SECTION 00300 – PROPOSAL

TO THE MAYOR AND COMMISSIONERS
CITY OF HOLLYWOOD, FLORIDA

SUBMITTED 02/01/18

Dear Mayor and Commissioners:

The undersigned, as BIDDER, hereby declares that the only person or persons interested in the Proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this Proposal or in the Contract to be entered into; that this Proposal is made without connection with any other person, company or parties making a Bid or Proposal; and that it is in all respects fair and in good faith without collusion or fraud.

The BIDDER further declares that he has examined the site of the Work and informed himself fully in regard to all conditions pertaining to the place where the Work is to be done; that he has examined the Drawings and Specifications for the Work and contractual documents relative thereto, including the Notice to Bidders, Instructions to Bidders, Proposal Bid Form, Form of Bid Bond, Form of Contract and Form of Performance Bond, General, Supplementary and Technical Specifications, Addenda, Drawings, and MBE/WBE Program, Exhibit A-D, and has read all of the Provisions furnished prior to the opening of bids; and that he has satisfied himself relative to the work to be performed.

The undersigned BIDDER has not divulged to, discussed or compared his bid with other bidders and has not colluded with any other BIDDER of parties to this bid whatever.

If this Proposal is accepted, the undersigned BIDDER proposes and agrees to enter into and execute the Contract with the City of Hollywood, Florida, in the form of Contract specified; of which this Proposal, Instructions to Bidders, General Specifications, Supplementary Conditions and Drawings shall be made a part for the performance of Work described therein; to furnish the necessary bond equal to one hundred (100) percent of the total Contract base bid, the said bond being in the form of a Cash Bond or Surety Bond prepared on the applicable approved bond form furnished by the CITY; to furnish all necessary materials, equipment, machinery, tools, apparatus, transportation, supervision, labor and all means necessary to construct and complete the work specified in the Proposal and Contract and called for in the Drawings and in the manner specified; to commence Work on the effective date established in the "Notice to Proceed" from the ENGINEER; and to substantially complete all Contract Work as per Project Schedule of Section 00800, and stated in the "Notice to Proceed" or pay liquidated damages for each calendar day in excess thereof, or such actual and consequential damages as may result therefrom, and to abide by the MBE/WBE Program.

The BIDDER acknowledges receipt of the following addenda:

No. 1 Dated 01/11/18

No. _____ Dated _____

No. _____ Dated _____

And the undersigned agrees that in case of failure on his part to execute the said Contract and the Bond within ten (10) days after being presented with the prescribed Contract forms, the check or Bid Bond accompanying his bid, and the money payable thereon, shall be paid into the funds of the City of Hollywood, Florida, otherwise, the check or Bid Bond accompanying this Proposal shall be returned to the undersigned.

Attached hereto is a certified check on the

_____ Bank of _____

or approved Bid Bond for the sum of

Thirteen thousand, one hundred twenty-one Dollars ($13,121.00) according to the conditions under the Instructions to Bidders and provisions therein.

NOTE: If a Bidder is a corporation, the legal name of the corporation shall be set forth below, together with signature(s) of the officer or officers authorized to sign Contracts on behalf of the corporation and corporate seal; if Bidder is a partnership, the true name of the firm shall be set forth below with the signature(s) of the partner or partners authorized to sign Contracts in behalf of the partnership; and if the Bidder is an individual, his signature shall be placed below; if a partnership, the names of the general partners.

WHEN THE BIDDER IS AN INDIVIDUAL:

_____
(Signature of Individual)

_____
(Printed Name of Individual)

_____
(Address)

****

WHEN THE BIDDER IS A SOLE PROPRIETORSHIP OR OPERATES UNDER A TRADE NAME:

_____
(Name of Firm)

_____
(Address)

_____(SEAL)
(Signature of Individual)

****

WHEN THE BIDDER IS A PARTNERSHIP:

_____
(Name of Firm) A Partnership

_____
(Address)

By: _____
(SEAL)
(Partner)

Name and Address of all Partners:

_____

_____

****

WHEN THE BIDDER IS A JOINT VENTURE:

_____
(Correct Name of Corporation

By: _____
(SEAL)
(Address)

_____
(Official Title)

As Joint Venture
(Corporate Seal)

Organized under the laws of the State of _____, and authorized by the law to make this bid and perform all Work and furnish materials and equipment required under the Contract Documents.

****

WHEN THE BIDDER IS A CORPORATION:

Therma Seal Roof Systems, LLC
(Correct Name of Corporation)

By: _____
(SEAL)

President
(Official Title)

1421 Oglethorpe Rd. West Palm Beach, FL 33405
(Address of Corporation)

Organized under the laws of the State of Florida, and authorized by the law to make this bid and perform all Work and furnish materials and equipment required under the Contract Documents.

CERTIFIED COPY OF RESOLUTION OF BOARD OF DIRECTORS

Therma Seal Roof Systems, LLC
(Name of Corporation)

RESOLVED that Dave Wikel
(Person Authorized to Sign)

President (Title) Therma Seal Roof Systems, LLC (Name of Corporation) of

be authorized to sign and submit the Bid or Proposal of this corporation for the following project:

CITY OF HOLLYWOOD, FLORIDA

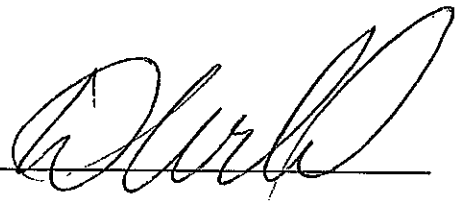
DRAINAGE IMPROVEMENTS FOR ALLEYS SOUTH OF HOLLYWOOD BOULEVARD, BETWEEN 22ND AND 26TH AVENUES

PROJECT NO. 16-11040

The foregoing is a true and correct copy of the Resolution adopted by

Therma Seal Roof Systems, LLC at a meeting of its Board of
(Name of Corporation)

Directors held on the 1st day of February, 2018.

By: 

Title: President

(SEAL)

The above Resolution MUST BE COMPLETED if the Bidder is a Corporation.

- END OF SECTION -

SECTION 00301

CITY OF HOLLYWOOD
DEPARTMENT OF PUBLIC UTILITIES
ENGINEERING & CONSTRUCTION SERVICES DIVISION

PROPOSAL BID FORM

Project No.: 17-2142 **Project Name: Meter Shop Roof Replacement**

If this Proposal is accepted, the undersigned Bidder agrees to complete all work under this contract within **60** calendar days following the issuance of the Notice to Proceed. All entries on this form must be typed or written in block form in ink.

BASE BID:

No.	Description	Qty	Unit	Unit Price	Total
1	Mobilization/Demobilization, Bonds and Insurance	1	LS	$4000	$4000.00
2	Install new roof – east section from expansion joint.	1	LS	$59,000	$59000.00
3	Install new roof – west section from expansion joint.	1	LS	20,000	$20,000.00
4	Install new gutters, downspouts and splash blocks on north-, east- and south-sides of building – east section from expansion joint	1	LS	$7,000	$7,000.00
5	Install new gutters, downspouts and splash blocks on south-side of building– west section from expansion joint.	1	LS	$3,000	$3,000.00
6	Remove / replace turbine vent, APV vent and 2 – 2' X 2' exhaust vents east side of expansion joint	1	LS	$1,200	$1,200.00
7	Perform all mechanical and electrical tasks and/or installation necessary to complete project.	1	LS	$2,500	$2,500.00
8	Repair and/or replace existing broken concrete roof features.	1	LS	$4,500	$4,500.00

SECTION 00301

CITY OF HOLLYWOOD
DEPARTMENT OF PUBLIC UTILITIES
ENGINEERING & CONSTRUCTION SERVICES DIVISION

PROPOSAL BID FORM

9	Owner's Contingency	1	LS			$25,000
10	Permit, Licenses, Testing / Engineering and Fee Allowance	1	LS			$5,000
11	Consideration of Indemnification	1	LS			$10.00
	TOTAL BASE BID					$131,210.00

TOTAL BASE BID IN WORDS One hundred thirty one thousand two hundred and ten dollars

NOTES:

1. **SUBSTANTIAL COMPLETION TIME AND PROJECT CLOSEOUT TIME FOR THE CONTRACT SHALL BE AS DEFINED IN THE PROJECT SCHEDULE IN THE SUPPLEMENTARY GENERAL CONDITIONS (SGC'S).**

SECTION 00410

APPROVED BID BOND

(Construction)

STATE OF FLORIDA

KNOW ALL MEN BY THESE PRESENTS: Philadelphia Indemnity Insurance Company
That we Therma Seal Roof Systems, LLC, as Principal, and, as Surety, are held and firmly bound unto the City of Hollywood in the sum of

Ten Percent of the Amount Bid Dollars ($ 10% of the Amount Bid) lawful money of the United States, amounting to 10% of the total Bid Price, for the payment of said sum, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal has submitted the accompanying bid, dated February 1st, 20 18 for

CITY OF HOLLYWOOD, FLORIDA
METER SHOP ROOF REPLACEMENT PROJECT
PROJECT NO. 17-2142

NOW, THEREFORE, if the principal shall not withdraw said bid within 90 days after date of the same and shall within ten days after the prescribed forms are presented to him for signature, enter into a written contract with the CITY, in accordance with the bid as accepted, and give bond with good and sufficient surety or sureties, and provide the necessary Insurance Certificates as may be required for the faithful performance and proper fulfillment of such Contract, then this obligation shall be null and void.

In the event of the withdrawal of said bid within the specified period, or the failure to enter into such contract and give such bond and insurance within the specified time, the principal and the surety shall pay to the City of Hollywood the difference between the amount specified in said bid and such larger amount for which the City of Hollywood may in good faith contract with another party to perform the work and/or supply the materials covered by said bid.

IN WITNESS WHEREOF, the above bound parties have executed this statement under their several seals this 1st day of February, 2018, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

WHEN THE PRINCIPAL IS AN INDIVIDUAL:

Signed, sealed and delivered in the presence of:

Witness	Signature of Individual
Address	
	Printed Name of Individual

Witness

Address

WHEN THE PRINCIPAL IS A CORPORATION:

Attest:

Secretary

Therma Seal Roof Systems, LLC
Name of Corporation

1421 Oglethorpe Road
Business Address

West Palm Beach, FL 33405

By:

(Affix Corporate Seal)

Dave Wikel
Printed Name

President
Official Title

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, Dave Wikel, certify that I am the secretary of the Corporation named as Principal in the attached bond; that Dave Wikel who signed the said bond on behalf of the Principal, was then President of said Corporation; that I know his signature, and his signature thereto is genuine and that said bond was duly signed, sealed and attested for and on behalf of said Corporation by authority of its governing body.

(SEAL)

Secretary

Approved Bid Bond

TO BE EXECUTED BY CORPORATE SURETY:

Attest: As Per Attached Power of Attorney

Secretary

Philadelphia Indemnity Insurance Company
Corporate Surety
One Bala Plaza, Suite 100
Business Address
Bala Cynwyd, PA. 19004-0950

BY:
(Affix Corporate Seal)

David T. Satine
Attorney-in-Fact
Alter Surety Group, Inc.
Name of Local Agency
5979 NW 151st Street, #202
Business Address
Miami Lakes, FL. 33014

STATE OF FLORIDA

Before me, a Notary Public, duly commissioned, qualified and acting, personally appeared, David T. Satine to me well known, who being by me first duly sworn upon oath says that he is the attorney-in-fact for the Philadelphia Indemnity Insurance Company and that the has been authorized by Philadelphia Indemnity Insurance Company to execute the forgoing bond on behalf of the CONTRACTOR named therein in favor of the City of Hollywood, Florida.

Subscribed and sworn to before me this 1st day of February 2018

Notary Public, State of Florida
Karol Kelly

Notary Public State of Florida
Karol Kelly
My Commission FF 164600
Expires 09/30/2018

My Commission Expires: September 30th, 2018

- END OF SECTION -

PHILADELPHIA INDEMNITY INSURANCE COMPANY
One Bala Plaza, Suite 100
Bala Cynwyd, PA 19004-0950

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS: That **PHILADELPHIA INDEMNITY INSURANCE COMPANY** (the Company), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, does hereby constitute and appoint **David T. Satine, Warren M. Alter and Jonathan A. Bursevich of Alter Surety Group, Inc.,** its true and lawful Attorney-in-fact with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business and to bind the Company thereby, in an amount not to exceed **$25,000,000**.

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of PHILADELPHIA INDEMNITY INSURANCE COMPANY on the 14th of November, 2016.

RESOLVED: That the Board of Directors hereby authorizes the President or any Vice President of the Company: (1) Appoint Attorney(s) in Fact and authorize the Attorney(s) in Fact to execute on behalf of the Company bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof and to attach the seal of the Company thereto; and (2) to remove, at any time, any such Attorney-in-Fact and revoke the authority given. And, be it

FURTHER RESOLVED: That the signatures of such officers and the seal of the Company may be affixed to any such Power of Attorney or certificate relating thereto by facsimile, and any such Power of Attorney so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

IN TESTIMONY WHEREOF, PHILADELPHIA INDEMNITY INSURANCE COMPANY HAS CAUSED THIS INSTRUMENT TO BE SIGNED AND ITS CORPORATE SEALTO BE AFFIXED BY ITS AUTHORIZED OFFICE THIS 27TH DAY OF OCTOBER, 2017.

