drip Edge (Eaves + Rakes) = 527 ft (32 Lengths)
Parapet Walls = 813 (34 Lengths).
Flashing = 160 ft (28 Lengths)
Step flashing = 236 ft (16 Lengths)
Total Area = 16,482 sq ft
Total Penetrations Area = 459 sq ft
Total Roof Area Less Penetrations = 16,023 sq ft
Total Penetrations Perimeter = 369 ft
Predominant Pitch = 4/12

Property Location
Longitude = -95.6381938
Latitude = 36.3195167

Notes
This was ordered as a commercial property. There were no changes to the structure in the past four years.

Parapet Wall Area Table

Wall Height (ft)	1	2	3	4	5	6	7
Vertical Wall Area	813	1626	2439	3252	4065	4878	5691

This table provides common parapet wall heights to aid you in calculating the total vertical area of these walls. Note that these values assume a 90 degree angle at the base of the wall. Allow for extra materials to cover cant strips and tapered edges.