(Seal)

Robert D. O'Leary Jr., President & CEO
Philadelphia Indemnity Insurance Company

On this 27th day of October, 2017, before me came the individual who executed the preceding instrument, to me personally known, and being by me duly sworn said that he is the therein described and authorized officer of the **PHILADELPHIA INDEMNITY INSURANCE COMPANY**; that the seal affixed to said instrument is the Corporate seal of said Company; that the said Corporate Seal and his signature were duly affixed.

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Morgan Knapp, Notary Public
Lower Merion Twp., Montgomery County
My Commission Expires Sept. 25, 2021
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

(Notary Seal)

Notary Public: Morgan Knapp
residing at: Bala Cynwyd, PA
My commission expires: September 25, 2021

I, Edward Sayago, Corporate Secretary of PHILADELPHIA INDEMNITY INSURANCE COMPANY, do hereby certify that the foregoing resolution of the Board of Directors and this Power of Attorney issued pursuant thereto on this 27th day of October, 2017 are true and correct and are still in full force and effect. I do further certify that Robert D. O'Leary Jr., who executed the Power of Attorney as President, was on the date of execution of the attached Power of Attorney the duly elected President of PHILADELPHIA INDEMNITY INSURANCE COMPANY,

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 1st day of February, 20 18.

Edward Sayago, Corporate Secretary
PHILADELPHIA INDEMNITY INSURANCE COMPANY

SECTION 00420

INFORMATION REQUIRED FROM BIDDERS

GENERAL INFORMATION

The Bidder shall furnish the following information. Failure to comply with this requirement may cause its rejection. Additional sheets shall be attached as required.

1. Contractor's Name/Address: Therma Seal Roof Systems, LLC.
1421 Oglethorpe Rd., West Palm Beach, FL 33405

2. Contractor's Telephone Number: 561-223-2096
and e-mail address: DWikel@thermasealroofs.com

3. Contractor's License (attach copy): CCC1325862
Primary Classification: Roofing
Broward County License Number (attach copy): N/A

4. Number of years as a Contractor in construction work of the type involved in this Contract: 15+

5. List the names and titles of all officers of Contractor's firm:
Dave Wikel , President
Mike Fuggetta , Vice President
Charlie Sapienza , Vice President of Operations

6. Name of person who inspected site or proposed work for your firm:
Name: Bobby Freeman
Date of Inspection: 01/11/18

7. What is the last project of this nature you have completed?

Martin County Correctional Institution Dorms A, B, C

8. Have you ever failed to complete work awarded to you; if so, where and why?

No

9. Name three individuals or corporations for which you have performed work and to which you refer:

Current Builders

West Construction

Kast Construction

10. List the following information concerning all contracts on hand as of the date of submission of this proposal (in case of co-venture, list the information for all coventures).

Name of Project	City	Total Contract Value	Contracted Date of Completion	% Completion to Date
Dct. Building 2	Miami	$312,000.00	2/28/18	80%
UPS Beacon Lakes	Miami	$682,000.00	5/19/18	50%
JEA Water Treatment	Port Saint Lucie	$175,492.94	2/15/18	90%

(Continue list on inset sheet, if necessary)

11. What equipment do you own that is available for the work?

Crane - Lull

12. What equipment will you purchase for the proposed work?

None.

NOTE:
If requested by CITY, the Bidder shall furnish a notarized financial statement, references and other information, sufficiently comprehensive to permit an appraisal of its current financial condition.

LIST OF SUBCONTRACTORS

The Bidder shall list below the name and address of each Subcontractor who will perform work under this Contract in excess of one-half percent of the total bid price, and shall also list the portion of the work which will be done by such Subcontractor. After the opening of Proposals, changes or substitutions will be allowed with written approval of the City of Hollywood. Subcontractors must be properly licensed and hold a valid Hollywood Certificate of Competency.

	Work to be Performed	**Subcontractor's Name / Address**
1.	N/A	N/A
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

NOTE: Attach additional sheets if required.

- END OF SECTION -

SECTION 00435

LOCAL PREFERENCE

(EXHIBIT "A")

Pursuant to §38.50 of the City of Hollywood *Code of Ordinances*, the City shall grant a preference to local Hollywood vendors if their initial bid is within 5% of the bid of the lowest responsive responsible bidder that is a non-local Hollywood vendor. The preference shall allow the local Hollywood vendor to submit a second and final offer, which must be at least 1% less than the bid of the lowest responsible responsive non-local Hollywood vendor to be awarded. The local Hollywood vendor shall have the burden of demonstrating that it maintains a permanent place of business with full-time employees within the City limits and has done so for a minimum of one (1) year prior to the date of issuance of a bid or proposal solicitation within Hollywood, Florida. All supporting documentation (e.g. City of Hollywood valid local business tax receipt) for local preference eligibility must be received with the bid package prior to the bid opening date and time.

SECTION 00495

TRENCH SAFETY FORM

This form must be completed and signed by the Bidder. **(Not Applicable this Project)**

Failure to complete this form may result in the bid being declared non-responsive.

Bidder acknowledges that the Florida Trench Safety Act, Section 553.60 et. seq., which became effective October 1, 1990, shall be in effect during the period of construction of the project. The Bidder by signing and submitting the bid is, in writing, assuring that it will perform any trench excavation in accordance with applicable trench safety standards. The Bidder further identifies the following separate item of cost of compliance with the applicable trench safety standards as well as the method of compliance:

Method of Compliance	Cost

Total $ _____

Bidder acknowledges that this cost is included in the applicable items of the Proposal and in the Grand Total Bid Price. Failure to complete the above will result in the bid being declared non-responsive.

The Bidder is, and the Owner and Engineer are not, responsible to review or assess Bidder's safety precautions, programs or costs, or the means, methods, techniques or technique adequacy, reasonableness of cost, sequences or procedures of any safety precaution, program or cost, including but not limited to, compliance with any and all requirements of Florida Statute Section 553.60 et. seq. cited as the "Trench Safety Act". Bidder is, and the owner and Engineer are not, responsible to determine if any safety related standards apply to the project, including but not limited to, the "Trench Safety Act".

_____	_____
Witness Signature	Contractor's Signature
_____	_____
Witness Printed Name	Printed Name
_____	_____
Witness Address	Title
_____	_____
Date	Date

- END OF SECTION -

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 1/31/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Sandra LaRue
Frank H. Furman, Inc. 1314 East Atlantic Blvd. P. O. Box 1927 Pompano Beach FL 33061	PHONE (A/C, No, Ext): (954) 943-5050 FAX (A/C, No): (954) 942-6310 E-MAIL ADDRESS: sandra@furmaninsurance.com

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
Therma Seal Roof Systems LLC 1421 Oglethorpe Rd West Palm Beach FL 33405	INSURER A: Gemini Insurance Company	10833
	INSURER B: MAPFRE Ins Co FL	34932
	INSURER C: Commerce & Industry Insurance Co	19410
	INSURER D: Bridgefield Casualty Ins Co	10335
	INSURER E: Travelers Property Casualty Co of A	25674
	INSURER F:	

COVERAGES **CERTIFICATE NUMBER: 2017 GL/AU/WC/UM** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:	X		VNGP001324	3/1/2017	3/1/2018	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 50,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
B	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS [X] HIRED AUTOS [X] NON-OWNED AUTOS			4150170013668	3/1/2017	3/1/2018	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
C	[X] UMBRELLA LIAB [X] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			BE015886390	3/1/2017	3/1/2018	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [N] N/A If yes, describe under DESCRIPTION OF OPERATIONS below			19642057	3/1/2017	3/1/2018	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
E	Contractors Equipment			QT6603F445655TIL17	11/21/2017	11/21/2018	Leased/Rented Equipment Deductible	$50,000 $1,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

City of Hollywood is included as additional insured with respects to general liabiltiy as required by written contract.

CERTIFICATE HOLDER

City of Hollywood
2600 Hollywood Blvd
Hollywood, FL 33022

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Dirk DeJong/SL

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD

LICENSE NUMBER
CCC1325862

The ROOFING CONTRACTOR
Named below IS CERTIFIED
Under the provisions of Chapter 489 FS.
Expiration date: AUG 31, 2018

WIKEL, DAVE LESLIE
THERMA SEAL ROOF SYSTEMS LLC
1421 OGLETHORPE ROAD
WEST PALM BEACH FL 33405

ISSUED: 08/18/2016 DISPLAY AS REQUIRED BY LAW SEQ #: L1608180001998

ANNE M. GANNON
CONSTITUTIONAL TAX COLLECTOR
Serving Palm Beach County
Serving *you.*

P.O. Box 3353, West Palm Beach, FL 33402-3353
www.pbctax.com Tel: (561) 355-2264

****LOCATED AT****
1421 OGLETHORPE RD
WEST PALM BEACH, FL 33405

TYPE OF BUSINESS	OWNER	CERTIFICATION #	RECEIPT #/DATE PAID	AMT PAID	BILL #
23-0125 CW ROOFING CONTRACTOR	WIKEL DAVE LESLIE	CCC1325862	B17.493350 - 08/10/17	$185.85	B40158712

This document is valid only when receipted by the Tax Collector's Office.

B3 - 522

THERMA SEAL ROOF SYSTEMS LLC
THERMA SEAL ROOF SYSTEMS LLC
1421 OGLETHORPE RD
WEST PALM BEACH, FL 33405

STATE OF FLORIDA
PALM BEACH COUNTY
2017/2018 LOCAL BUSINESS TAX RECEIPT

LBTR Number: 201360539
EXPIRES: SEPTEMBER 30, 2018

This receipt grants the privilege of engaging in or managing any business profession or occupation within its jurisdiction and MUST be conspicuously displayed at the place of business and in such a manner as to be open to the view of the public.

ANNE M. GANNON
CONSTITUTIONAL TAX COLLECTOR
Serving Palm Beach County
Serving *you.*

P.O. Box 3353, West Palm Beach, FL 33402-3353
www.pbctax.com Tel: (561) 355-2264

****LOCATED AT****
1421 OGLETHORPE RD
WEST PALM BEACH, FL 33405

TYPE OF BUSINESS	OWNER	CERTIFICATION #	RECEIPT #/DATE PAID	AMT PAID	BILL #
23-0081 ROOFING CONTRACTOR	WIKEL DAVE LESLIE	CCC1325862	B17.493349 - 08/10/17	$27.50	B40158713

This document is valid only when receipted by the Tax Collector's Office.

B2 - 522

THERMA SEAL ROOF SYSTEMS LLC
THERMA SEAL ROOF SYSTEMS LLC
1421 OGLETHORPE RD
WEST PALM BEACH, FL 33405

STATE OF FLORIDA
PALM BEACH COUNTY
2017/2018 LOCAL BUSINESS TAX RECEIPT

LBTR Number: 201360538
EXPIRES: SEPTEMBER 30, 2018

This receipt grants the privilege of engaging in or managing any business profession or occupation within its jurisdiction and MUST be conspicuously displayed at the place of business and in such a manner as to be open to the view of the public.

CARLISLE
SYNTEC SYSTEMS

January 22, 2018

THERMA SEAL ROOF SYSTEMS LLC

1421 OGLETHORPE ROAD

WEST PALM BEACH, FL 33405

US

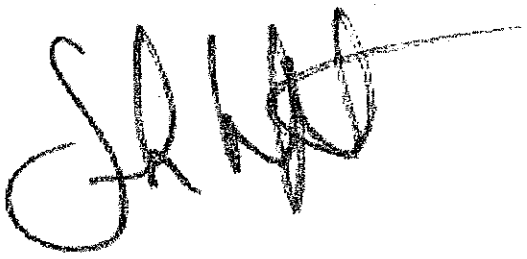
Project:

To Whom It May Concern:

This letter is to confirm that THERMA SEAL ROOF SYSTEMS LLC in WEST PALM BEACH, FL is a Carlisle Authorized Applicator.

If you should have any further questions, please feel free to contact me.

Sincerely,



Shannon Wyatt

/ems

CARLISLE

GOLDEN SEAL TOTAL ROOFING SYSTEM WARRANTY

with limited coverage for accidental punctures

SERIAL NO. **DATE OF ISSUE:**

BUILDING OWNER:
NAME OF BUILDING:
BUILDING ADDRESS:
DATE OF COMPLETION OF THE CARLISLE TOTAL ROOFING SYSTEM:
DATE OF ACCEPTANCE BY CARLISLE:

Carlisle Roofing Systems, Inc., (Carlisle) warrants to the Building Owner (OWNER) of the above described building, that; subject to the terms, conditions, and limitations stated in this warranty, Carlisle will repair any leak in the Carlisle Golden Seal™ Total Roofing System (CARLISLE TOTAL ROOFING SYSTEM) installed by a Carlisle Authorized Roofing applicator for a period of years commencing with the date of Carlisle's acceptance of the Carlisle Total Roofing System installation. However, in no event shall Carlisle's obligations extend beyond years subsequent to the date of substantial completion of the Carlisle Total Roofing System. See below for exact date of warranty expiration.

The Carlisle Total Roofing System is defined as the following Carlisle brand materials: Membrane, Flashings, Adhesives and Sealants, Insulation, Cover Boards, Fasteners, Fastener Plates, Fastening Bars, Metal Work, insulation adhesives and any other Carlisle brand products utilized in this installation.

TERMS, CONDITIONS, LIMITATIONS

1. Owner shall provide Carlisle with written notice via letter, fax, or email within thirty (30) days of the discovery of any leak in the Carlisle Total Roofing System. Owner should send written notice of a leak to Carlisle's Warranty Services Department at the address set forth at the bottom of this warranty. By so notifying Carlisle, the Owner authorizes Carlisle or its designee to investigate the cause of the leak. Should the investigation reveal the cause of the leak to be outside the scope of this Warranty, investigation and repair costs for this service shall be paid by the Owner.
2. If, upon inspection, Carlisle determines that the leak is caused by a defect in the Carlisle Total Roofing System's materials, or workmanship of the Carlisle Authorized Roofing Applicator in installing the same, Owner's remedies and Carlisle's liability shall be limited to Carlisle's repair of the leak.
3. This warranty shall not be applicable if, upon Carlisle's inspection, Carlisle determines that any of the following has occurred:
   (a) The Carlisle Total Roofing System is damaged by natural disasters, including, but not limited to, lightning, fire, insect infestations, earthquake, tornado, hail, hurricanes, and winds of (3 second) peak gust speeds of mph or higher measured at 10 meters above ground; or
   (b) Loss of integrity of the building envelope and, or structure including, but not limited to partial or complete loss of roof decking, wall siding, windows, doors or other envelope components or from roof damage by wind-blown objects, or;
   (c) The Carlisle Total Roofing System is damaged by any intentional or negligent acts, accidents, misuse, abuse, vandalism, civil disobedience, or the like; however, this warranty does provide limited coverage to provide for the repair of any leaks in the Carlisle Total Roofing System caused by accidental punctures (but not including punctures caused by snow removal or other trades during new construction). The extent of this limited warranty to repair punctures shall not exceed man hours per year during the life of the warranty.
   (d) Deterioration or failure of building components, including, but not limited to, the roof substrate, walls, mortar, HVAC units, non-Carlisle brand metal work, etc., occurs and causes a leak, or otherwise damages the Carlisle Total Roofing System; or
   (e) Acids, oils, harmful chemicals and the like come in contact with the Carlisle Total Roofing System and cause a leak, or otherwise damage the Carlisle Total Roofing System.
   (f) The Carlisle Total Roofing System encounters leaks or is otherwise damaged by condensation resulting from any condition within the building that may generate moisture.
4. This Warranty shall be null and void if any of the following shall occur:
   (a) If, after installation of the Carlisle Total Roofing System by a Carlisle Authorized Roofing Applicator there are any alterations or repairs made on or through the roof or objects such as, but not limited to, structures, fixtures, solar panels, wind turbines, roof gardens or utilities are placed upon or attached to the roof without first obtaining written authorization from Carlisle; or
   (b) Failure by the Owner to use reasonable care in maintaining the roof, said maintenance to include, but not be limited to, those items listed on Carlisle's Care & Maintenance Information sheet which accompanies this Warranty.
5. Only Carlisle brand insulation products are covered by this warranty. Carlisle specifically disclaims liability, under any theory of law, for damages sustained by or caused by non-Carlisle brand insulation products.
6. During the term of this Warranty, Carlisle shall have free access to the roof during regular business hours.
7. Carlisle shall have no obligation under this Warranty while any bills for installation, supplies, service, and warranty charges have not been paid in full to the Carlisle Authorized Roofing Applicator, Carlisle, or material suppliers.
8. Carlisle's failure at any time to enforce any of the terms or conditions stated herein shall not be construed to be a waiver of such provision.
9. Carlisle shall not be responsible for the cleanliness or discoloration of the Carlisle Total Roofing System caused by environmental conditions including, but not limited to, dirt, pollutants, or biological agents.
10. Carlisle shall have no liability under any theory of law for any claims, repairs, restoration, or other damages including, but not limited to, consequential or incidental damages relating, directly or indirectly, to the presence of any irritants, contaminants, vapors, fumes, molds, fungi, bacteria, spores, mycotoxins, or the like in the building or in the air, land, or water serving the building.
11. This warranty shall be transferable upon a change in ownership of the building when the owner has completed certain procedures including a transfer fee and an inspection of the Roofing System by a Carlisle representative.

CARLISLE DOES NOT WARRANT PRODUCTS UTILIZED IN THIS INSTALLATION WHICH IT HAS NOT FURNISHED; AND SPECIFICALLY DISCLAIMS LIABILITY, UNDER ANY THEORY OF LAW, ARISING OUT OF THE INSTALLATION AND PERFORMANCE OF, OR DAMAGES SUSTAINED BY OR CAUSED BY, PRODUCTS NOT FURNISHED BY CARLISLE OR THE PRIOR EXISTING ROOFING MATERIAL OVER WHICH THE CARLISLE TOTAL ROOFING SYSTEM HAS BEEN INSTALLED.

THE REMEDIES STATED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES FOR FAILURE OF THE CARLISLE TOTAL ROOFING SYSTEM OR ITS COMPONENTS. THERE ARE NO WARRANTIES EITHER EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY, WHICH EXTEND BEYOND THE FACE HEREOF. CARLISLE SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR DAMAGE TO THE BUILDING OR ITS CONTENTS UNDER ANY THEORY OF LAW.

BY: Robert H. McNeill
AUTHORIZED SIGNATURE
TITLE: Director, Technical and Warranty Services

This Warranty Expires:

P.O. Box 7000 Carlisle, PA 17013 Phone: 800.233.0551 Fax: 717.245.7121 www.carlislesyntec.com

COMPASS SALES GROUP

January 30, 2018

Project: City of Hollywood - Meter Shop Project

To Whom It May Concern:

Carlisle Syntec Systems will provide, in coordination with the roofing contractor, 3 project site visits per week.

The project conditions have been observed. Carlisle Syntec Systems will issue a warranty upon final inspection and acceptance of the installation.

Regards,

Bernie Abrami
Compass Sales Group
Representing Carlisle Syntec Systems

Manufacturer's Representative for

CARLISLE SYNTEC SYSTEMS

**125 S. Swoope Ave, Suite 201B,
Maitland, FL 32751
434-534-2683**

Georgia-Pacific
DensDeck®
Prime Roof Board

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/

NOTICE OF ACCEPTANCE (NOA)

Carlisle SynTec, a division of Carlisle Construction Materials Inc.
1285 Ritner Highway
Carlisle, PA 17013

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.
This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Carlisle Sure-Weld Single Ply TPO Roof Systems over Recover Decks

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This renews NOA# 13-0219.14 and consists of pages 1 through 24.
The submitted documentation was reviewed by Alex Tigera.

7/6/15

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Material:	TPO
Deck Type:	Recover
Maximum Design Pressure:	See Specific Assemblies herein.
Fire Classification:	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product Name	Dimensions	Test Specifications	Product Description
Sure-Weld FleeceBACK	various	TAS 131	Reinforced white or colored TPO membrane with fleece backing.
Sure-Weld AFX	Various	TAS 131	Reinforced white or colored TPO membrane with fleece backing.
Sure-Weld	various	TAS 131	Reinforced white or colored TPO membrane.
Sure-Weld EXTRA	various	TAS 131	Reinforced white or colored TPO membrane.
Sure-Weld HS	various	TAS 131	Reinforced white or colored FR TPO membrane.
Sure-Weld Pressure-Sensitive RUSS	Various	TAS 131	Reinforced Securement Strip
Carlisle FAST 100 Adhesive	various	TAS 110	Spray Polyurethane Adhesive
Carlisle Olybond 500BA	Various	TAS 110	Polyurethane Adhesive
Carlisle One-Step Adhesive	Various	TAS 110	Polyurethane Adhesive
Sure-Weld Bonding Adhesive	various	TAS 110	Solvent-based bonding adhesive.
Aqua Base 120 Bonding Adhesive	Various	TAS 110	Water-based bonding adhesive
Cold Applied Adhesive	Various	TAS 110	Asphalt-Modified Polyether Adhesive
Low VOC Bonding Adhesive	Various	TAS 110	Solvent-based bonding adhesive

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Polyisocyanurate HP-NB, HP-H	Polyisocyanurate roof insulation.	Carlisle Syntec, Inc.
SecurShield HD	High Density polyisocyanurate roof insulation	Carlisle Syntec, Inc.
Dens Deck	Silicon treated gypsum	Georgia-Pacific Gypsum, LLC.
H-Shield, H-Shield NB	Isocyanurate Insulation	Hunter Panels
Wood Fiberboard	Regular wood fiber insulation	Generic
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic
Type X Gypsum	Gypsum Wallboard	Generic
XPS	Extruded polystyrene	Generic
Insulfoam SP	Expanded Polystyrene	Insulfoam, LLC
SECUROCK Gypsum Fiber Roof Board	Gypsum Based board stock	US Gypsum Corporation
R-Tech, R-Tech Fan Fold	Expanded Polystyrene	Insulfoam, LLC

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Sure-Seal HP, HPX, HP-XTRA Fasteners, HP Purlin	Insulation and membrane fastener	Various	Carlisle Syntec, Inc.
2.	Piranha, Piranha Xtra Plates	Metal plates used for membrane securement with Sure-Seal fasteners.	2-3/8" dia	Carlisle Syntec, Inc.
3.	#12 Standard Roofgrip	Insulation and membrane fastener	Various	OMG, Inc.
4.	#14 Roofgrip	Insulation and membrane fastener	Various	OMG, Inc.
5.	#14 Standard Stainless	Stainless steel insulation and membrane fastener	Various	OMG, Inc.
6.	Lite-Deck Fastener	Insulation fastener for cementitious and gypsum decks	various	OMG, Inc.
7.	Lite-Deck Plate	3" round Galvalume AZ55 stress plate	3" round	OMG, Inc.
8.	Olympic Standard	Galvalume AZ55 stress plate	3" round	OMG, Inc.
9.	Olympic Plastic	Plastic plates for fasteners.	3" round	OMG, Inc.
10.	HD-14-10	Insulation/membrane fastener for concrete decks.	Various	Carlisle Syntec, Inc.
11.	CD-10	Insulation/membrane fastener for concrete decks.	Various	Carlisle Syntec, Inc.
12.	Insulation Fastening Plate	Metal plates used for insulation securement with approved fasteners.	3" diameter	Carlisle Syntec, Inc.
13.	Trufast #14 HD Fasteners	Insulation and membrane fastener	Various	Altenloh, Brinck & Co. U.S., Inc.
14.	Trufast #15 EHD Fasteners	Insulation and membrane fastener	Various	Altenloh, Brinck & Co. U.S., Inc.
15.	Trufast #15 EHD Fasteners	Insulation and membrane fastener	Various	Altenloh, Brinck & Co. U.S., Inc.
16.	Trufast 3" Metal Insulation Plate	Insulation Fastening Plate	3" diameter	Altenloh, Brinck & Co. U.S., Inc.
17.	Trufast 2.4" Barbed Metal Seam Plate (14 Barb)	Membrane Fastening Plate	2.4" diameter	Altenloh, Brinck & Co. U.S., Inc.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Architectural Testing Inc.	ATI-37050.01	Wind Uplift Classification	3/13/00
	ATI-37490.01	Membrane Brittleness Testing	7/7/00
Factory Mutual Research Corp.	3020845	Wind Uplift and Fire Classification	1/25/06
	3019897	Wind Uplift and Fire Classification	10/07/05
	3022187	Wind Uplift and Fire Classification	9/15/05
	3014692	Wind Uplift and Fire Classification	8/05/03
	3019890	Wind Uplift and Fire Classification	12/16/04
	303393	Wind Uplift and Fire Classification	3/30/99
	303393 (Letter Report)	Wind Uplift Classification	3/26/99
	3001522	Wind Uplift and Fire Classification	3/26/99
	3001522 (Letter Report)	Wind Uplift Classification	11/3/98
	3Z9A1.AM	Wind Uplift and Fire Classification	10/15/97
	Approval Guide Excerpt	Wind Uplift and Fire Classification Listings	5/00
	Letter	Wind Uplift and Fire Classifications	5/2/00
	3012144	Class 4470	06/04/04
	3037400	Class 4470	09/02/09
Celotex Corporation Testing Services	520257	Membrane Physical Property Testing	4/19/00
SGS U.S. Testing Company Incorporated	131248-R2	Membrane Ozone Resistance Testing	1/6/00
Trinity ERD	C46470.07.14-1A	TAS 131	07/16/14
	C46470.07.14-1B	TAS 131	07/16/14
	C46470.07.14-2A	TAS 131	07/30/14
	C46470.07.14-4-R1	TAS 131	07/21/14

APPROVED ASSEMBLIES

Membrane Type: Single Ply, Thermoplastic, TPO, Reinforced, FleeceBACK

Deck Type 7I: Recover

Deck Description: 2500 psi structural concrete.

System Type A(1): One or more layers of insulation adhered with Carlisle FAST 100 Adhesive. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Polyisocyanurate HP-H, HP-NB Minimum 1" thick	**N/A**	**N/A**
XPS Minimum 1 " thick	**N/A**	**N/A**
Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Dens Deck Prime, or SECUROCK (required over XPS board) Minimum ½" thick	**N/A**	**N/A**

Note: All insulation shall be fully adhered to the existing roof with Carlisle FAST 100 Adhesive at a rate of 1 gal./sq.

Vapor Retarder: ~~(Optional)~~ Any UL of FMRC approved vapor Retarder applied to the roof deck or over a base layer of insulation.

Barrier: None.

Membrane: Sure-Weld FleeceBACK 100 or 115 membrane fully adhered to the insulation using Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1 gal/120ft^2. Outside 1.5" of side laps are heat welded.

Maximum Design Pressure: –232.5 psf. (See General Limitation #9)

RECOVER SYSTEM LIMITATIONS:

1 All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

2. The membrane can be identified using the identification code printed outside the splice overlap area (visible every 50') or within the slice area. The code begins with either 9 or 91 to designate the plant. The next three letters designate the material and color. The next six numbers designate the date of manufacture (year/month/day). The next letter designates the shift and the last number designates the machine. In addition to this identification code, the letters "CCM" are also printed within the splice overlap area.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All membranes or packaging shall bear the imprint or identifiable marking of the manufacturer's name or logo and the following statement: "Miami-Dade County Product Control Approved" or the Miami-Dade County Product Control Seal as shown below.

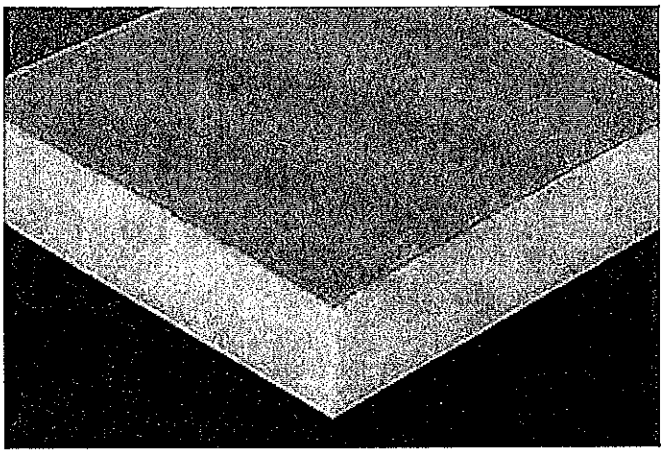
MIAMI-DADE COUNTY APPROVED

11. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE

CARLISLE SYNTEC SYSTEMS

InsulBase® POLYISO Insulation



Overview

InsulBase is a rigid-roof insulation panel composed of a closed-cell polyisocyanurate foam core bonded on each side to fiber-reinforced paper facers.

Features and Benefits

» InsulBase polyiso insulation provides the highest R-value per inch of commercially available insulation products

» Environmentally friendly construction with 0% ozone-depleting components and CFC free

» Approved for direct application to steel decks

Panel Characteristics

» Available in 4' x 4' (1220 mm x 1220 mm) and 4' x 8' (1220 mm x 2440 mm) panels in thickness of ½" (13 mm) to 4.5" (115 mm)

» Available in two grades of compressive strengths per ASTM C1289, Type II, Class 1, Grade 2 (20 psi), Grade 3 (25 psi)

Applications

» Constructions requiring FM Class 1 and UL Class A ratings

» Single-Ply Roof Systems (Ballasted, Mechanically Attached, Fully Adhered)

InsulBase Polyiso Thermal Values

Thickness (inches)	Thickness (MM)	LTTR R-value**	Flute Spanability
0.50	13	2.8	2 ⅝"
1.00	25	5.7	2 ⅝"
1.50	38	8.6	4 ⅜"
1.75	44	10.0	4 ⅜"
1.80	46	10.3	4 ⅜"
2.00	51	11.4	4 ⅜"
2.50	64	14.4	4 ⅜"
2.60	66	15.0	4 ⅜"
3.00	76	17.4	4 ⅜"
3.50	89	20.5	4 ⅜"
3.80	97	22.3	4 ⅜"
4.00	102	23.6	4 ⅜"
4.30	109	25.5	4 ⅜"
4.50	114	26.8	4 ⅜"

** Long-Term Thermal Resistance Values are based on ASTM C1289 effective January 1, 2014, predicting product R-value after five years, which is equivalent to a time-weighted thermal design R-value for 15 years.

Installation

Ballasted Single-Ply Systems

Each InsulBase panel is loosely laid on the roof deck. Butt edges and stagger joints of adjacent panels. Install the roof membrane according to Carlisle's specifications.

Mechanically Attached Single-Ply Systems

InsulBase panels must be secured to the roof deck with fasteners and plates (appropriate to the deck type). Butt edges and stagger joints of adjacent panels. Install the roof membrane according to Carlisle's specifications.

Fully Adhered Single-Ply Systems

InsulBase panels must be secured to the roof deck with fasteners and plates (appropriate to deck type). Butt edges and stagger joints of adjacent panels. Install the roof membrane according to Carlisle's specifications.

InsulBase 4' x 8' panels can be secured to the roof deck with Carlisle's FAST® Adhesive, either full coverage or bead spacing.

InsulBase 4' x 4' panels may be adhered to prepared concrete deck with a full mopping of Type III or IV asphalt.

Review Carlisle specifications and details for complete installation information.

CARLISLE SYNTEC SYSTEMS

InsulBase POLYISO Insulation

InsulBase Codes and Compliances

- ASTM C1289, Type II, Class 1, Grade 2 (20 psi), Grade 3 (25 psi)
- International Building Code (IBC) Section 2603

Underwriters Laboratories, Inc.

- Component of Class A Roof Systems (UL 790)
- Hourly Rated P series roof assemblies (UL 263) P 225, 230, 259, 302, 303, 508, 510, 514, 519, 701, 710, 713, 717, 718, 719, 720, 722, 723, 727, 728, 729, 730, 732, 734, 735, 739, 741, 742, 743, 819, 824, 827, 828
- Insulated metal deck assemblies - (UL 1256) nos. 120, 123, 292
- InsulBase classified by ULC
- R18846

Factory Mutual Research

- FM Class 1 approval for steel roof-deck constructions, (FM 4450)
- FM 4470
  (Subject to the conditions of approval described in Roofnav.com)
- FLORIDA BUILDING CODE APPROVAL FL#1296
- MIAMI-DADE COUNTY, FLORIDA NOA NO: 04-1018.01

Precautions

Insulation must be protected from open flame and kept dry at all times. Install only as much insulation as can be covered the same day by completed roof-covering material. Protect installed product from excessive foot traffic. Carlisle will not be responsible for specific building and roof design by others, for deficiencies in construction or workmanship, for dangerous conditions on the job site or for improper storage and handling. Technical specifications shown in this literature are intended to be used as general guidelines only and are subject to change without notice. Call Carlisle for more specific details, or refer to PIMA Technical Bulletin No. 109: Storage & Handling Recommendations for Polyiso Roof Insulation.

Typical Properties and Characteristics (ASTM C1289)

Physical Property	Test Method	Value
Compressive Strength	ASTM D1621	20 psi* minimum (138 kPa, Grade 2)
Dimensional Stability	ASTM D2126	2% linear change (7 days)
Moisture Vapor Permeance	ASTM E96	<1 perm (57.5 ng/(Pa•s•m²))
Water Absorption	C1763	<1% volume

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

* Polyiso Foam Core only

CLASSIFIED C UL US

Foamed plastic as roof deck construction material with resistance to an internal fire exposure only for use in construction no.(s) 120 and 123. See UL Directory of Products Certified for Canada and UL Roofing Materials and Systems Directory. 99DL.

U.S. GREEN BUILDING COUNCIL

PIMA QualityMark™ The Certified LTTR-value

4" Insul ADH.

EXPERIENCE THE CARLISLE DIFFERENCE

CARLISLE SYNTEC SYSTEMS

FleeceBACK®
FAST™ Bag in a Box Adhesive

Overview

FAST Bag in a Box Adhesive is a VOC-free, two-component, construction-grade, insulating, polyurethane adhesive. The low-rise, expanding characteristics of FAST Bag in a Box Adhesive are designed to securely bond Carlisle's FleeceBACK® membranes and insulations to a variety of substrates. FAST Adhesive is compatible with: HP Fiberboard, HP Polyiso, extruded polystyrene (XPS), expanded polystyrene (EPS), spray polyurethane foam (SPF), DensDeck®, Securock® and OSB. Compatible deck types include concrete, cellular lightweight concrete, gypsum, cementitious wood fiber, wood, and painted or galvanized steel. FAST is also compatible with the following roofing materials for recover applications: weathered smooth or gravel-surfaced BUR, mineral cap sheet, weathered smooth or granule-surfaced Mod-Bit, weathered coal tar pitch, aged EPDM, aged TPO, aged Hypalon and Carlisle's 725TR Air and Vapor Barrier. Previously unexposed asphalt vapor barriers or unexposed asphalt must be primed with CAV-GRIP™. FAST Bag in a Box Adhesive is extruded to produce a strong, low-rise adhesive with superior wind uplift resistance and a nominal free-rise core density of 2½ lbs. per cu. ft.

FAST Installation

Requires PaceCart 2™

1. The surface to which adhesive is to be applied shall be dry, free of fins, protrusions, sharp edges, loose and foreign materials, oil, and grease. Depressions greater than ¼" (6 mm) shall be filled with FAST Adhesive or other approved patching material. All sharp projections shall be removed. **Previously unexposed asphalt must be primed with CAV-GRIP for extrusion application.**
2. **Seal gaps between the wall/penetration and concrete deck with Carlisle 725TR or other suitable material to avoid condensation issues and positive pressure from air infiltration.**
3. For re-roofing sprayed-in-place (SPF) urethane roofs, all wet areas must be removed. The surface must then be scarified or perforated, depending on the coating, before applying FAST Bag in a Box Adhesive.
4. Apply **FAST Bag in a Box** when substrate and ambient temperature are 50°F (10°C) or above.
5. Apply **FAST Bag in a Box IC** when substrate and ambient temperatures are between 25° – 50°F (-4° – 10°C). FAST must be kept warm.
6. Remove static mixing nozzle when stopping for more than one minute. Failure to remove nozzle can cause damage to the PaceCart™.
7. High slope applications may require adhesive to be applied to the bottom of the insulation board to avoid running.

FleeceBACK Installation

Mod-Bit Method:

1. Unroll FleeceBACK sheet and position. Fold sheet in half length-wise.
2. Apply FAST Bag in a Box Adhesive to the substrate at 4", 6" or 12" on center with a **minimum ½" wet bead** achieving light-yellow-colored foam.
3. Once "string time" occurs, gradually feed FleeceBACK sheet into FAST adhesive checking for "string body" every few feet. Stop feeding FleeceBACK sheet into the adhesive when applicator reaches adhesive that has NOT developed "string body". Immediately begin to roll membrane with a 150-lbs. weighted roller width-wise. Repeat process until FleeceBACK sheet is fully installed.

Barn Door Method:

1. Unroll FleeceBACK sheet and position. Fold sheets in half width-wise and bond one sheet at a time.
2. Apply FAST Bag in a Box Adhesive to the substrate at 4", 6" or 12" on center with a **minimum ½" wet bead** achieving light-yellow-colored foam.
3. Allow adhesive to rise and develop "string/body" (approx. 1½-2 minutes), then place FleeceBACK membrane into FAST Adhesive. String time will vary based on environmental conditions like temperature and humidity.
4. As soon as membrane is set, roll membrane with a roller not to exceed 150 lbs. to ensure fleece embedment. If adhesive contaminates the splice area, immediately remove with Weathered Membrane Cleaner.

Review Carlisle specifications and details for complete installation information.

CARLISLE SYNTEC SYSTEMS

FleeceBACK
FAST Bag in a Box Adhesive

Insulation Attachment

1. Apply FAST Bag in a Box Adhesive to the substrate at 4", 6" or 12" on center with a minimum ½" wet bead achieving light-yellow-colored foam. For steel decks, extrusion of FAST must run parallel with and be on top of the steel deck flutes.

Bead spacing parameters for 5-, 10-, or 15-year 55 mph warranties (Contact Carlisle Project Review for bead spacing on higher mph warranties or 20- and 30-year warranty projects)

Building Height	Bead Spacing (Perimeter)	Bead Spacing (Field)
0' – 25'	6" o.c. (4' perimeter)	12" o.c.
25' – 50'	6" o.c. (8' perimeter)	12" o.c.
50' – 75'	6" o.c. (12' perimeter)	12" o.c.
75' – 100'	6" o.c. (16' perimeter)	12" o.c.
100' or greater: Contact Carlisle for bead spacing requirements		

2. Factory Mutual bead spacing guidelines in the perimeter and corner may differ from the table above. Beads at 12" o.c. are not acceptable at perimeters or corners.
3. Place insulation boards (maximum 4' x 4' insulation boards when FAST Adhesive is extruded at 12" o.c. or when boards exceed 4" thickness) into FAST Bag in a Box Adhesive after allowing it to rise between ½" to ¾" and develop "string/body" (approx. 1½-2 min.). String time will vary based on environmental conditions like temperature and humidity. Do not allow the adhesive to over-cure prior to setting insulation boards.
4. Designate one person to walk boards into place and then roll the boards between 5-7 minutes from the initial adhesive application. Boards may be temporarily weighted or relief cut where necessary to keep the boards in constant contact with the adhesive until the adhesive cures.
5. At the beginning of the insulation attachment process and periodically throughout the day, check the adhesion of boards to ensure a tight bond is created and maximum contact is achieved. Allow a minimum of 30 minutes before checking boards.

Precautions

» Review the application MSDS for complete safety information prior to use.

» The foam produced is an organic material. It must be considered to be combustible and may constitute a fire hazard. The foam adhesive must not be left exposed or unprotected. Shield from heat and sparks.

» Do not smoke during application.

» Use with adequate ventilation. Avoid breathing vapors. Wear a NIOSH- or MSHA-approved respirator for organic vapors with prefilters and solvent-resistant cartridges if concentrations of MDI exceed the TLV or are unknown. Proper safety training is essential for all persons involved in the installation process. If vapor is inhaled, remove to fresh air and administer oxygen if breathing is difficult. Consult a physician immediately.

» Avoid contact with eyes. Safety glasses or goggles are required. If splashed in eyes, immediately flush eyes with plenty of clean water for at least 15 minutes. Contact a physician immediately.

» Avoid contact with skin. Wear long-sleeved shirts and long pants. Wash hands thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water or corn oil. NOTE: Permeation-resistant gloves that meet ANSI/ISEA 105-2005 are required when handling the material or during application.

» Jobsite storage temperatures in excess of 90°F (32°C) may affect product shelf life. Should the components be stored at temperatures lower than 55°F (13°C), restore to room temperature prior to use. Do not allow FAST Adhesive in boxes or in PaceCart to freeze.

» Previously unexposed asphalt must be primed with CAV-GRIP.

» KEEP OUT OF THE REACH OF CHILDREN.

Coverage Rates

FleeceBACK or insulation attachment to a smooth, flat non-porous approved surface:

170 ft² per gallon at 12" o.c.
95 ft² per gallon at 6" o.c.
65 ft² per gallon at 4" o.c.

(ft² per gallon may vary due to jobsite conditions...gravel BUR will consume twice as much adhesive)

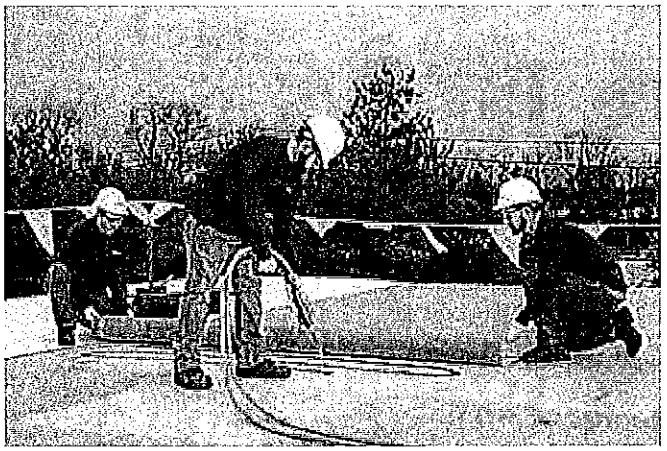
Typical Properties and Characteristics

Base	FAST Part A (1) Polymeric Isocyanate	FAST Part B (2) Polyols, Surfactants & Catalysts
Mixing Ratios by Volume	1:1 Part A to Part B	
Viscosity (CPS@25°C)	250	300-500
Avg. Net Weight	10.25 lbs/gal	8.75 lbs/gal
Packaging	5-gal box (19 L)	5-gal. box (19 L)
Speeds	Standard	Standard (50° F and above) IC FAST (25° – 50° F)
Shelf Life	1 year	1 year
VOC Content	0 g/L	0 g/L
Manufacturing Location	Carlisle, PA	Carlisle, PA

800-479-6832 | P.O. Box 7000 | Carlisle, PA 17013 | Fax: 717-245-7053 | www.carlislesyntec.com

CARLISLE SYNTEC SYSTEMS

FleeceBACK® TPO Membranes



Overview

FleeceBACK TPO membranes with Octaguard XT™ are manufactured using a hot-melt extrusion process for complete scrim encapsulation. Once the TPO is reinforced and enhanced with fleece, the total sheet thicknesses available are 100, 115, and 135 mils, creating a very tough, durable and versatile sheet that is ideal for re-roofing or new construction projects. FleeceBACK TPO sheets are chlorine free and plasticizer free with excellent chemical resistance to acids, bases, restaurant oils, and greases.

All FleeceBACK TPO membranes utilize Octaguard XT™ weathering package technology to withstand extreme durability testing intended to simulate exposure to severe climates. FleeceBACK TPO's advanced polymerization technology combines the flexibility of ethylene-propylene (EP) rubber with the heat weldability of polypropylene.

FleeceBACK TPO membranes are intended to be used with adhered or mechanically fastened roofing systems. FleeceBACK TPO is ideally suited for roof garden and solar panel applications and projects demanding superior wind uplift resistance due to its added toughness and durability. FleeceBACK TPO is also a great solution for buildings requiring low noise and odors during roofing application.

Features and Benefits

- Choice of white, gray, or tan membranes that are UL Class A rated
- Superior wind uplift performance and ratings (up to an FM 1-945) due to a mechanical bond between fleece and adhesive
- 75% fewer seams than Modified Bitumen
- Wide window of weldability
- Fleece reinforcement adds toughness, durability, and enhanced puncture resistance
  - 115-mil membrane delivers 33% greater puncture resistance and 33% greater breaking strength than 60-mil TPO
  - Greater puncture resistance than Modified Bitumen
- Excellent hail damage resistance
  - Passes FM's severe hail test
  - Passes UL-2218 Class 4 rating
  - Passes National Bureau of Standards – 23 Ice Ball test up to 3"-diameter hail with the membrane cooled to 32°F

Installation

Adhered Roofing System

Insulation is mechanically fastened or adhered. Spray-apply or extrude FAST™ or Flexible FAST Adhesive to the substrate and allow foam to "string/body" approx 1½ - 2 minutes prior to setting FleeceBACK TPO into the FAST Adhesive. Roll FleeceBACK TPO membrane with a 30"-wide, 150-pound weighted roller to ensure full embedment. Splices are hot-air welded. End laps are butted and sealed with reinforced membrane or a head sheet may be utilized.

Review Carlisle specifications and details for complete installation information, including mechanically fastened options.

Precautions

- Use proper stacking procedures to ensure sufficient stability.
- Exercise caution when walking on wet membrane.
- UV-resistant sunglasses are required when working with FleeceBACK TPO membranes.
- White surfaces reflect heat and may become slippery due to frost and ice accumulation.
- Care must be exercised when working close to a roof edge when the surrounding area is snow covered.
- FleeceBACK TPO membrane rolls must be tarped and elevated to keep dry prior to installation. If the fleece gets wet, use a wet vac system to help remove moisture from the fleece. DO NOT INSTALL MEMBRANE IF FLEECE IS WET.
- FleeceBACK TPO membrane exposed to the weather must be prepared with Weathered Membrane Cleaner prior to hot-air welding.

CARLISLE SYNTEC SYSTEMS

FleeceBACK TPO
Membranes

LEED® Information

Pre-consumer Recycled Content	10%		
Post-consumer Recycled Content	0%		
Manufacturing Location	Senatobia, MS Tooele, UT		
Solar Reflectance Index	White: 99	Gray: 53	Tan: 88

Radiative Properties for ENERGY STAR®*, Cool Roof Rating Council (CRRC) and LEED

Physical Property	Test Method	White	Gray	Tan
ENERGY STAR – Initial solar reflectance	Solar Spectrum Reflectometer	0.79	N/A	0.71
ENERGY STAR – Solar reflectance after 3 years	Solar Spectrum Reflectometer (uncleaned)	0.70	N/A	0.64
CRRC – Initial solar reflectance	ASTM C1549	0.79	0.46	0.71
CRRC – Solar reflectance after 3 years	ASTM C1549 (uncleaned)	0.70	0.43	0.64
CRRC – Initial thermal emittance	ASTM C1371	0.90	0.89	0.86
CRRC – Initial thermal emittance after 3 years	ASTM C1371 (uncleaned)	0.86	0.88	0.87
LEED – Thermal emittance	C1371	0.90	0.89	0.86
Solar Reflectance Index (SRI)	ASTM E1980	99	53	86

Carlisle Extreme Testing – Heat Aging

	ASTM Requirement	FleeceBACK TPO Requirement
ASTM Test 240°F	670 hours or 4 weeks	5,376 hours or 32 weeks*

*Comparable to 1,024 weeks (20 years) at 185°F for 8 hrs/day.

Heat Aging accelerates the oxidation rate that roughly doubles for each 18°F (10°C) increase in roof membrane temperature. Oxidation (reaction with oxygen) is one of the primary chemical degradation mechanisms of roofing materials.

Carlisle Extreme Testing – Environmental Cycling

–10 days heat aging at 240°F (116°C) followed by 5 days water immersion at 158°F (70°C)

Followed by 5,040 kJ/m² (2000 hrs. at 0.70 W/m² irradiance) xenon-arc exposure

Environmental Cycling subjects the membrane to repeated cycles of heat aging, hot-water immersion followed by xenon-arc exposure.

EXTREME Testing for Severe Climates

ASTM Standard D6878 is the material specification for Thermoplastic Polyolefin-Based Sheet Roofing. It covers material property requirements for TPO roof sheeting and includes initial and aged properties after heat and xenon-arc exposure. As stated in the scope of the standard, "the tests and property limits used to characterize the sheet are values intended to ensure minimum quality for the intended purpose." Carlisle's goal is to produce TPO that delivers maximum performance for the intended purpose of roofing membranes. Maximum performance requires the membrane to far exceed the requirements of ASTM D6878.

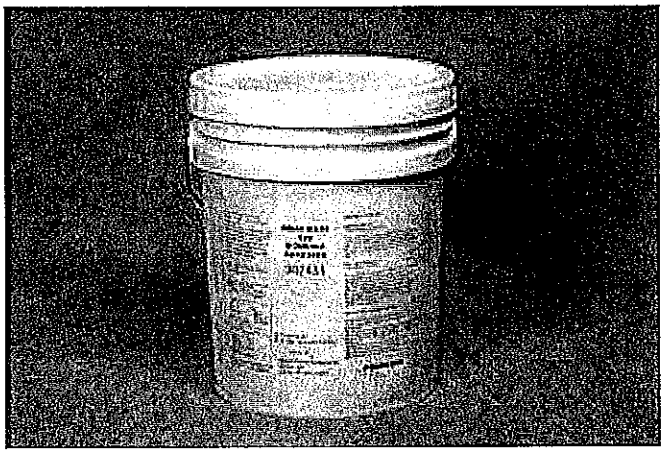
Typical Properties and Characteristics

Physical Property	Test Method	SPEC. (Min.)	FleeceBACK TPO Typicals
Tolerance on Nominal Thickness, %	ASTM D751	±10	±10
Thickness over Fleece, min			
100-mil (2.54 mm)	—	—	.045 (1.14)
115-mil (2.92 mm)	—	—	.060 (1.52)
135-mil (3.43 mm)	—	—	.080 (2.03)
Weight, lbm/ft²			
100-mil	—	—	0.27
115-mil	—	—	0.33
135-mil	—	—	0.46
Breaking Strength, min, lbf (kN)	ASTM D751 Grab Method	220 (1)	
100-mil			350 (1.6)
115-mil			450 (2)
135-mil			500 (2.2)
Elongation at break of internal fabric, %	ASTM D751	15	25
Tearing Strength, min, lbf (N)	ASTM D751		
100- & 115-mil, 135-mil	B Tongue Tear	55 (245)	100 (445)
Puncture Resistance, Joules	ASTM D5635		
100-mil		—	17.5
115-mil		—	22.5
135-mil		—	30.0
Puncture Resistance, lbf	FTM 101C		
100-mil	Method 2031	350	450
115-mil		400	500
135-mil		425	525
Brittleness point, max, °F (°C)	ASTM D2137	-40 (-40)	-50 (-46)
Linear Dimensional Change, %	ASTM D1204	± 1 max	-0.2 typical
Field Seam Strength, lbf/in. (kN/m) ASTM D1876 tested in peel	ASTM D1876		
100-mil		25 (4.4)	50 (8.8)
115-mil		25 (4.4)	60 (10.5)
135-mil		40 (7.0)	70 (12.3)
Water Vapor Permeance, Perms	ASTM E96 Proc B	—	0.10 max 0.05 typical
Resistance to Microbial Surface Growth, Rating (1 is very poor, 10 is no growth)	ASTM D3274	—	9-10 typical
Properties after heat aging– ASTM D573, 670 hrs. at 240 °F	ASTM D573		
Breaking strength, % retained		—	90 min
Elongation reinf. % retained		—	90 min
Tearing Strength, % retained		—	60 min
Weight Change, %		—	± 1.0 max
Ozone Resistance 100 pphm, 168 hours	ASTM D1149	No cracks	No cracks
Resistance to Water Absorption After 7 days immersion @ 158°F (70°C) Change in mass, max, % (one side)	ASTM D471	± 3.0	0.90
Resistance to Outdoor (Ultraviolet) Weathering Xenon-Arc, total radiant exposure at 0.70 W/m² irradiance, 63°C black panel temp.	ASTM G155	No cracks No loss of breaking or tearing strength	No cracks No loss of breaking or tearing strength
100-mil			17,640 kJ/m²
115-mil			20,160 kJ/m²
135-mil			27,720 kJ/m²

800-479-6832 | P.O. Box 7000 | Carlisle, PA 17013 | Fax: 717-245-7053 | www.carlislesyntec.com

CARLISLE SYNTEC SYSTEMS

Aqua Base 120 Bonding Adhesive



Overview

Aqua Base 120 is a unique, semi-pressure-sensitive, water-based bonding adhesive for EPDM, TPO, and FleeceBACK® membranes offering good peel strengths with low-VOCs and no strong odors. This product may be used as a one-sided, wet lay-in adhesive on horizontal surfaces with FleeceBACK membranes in either 100-, 105-, or 115-mil thicknesses. It can also be used as a two-sided contact adhesive with standard Sure-Seal EPDM, Sure-White EPDM and Sure-Weld TPO.

Features and Benefits

- Low VOCs, only 4 g/L
- Low or no odor
- Can be sprayed or roller applied
- Can be used for FleeceBACK and non-FleeceBACK membranes
- Typical warranties are 10-, 15- or 20-year terms
- 20-year warranties are available for all EPDM and TPO membranes over approved substrates

Coverage Rate

Coverage rate is 100–120 ft² (11.6 m²) of finished surface area per gallon when applied to an approved substrate for wet lay-in with FleeceBACK 100- or 115-mil membranes (standard gray fleece). The coverage rate is also 100–120 ft² of finished surface area per gallon when used as a contact adhesive and applied on both the substrate and standard membrane. Note: Aqua Base 120 will be applied at half the prescribed thickness to both the substrate and membrane, netting 200–240 ft² of overall coverage. Coverage rates are average and may vary due to conditions such as insulation type or wall construction. Do not exceed the coverage rate listed above, as it will have a detrimental effect on the system performance. One 5-gallon pail should cover a maximum 6 square area of finished roof surface.

Application

1. The surface, on or against which the adhesive is to be applied, shall be clean, smooth, dry, and free of fins, sharp edges, loose and foreign materials, oil and grease. Depressions or step-offs greater than ¼" (6 mm) shall be feathered using epoxy, mortar or other approved patching material. All sharp projections should be removed by scraping, sweeping, blowing, vacuum cleaning, etc.
2. Aqua Base 120 Bonding Adhesive is approved for use on 20-year warranties over Polyisocyanurate (requires two-sided contact adhesive method), SecurShield, SecurShield HD, Securock, OSB, plywood, cellular lightweight over vented steel deck and structural concrete. The wet lay-in procedure is not acceptable over existing roof systems or decks with residual adhesive or asphalt. A porous substrate is required for Aqua Base to work properly.
3. Stir until settled material or phased liquid is redistributed and the adhesive is uniform in color.
4. Apply adhesive to the substrate in a uniform manner avoiding globs, puddles and uncoated areas. Avoid accumulation of adhesive between insulation joints. Do not exceed the published coverage rate.
5. Application methods:
   a. Roller Application: Use a medium nap roller.
   b. Mechanical Roller Application: Follow the manufacturer's safety and use procedures.
   c. Mechanical Spray Application: Follow the manufacturer's safety and use procedures.
      - Tip sizes between .019"–.023" in a Graco 510 gun
      - Minimum fluid pressure of 2,500 psi is required for a fair pattern
      - Back rolling is recommended
      - Flush with water at the end of the day

Aqua Base 120 Bonding Adhesive

FleeceBACK Membrane (wet lay-in method): Coat the substrate with Aqua Base 120 Bonding Adhesive and roll FleeceBACK 100–115-mil membrane into the wet adhesive. Avoid heavy or thin application of adhesive. Immediately install the membrane while the adhesive is still wet (pink in color). If adhesive has turned yellow in color, recoat with additional adhesive. Care must be taken with the "barn door" method of sheet installation to avoid dry (yellow) adhesive. Lift the membrane in a few areas to ensure adhesive is transferring to the fleece. Roll with a 150-lb segmented weighted roller to achieve maximum contact. Pay particular attention to rolling the membrane along the insulation joints. All adhesive residue in the splice area must be removed. Cure rates are between 12–72 hours depending on porosity of substrate and weather conditions. Re-rolling within 24 hours may be necessary if the substrate is uneven or the sheet contains some fullness. Temporary weighting of the membrane may be necessary until the adhesive cures to address pronounced sheet fullness. Do not use the FleeceBACK AFX membranes for the wet lay-in application.

FleeceBACK Membrane (vertical walls two-sided contact method): Coat the fleece backing and allow the adhesive to completely dry. Test for dryness by pressing the back of a finger into the fleece to check that the adhesive is dry throughout the fleece layer. Once the adhesive on the fleece is dry, apply a standard coat of adhesive to the wall and a second coat to the fleece backing and allow drying. Adhesive will turn yellow when dry. Mate the membrane with the adhesive-coated wall, while avoiding wrinkles. Immediately broom the bonded portion of the sheet with a stiff-bristle push-broom or roll the membrane using a 3"-wide "J" roller (preferred) to achieve maximum contact. Please note the fleece will develop a dry top surface while still holding moisture in the fleece and does require complete drying prior to the mating of the membrane to the wall substrate. Installing the membrane while the adhesive is still wet will trap moisture and cause blisters or loose membrane.

Standard Membrane (two-sided contact method): Apply Aqua Base 120 Bonding Adhesive to the membrane and the substrate at the recommended rate. The adhesive must be allowed to dry completely. Aqua Base 120 will change from a pink color to a clear with yellow cast as the water evaporates, indicating it is ready to be mated together. The dried adhesive should remain tacky before assembly. Mate the membrane with the adhesive-coated substrate, while avoiding wrinkles. Immediately roll the bonded portion of the sheet with a 150-lb segmented weighted roller to achieve maximum contact. Pay particular attention to rolling the membrane along the insulation joints. The adhesive contains no solvents to react with the membrane, and therefore rolling the sheet is critical. Extended drying times can be expected in cool, overcast, humid, shaded or late day applications. The adhesive must be dry to avoid permanent blisters from trapped moisture. Coated areas exposed to moisture shall be allowed to dry and then recoated. All adhesive residues in the splice area must be removed.

Standard Membrane (vertical walls two-sided contact method): Let the wall flashing membrane relax and warm to minimize the natural tendency of the membrane to curl. Apply a medium to heavy coat of adhesive to the wall first and then a standard coat to the flashing membrane and allow thorough drying. Aqua Base 120 will change from a pink color to a clear with yellow cast as the water evaporates, indicating it is ready to be mated together. Not allowing the adhesive to dry completely will result in poor adhesion strength or blisters occurring over time. Mate the membrane with the adhesive-coated wall, while avoiding wrinkles. Immediately broom the bonded portion of the sheet with a stiff-bristle push-broom and roll the membrane, starting in the angle change and working the membrane up the wall, using a 3"-wide "J" roller (preferred) to achieve maximum contact. Roll up from the base evenly and work in small sections gaining good attachment at the lower portions before moving up to the top of the membrane. Temporary pinning or taping the top membrane edge to the wall may be necessary to prevent membrane curl back until the termination detail can be completed.

The product is approved for use by Carlisle authorized roofing applicators only and is for use in Carlisle roofing and waterproofing installations.

Review Carlisle specifications and details for complete application information.

Precautions

- Review the applicable Safety Data Sheet for complete safety information prior to use.
- Keep container closed when not in use. Use with adequate ventilation. If inhaled, remove to fresh air.
- If swallowed, DO NOT INDUCE VOMITING. Call a physician immediately.
- Avoid contact with eyes. Safety glasses or goggles are recommended. If splashed in eyes, immediately flush eyes with plenty of water for at least 15 minutes. Contact a physician immediately.
- Avoid contact with skin. Wash your hands thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water.
- Jobsite storage temperatures in excess of 90°F (32°C) may affect product shelf life. DO NOT ALLOW PRODUCT TO FREEZE. Do not store below 40°F.
- Do not thin the Aqua Base 120 Adhesive. Thinning will affect performance and may coagulate the adhesive.

- Adhesive will turn from pink to clear with a yellow cast when completely dry. Dry time is dependant on ambient conditions.
- This adhesive is to be applied when the ambient temperature is 40°F (4°C) and rising. Do not apply if ambient temperature will drop below 32°F (0°C) before adhesive completely dries.
- Opened containers of adhesive should be used within 48 hours. The adhesive will form a thick surface skin that will not re-dissolve. Adhesive can be used once the skinned layer is removed.
- Extended drying times can be expected in cool or humid conditions as well as shaded areas. Not allowing the adhesive to dry in a standard membrane application will result in poor adhesion strength or blisters occuring over time.
- KEEP OUT OF THE REACH OF CHILDREN.

Typical Properties and Characteristics

Base	Acrylic
Color	Pink (yellow cast when dry)
Solids	57.5%
Flash Point	>212°F
Brookfield Viscosity	20,000 centipoise
Average Net Weight	8.8 lbs/gal (1.05 kg/l)
Packaging	5-gallon pail
Shelf Life	1 year

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

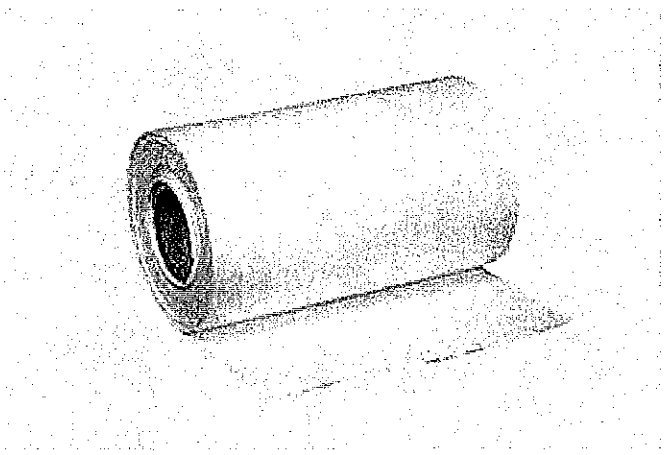
LEED® Information

Pre-consumer Recycled Content	0%
Post-consumer Recycled Content	0%
VOC Content	4 g/l
Manufacturing Location	Greenville, SC

CARLISLE SYNTEC SYSTEMS

» Penetrations, Corners

Sure-Weld® TPO
Non-Reinforced Flashing



Overview

Carlisle's Sure-Weld TPO Non-Reinforced Flashing is a 60-mil thermoplastic polyolefin (TPO)-based membrane available in 12" and 24" by 50' rolls. When the use of prefabricated accessories is not feasible, this product can be used to create inside and outside corners, field-fabricated pipe flashings, sealant pockets, and scuppers. Standard colors are white, tan, and gray.

Features and Benefits

» New and improved TPO Flashing provides 35% more flexibility, making it easier to field-fabricate details

» Compounded with the same OctaGuard XT™ weathering package as Carlisle's Sure-Weld TPO membranes for maximum longevity

» Superior weldability allows for consistent, high-quality seams in penetrations and other critical roof areas

» Available in white, gray, and tan colors to match Carlisle's Sure-Weld TPO membranes

Installation

1. TPO Flashing is used to flash various roofing system details and penetrations. The specific installation method will vary based on the situation.
2. Use a lower temperature setting on the heat welder than when welding reinforced TPO membrane. Typically, a setting of "6" on a scale of "10" is appropriate for welding TPO Flashing.
3. Use the edge of the roller to crease the flashing into any membrane step-offs for a proper seal.

Review Carlisle specifications and details for complete installation information.

Precautions

» Review the applicable Safety Data Sheet for complete safety information prior to use.

» Sunglasses that filter out ultraviolet light are strongly recommended, as tan and white surfaces are highly reflective. Roofing technicians should dress appropriately and wear sunscreen.

» Store TPO Flashing in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins. TPO Flashing that has been exposed to the weather for approximately 7 days or longer must be prepared with Weathered Membrane Cleaner prior to hot air welding.

Typical Properties and Characteristics

Properties	ASTM Test Method	Specification
Tolerance on nominal thickness, %	D 412	plus 15/ minus 10
Weight, lb/ft2 (kg/m²), typical		0.30 (1.5)
Tensile strength, min., psi (Mpa)	D 412 Die C	1200 (8.3)
Elongation, ultimate, min., %	D 412 Die C	600
Tear strength, min., lbf/in (kN/m)	D 624 Die C	250 (43.8)
Ozone resistance, 168h @ 100 pphm, 50% ext.	D 1149	No Cracks
Heat aging: 28 days at 240°F (116°C)	D 573	
Tensile strength, min., psi (MPa)	D 412	1000 (6.9)
Elongation, ultimate, min., %	D 412	500
Tear strength, min., lbf/in (kN/m)	D 624	200 (35.0)
Linear dimensional change, max. %	D 1204	±4
Resistance to Xenon-arc weathering	G 155	No Cracks
Xenon-Arc, 10,080 kJ/m² total radiant	0.70 W/m²	
Exposure, visual condition at 10X	80°C B.P.T.	

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

LEED® Information

Pre-consumer Recycled Content	0%
Post-consumer Recycled Content	0%
Manufacturing Location	Greenville, IL
Solar Reflectance Index (SRI)	N/A

800-479-6832 | P.O. Box 7000 | Carlisle, PA 17013 | Fax: 717-245-7053 | www.carlislesyntec.com

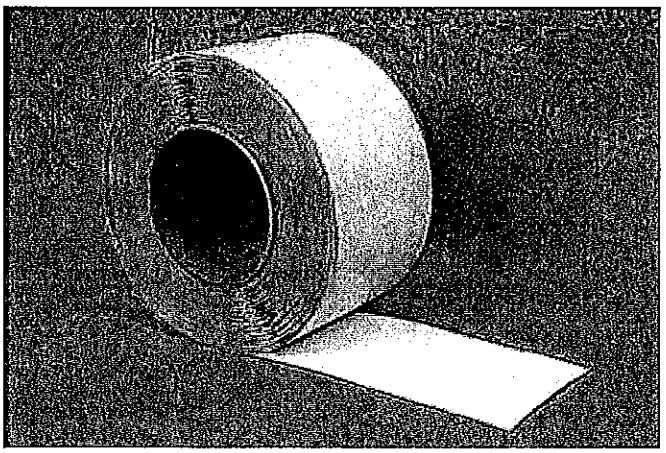
6" At Drip Edge

EXPERIENCE THE CARLISLE DIFFERENCE

CARLISLE SYNTEC SYSTEMS

Sure-Weld® TPO
Pressure-Sensitive Coverstrip

Certified Fabricated Accessory



Overview

Sure-Weld TPO Pressure-Sensitive (PS) Coverstrip is a nominal 30-mil (0.76 mm) non-reinforced TPO flashing laminated to a nominal 30-mil (0.76 mm), fully cured synthetic rubber pressure-sensitive adhesive. PS Coverstrip is available in 6" (152 mm) wide x 100' (30.5 m) long rolls and 3 membrane colors - white, gray, and tan.

TPO PS Coverstrip is intended to strip in flat metal flanges (i.e. drip edge or self-flashing curb flanges).

NOTE: TPO PS Coverstrip cannot be used for flashing corners, pipes, T-joints or butt joints on FleeceBACK® TPO systems or any angled metal flanges such as gravel stops or other canted metal edgings.

Carlisle's TPO PS Coverstrip is part of the Certified Fabricated Accessory (CFA) program. Certified Fabricated Accessories are the only factory-fabricated TPO accessories that meet the stringent quality tolerances required to be included in a Carlisle warranted roofing system.

Features and Benefits

» Pressure-sensitive adhesive is compatible with a variety of metal finishes and allows for a fast, simple installation with no welding required

Installation

1. Clean the existing membrane (and metal if applicable) with Weathered Membrane Cleaner and HP Splice Wipes or other natural fiber rags. A Carlisle Primer Pad may be necessary to remove a heavy build-up of dirt. Pour a small amount of Weathered Membrane Cleaner over a primer pad and rub area to be primed in a circular motion. Wipe away residual dirt with HP Splice Wipes or other natural fiber rags.
2. Roller-apply TPO Primer or Low-VOC TPO Primer to the area of the membrane and metal to be flashed with a short nap length paint roller. The properly primed area will be uniform in color without streaks and free of globs or puddles.

   *Do not use HP-250 Primer on TPO membrane.
3. The entire surface where the flashing will be applied must be clean. The adhesive on the back of the TPO PS Coverstrip will not adhere to dusted/dirty surfaces. Any residual surface contamination will be detrimental to the bond strength of the adhesive.
4. Install TPO PS Coverstrip immediately after TPO Primer or Low-VOC TPO Primer flashes off to minimize potential dust contamination and to promote adhesion in colder weather.
5. Peel off 10-12" (250-300 mm) of the protective release liner from the TPO PS Coverstrip. Position the flashing over the area to be covered and press down using firm, even hand pressure across the entire area. Continue this process until the full area to be flashed is completed. (Cut-Edge Sealant is not required on edges of TPO PS Coverstrip.)
6. Immediately roll the TPO PS Coverstrip with a 2"-wide (50 mm) silicone roller using positive pressure. Roll across the coverstrip edge, not parallel to the length. In areas where the TPO PS Coverstrip crosses a metal joint, a membrane seam (T-joint) or at an end lap, use a hot-air gun to heat the top surface (TPO flashing) of the TPO PS Coverstrip and crease the material into the step-off. This process reduces the possibility of a water channel forming.
7. To achieve proper adhesion of the TPO PS Coverstrip when jobsite temperatures fall below 40°F (5°C), heat the cleaned/primed area of the membrane with a hot-air gun as the flashing is applied and pressed into place.

Review Carlisle specifications and details for complete installation information.

CARLISLE SYNTEC SYSTEMS

Sure-Weld TPO
Pressure-Sensitive Coverstrip

Precautions

- TPO PS Coverstrip cannot be used for flashing corners, pipes, T-joints, butt joints on FleeceBACK TPO systems or any angled metal flanges such as gravel stops or other canted metal edgings.
- Avoid prolonged contact with skin. In case of contact with skin, thoroughly wash affected area with soap and water.
- Prolonged jobsite storage temperatures in excess of 90°F (32°C) may affect product shelf life.
- In warm, sunny weather, keep TPO PS Coverstrip rolls in box or in a shaded area until ready to use.
- Storage and use of TPO PS Coverstrip at temperatures below 40°F (4°C) will result in a loss of adhesive tack, and in extreme cases will result in an inadequate bond to the substrate. Overnight storage must be available to keep the temperature of the TPO PS Coverstrip at a minimum of 40°F (4°C). Hot boxes for jobsite storage must be provided to maintain a minimum product temperature of 40°F (4°C).
- TPO PS Coverstrip must be stored in a dry area.
- Due to solvent flash-off, condensation may form on freshly applied TPO Primer when the ambient temperature is near the dew point. If condensation develops, the application of TPO Primer and TPO PS Coverstrip must be discontinued since proper adhesion will not be achieved. Allow the surface to dry and apply a thin freshener coat of TPO Primer to the previously coated surface and apply TPO PS Coverstrip when conditions allow.
- Do not allow waste products (petroleum, grease, oil, solvents, vegetable or mineral oil, animal fats, etc.) or direct steam venting to come in contact with the PS Coverstrip.
- KEEP OUT OF THE REACH OF CHILDREN.

Typical Properties and Characteristics

Physical Property	Test Method	Typical
Tensile Strength, psi (MPa)	ASTM D412	2,500 (17.2) Minimum 2,900 (20.0) Typical
Elongation, %	ASTM D412	600 Minimum 750 Typical
Hardness, Shore A	ASTM D2240	Typical 80
Color		White, gray and tan
Base		Membrane - Non-reinforced TPO Adhesive - Synthtic Rubber
Solids		100%
Nominal Thickness		0.060" (1.52 mm)
Nominal Width		Membrane - 6" (152 mm) Adhesive - 6-¼" (159 mm)
Nominal Length		100 ft. (30.5 m)
Net Weight per Roll		22 lbs. (10 kg)
Packaging		2 Rolls/Carton
Shelf Life		1 Year

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

LEED® Information

Pre-consumer Recycled Content	0%
Post-consumer Recycled Content	0%
Manufacturing Location	Michigan Center, MI
Solar Reflectance Index (SRI)	N/A

800-479-6832 | P.O. Box 7000 | Carlisle, PA 17013 | Fax: 717-245-7053 | www.carlislesyntec.com

CARLISLE SYNTEC SYSTEMS

Sure-Weld® TPO
Low-VOC Cut-Edge Sealant

Overview

Carlisle's Low-VOC TPO Cut-Edge Sealant is a free-flowing polymeric material designed to be used for sealing cut edges of Sure-Weld TPO Reinforced Membrane. It is available in clear for use with various colors of TPO membrane.

Carlisle's Low-VOC TPO Cut-Edge Sealant is used to seal cut edges of TPO Membrane, providing a waterproof barrier where scrim reinforcement is exposed.

Features and Benefits

- Provides excellent sealing of exposed fabric at cut membrane edges
- Squeeze-bottle packaging allows easy, no-mess application
- Available in clear for use with various colors of Sure-Weld TPO membrane

Coverage Rate

Approximately 225' – 275' (70 – 85 m) per 16-oz. bottle when applied with ⅛" (3 mm) bead.

Application

1. All surfaces to be sealed with TPO Low-VOC Cut-Edge Sealant must be clean, dry and free from oil, grease, dirt and other foreign materials.
2. Apply a ⅛" (3 mm) bead of TPO Low-VOC Cut-Edge Sealant from the plastic squeeze bottle to seal cut edges of reinforced TPO membrane. Do not apply TPO Low-VOC Cut-Edge Sealant on vertical surfaces.
3. Sealant should be tack-free in 2 hours and fully cured in 24 hours depending on weather conditions and application thickness.

Review Carlisle specifications and details for complete installation information.

Precautions

- Review the applicable Material Safety Data Sheet for complete safety information.
- TPO Low-VOC Cut-Edge Sealant is FLAMMABLE – it contains solvents that are dangerous fire and explosion hazards when exposed to heat, flame or spark. Do not smoke while applying. Do not use in a confined area or unventilated area. Vapors are heavier than air and may travel along the ground to a distant ignition source and flashback.
- Avoid breathing vapors. Keep container closed when not in use. Use with adequate ventilation. If inhaled, remove to fresh air. If not breathing, perform artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.
- If swallowed, DO NOT INDUCE VOMITING. Call a physician immediately.
- Avoid contact with eyes. Safety glasses or goggles are recommended. If splashed in eyes, immediately flush eyes with plenty of water for at least 15 minutes. Contact a physician immediately.
- Avoid contact with skin. Permeation-resistant gloves (that meet ANSI/ISEA 105-2005) recommended. Wash thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water.
- Jobsite storage temperatures in excess of 90°F (32°C) may affect product shelf life. Should the TPO Low-VOC Cut-Edge Sealant be stored at temperatures below 60°F (15°C), restore to room temperature prior to use.
- KEEP OUT OF THE REACH OF CHILDREN

CARLISLE SYNTEC SYSTEMS

Sure-Weld TPO
Low-VOC Cut-Edge Sealant

Typical Properties and Characteristics	
Base	Synthetic Rubber
Color	Clear
Solids	23-25%
Viscosity	4,000 cps
Flash Point	40°F (4°C)
Net Weight Gallon	10 lbs (4.5 kg)
Resistance to:	
Ozone	Excellent
UV	Excellent
Water	Excellent
Packaging	Twelve 16-oz. bottles/carton (5.68 L)
Shelf Life	1 year

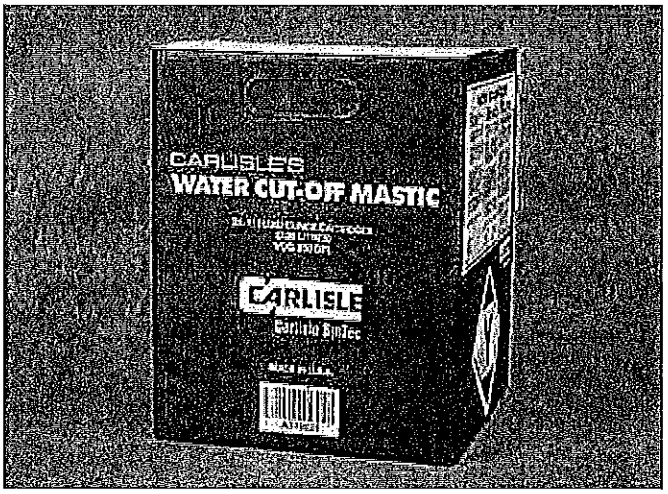
Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

LEED® Information	
Pre-consumer Recycled Content	0%
Post-consumer Recycled Content	0%
Manufacturing Location	Akron, OH
VOC Content	235 g/L

800-479-6832 | P.O. Box 7000 | Carlisle, PA 17013 | Fax: 717-245-7053 | www.carlislesyntec.com

CARLISLE SYNTEC SYSTEMS

Water Cut-Off Mastic



Overview

Let Carlisle simplify your next membrane installation with its Water Cut-Off Mastic. Water Cut-Off Mastic is a one-component, low-viscosity, self-wetting, butyl-blend mastic designed to be used in conjunction with roofing and waterproofing systems. It is primarily used as a sealing agent between various membranes and applicable when membrane is being terminated using a compression-type seal.

Water Cut-Off Mastic is an extremely tacky material and will remain as such when used with compression-type terminations.

Features and Benefits

» Extremely tacky

» Provides a durable compression-type seal between various membranes and parapet wall constructions

Coverage Rate

10 linear feet per tube at the recommended application rate of a ½" bead.

Application

1. All surfaces to be sealed with Water Cut-Off Mastic must be free of moisture, oil, dirt and other foreign materials. Water Cut-Off Mastic cannot be used on insulation.
2. Apply a ½" (13 mm) bead of Water Cut-Off Mastic between the substrate and the edge of the membrane.
3. Apply appropriate termination material and secure to provide constant compression for the Water Cut-Off Mastic.

Review Carlisle specifications and details for complete application information.

Precautions

» Review the applicable Material Safety Data Sheet for complete safety information prior to use.

» Water Cut-Off Mastic is FLAMMABLE – contains solvents that are dangerous fire and explosion hazards when exposed to heat, flame or sparks. Store and use away from all sources of heat, flame or sparks. Do not smoke while applying. Do not use in a confined or unventilated area. Vapors are heavier than air and may travel along ground to a distant ignition source and flash back.

» Avoid breathing vapors. Keep container closed when not in use. Use with adequate ventilation. If inhaled, remove to fresh air. If not breathing, perform artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

» If swallowed, DO NOT INDUCE VOMITING. Call a physician immediately.

» Avoid contact with eyes. Safety glasses or goggles are recommended. If splashed in eyes, immediately flush eyes with plenty of clean water for at least 15 minutes. Contact a physician immediately.

» Avoid contact with skin. Wash hands thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water.

Note: Permeation-resistant gloves (that meet ANSI/ISEA 105-2005) are recommended to be worn when using this product to protect hands from irritating ingredients.

CARLISLE SYNTEC SYSTEMS

Water Cut-Off Mastic

Typical Properties and Characteristics

Color	Gray
Solids	80%
Flash Point	40°F (4°C) Closed Cup
Service Temperature	-40°F to 200°F (-40°C to 93°C)
Specific Gravity	1.29
Cold Weather Flexibility	Excellent
Average Brookfield Viscosity	1,320,000 cps
Packaging	25 tubes/carton
Clean up	Weathered Membrane Cleaner
Average net weight/carton	28 lbs (13 kg)
Shelf life	1 year, unopened container

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

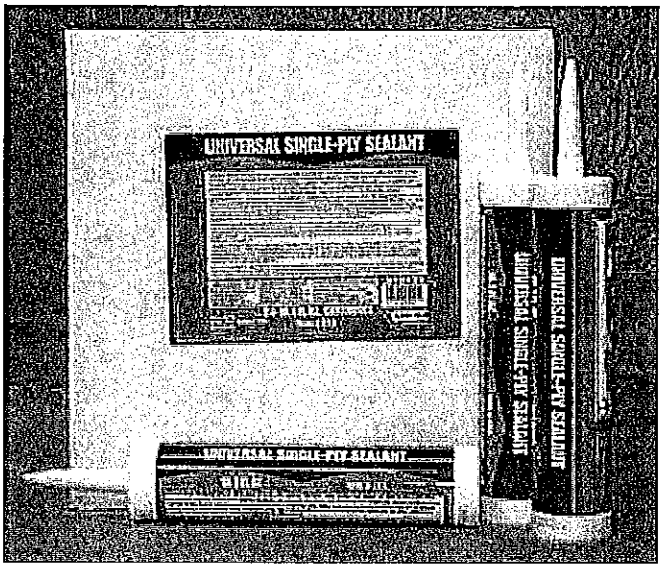
LEED® Information

Pre-consumer Recycled Content	0%
Post-consumer Recycled Content	0%
Manufacturing Location	Carlisle, PA
VOC Content	250 g/L

800-479-6832 | P.O. Box 7000 | Carlisle, PA 17013 | Fax: 717-245-7053 | www.carlislesyntec.com

CARLISLE SYNTEC SYSTEMS

Universal Single-Ply Sealant



Overview

Carlisle's Universal Single-Ply Sealant is a 100% solids, solvent-free, one-part polyether sealant that provides a weather-tight seal to a variety of substrates. Universal Single-Ply Sealant can be used as a sealant above Termination Bar for Sure-Weld®, Sure-Flex™, and Sure-White® fully adhered and mechanically fastened roofing systems. It is also excellent for use in counter flashing, coping, and scupper details.

Features and Benefits

» Excellent adhesion to a variety of substrates

» Low VOC

» Wide range of applications

Coverage Rate

25' (7.6 m) per tube or 600' (183 m) per carton using a ¼" (8 mm) bead.

Application

1. Universal Single-Ply Sealant is a one-component, ready-to-use material that requires no mixing or preparation.
2. Surface preparation: Surfaces shall be dry, clean, and free of all dust or contamination that may negatively affect adhesion. Cleaning with Carlisle's Weathered Membrane Cleaner or Low-VOC Membrane Cleaner may be required.
3. Use a high-quality caulking gun to ensure ease of application.
4. Universal Single-Ply Sealant typically is tack-free in 25 minutes and skins over within 45 minutes. Full cure occurs in 3 to 7 days, depending on temperature and humidity levels.
5. Clean up: Remove excess sealant adjacent to joint prior to cleaning with Carlisle's Weathered Membrane Cleaner or Low-VOC Membrane Cleaner.

Review Carlisle specifications and details for complete installation information.

Precautions

» Store in original, unopened containers in a cool, dry area. Protect unopened containers from heat and direct sunlight. Elevated temperatures will reduce shelf life.

» Do not use Universal Single-Ply Sealant in temperatures below 40°F (4°C).

» For industrial professional use only. May not be repackaged or resold for other than industrial or professional use.

» Avoid prolonged contact with skin.

» Uncured adhesive is an eye irritant. In case of contact with eyes, immediately flush with water.

» Do not ingest. If ingested, contact a physician immediately.

» Review Safety Data Sheet for complete safety information prior to use.

» KEEP OUT OF THE REACH OF CHILDREN.

CARLISLE SYNTEC SYSTEMS

Universal Single-Ply Sealant

Typical Properties and Characteristics

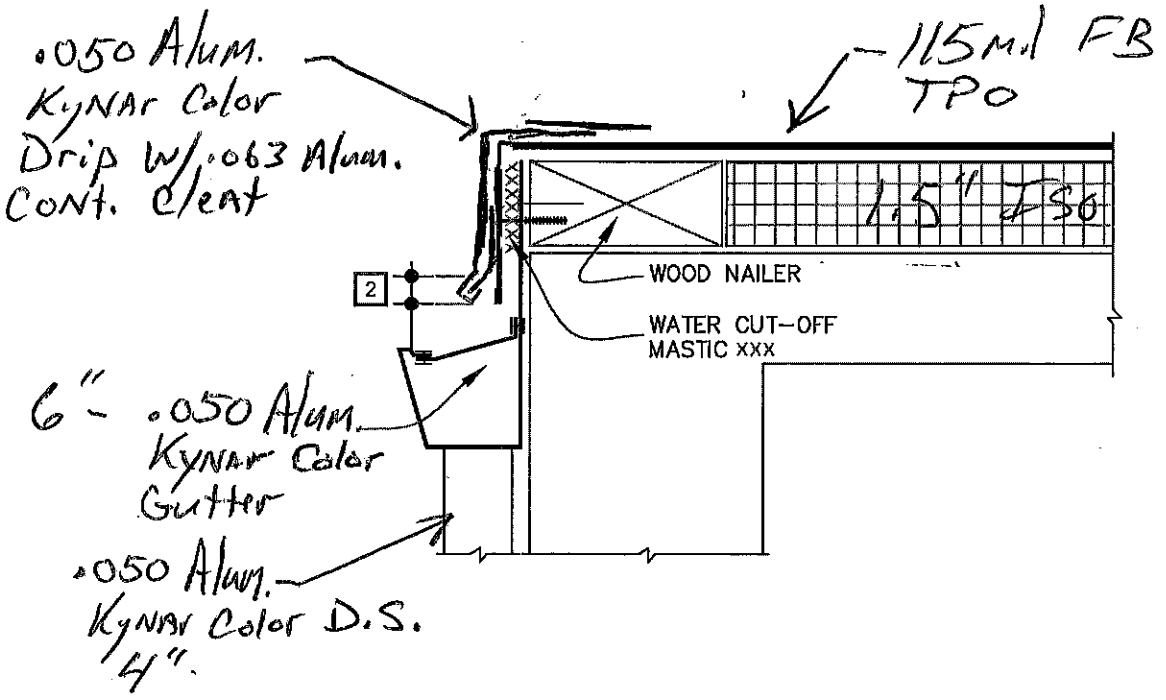
Color	White
Viscosity	850,000 Cps.
Tack-Free Time	25 minutes depending on temp/humidity
Cure Time	3-7 days depending on temp/humidity
Flow, Sag, or Slump	None (¼"[8 mm] Bead)
Staining	None
Ozone Resistance	Good
UV Resistance	Excellent
Cured Hardness (Shore A)	17-23
Shear Strength	150 PSI
Weight per Carton	26 lbs (11.8kg)
Packaging	24 Cartridges, 10.1 Fl. Oz. (298 mL) each
Shelf Life	12 months, unopened container @ 90°F (32°C)
VOC Content	22 g/L

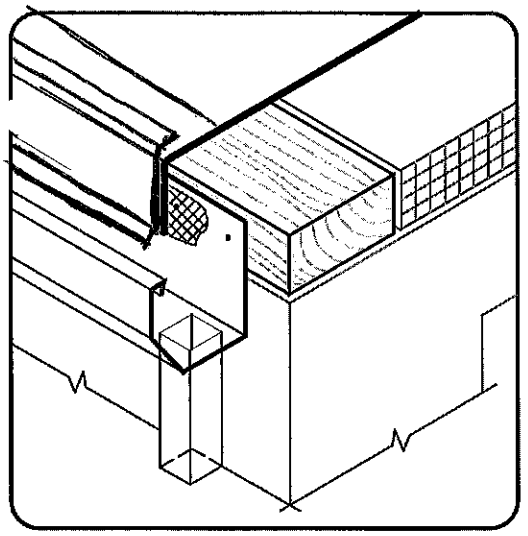
Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

LEED® Information

Pre-consumer Recycled Content	0%
Post-consumer Recycled Content	0%
Manufacturing Location	Schoolcraft, MI
Solar Reflectance Index (SRI)	N/A

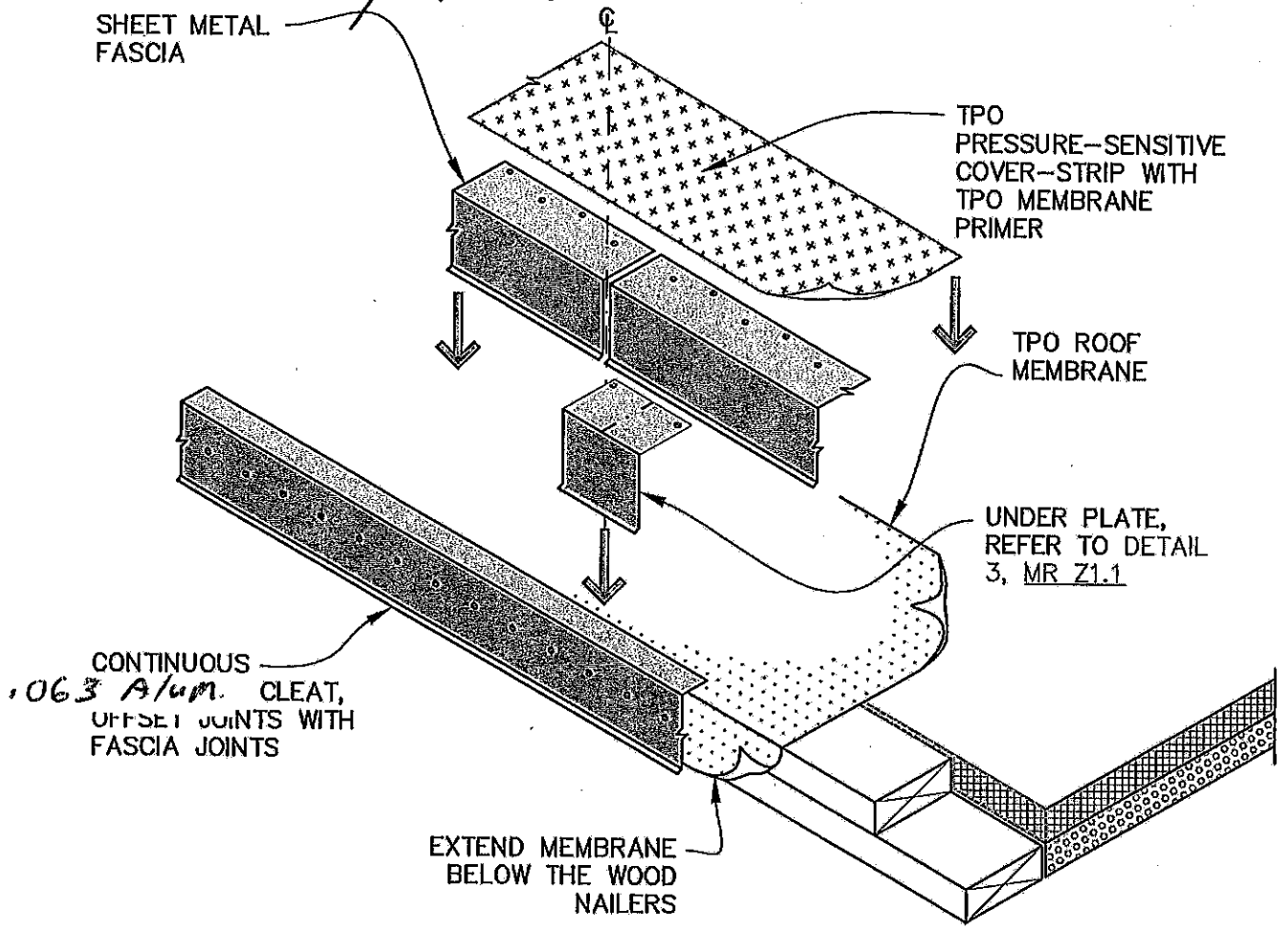
800-479-6832 | P.O. Box 7000 | Carlisle, PA 17013 | Fax: 717-245-7053 | www.carlislesyntec.com





THERMOPLASTIC REINFORCED MEMBRANE APPROVED INSULATION 0 SEE NOTE(S)	For additional information, refer to Specifications	DETAIL NO. THERMOPLASTIC UNIVERSAL

.050 Alum. KyNar color

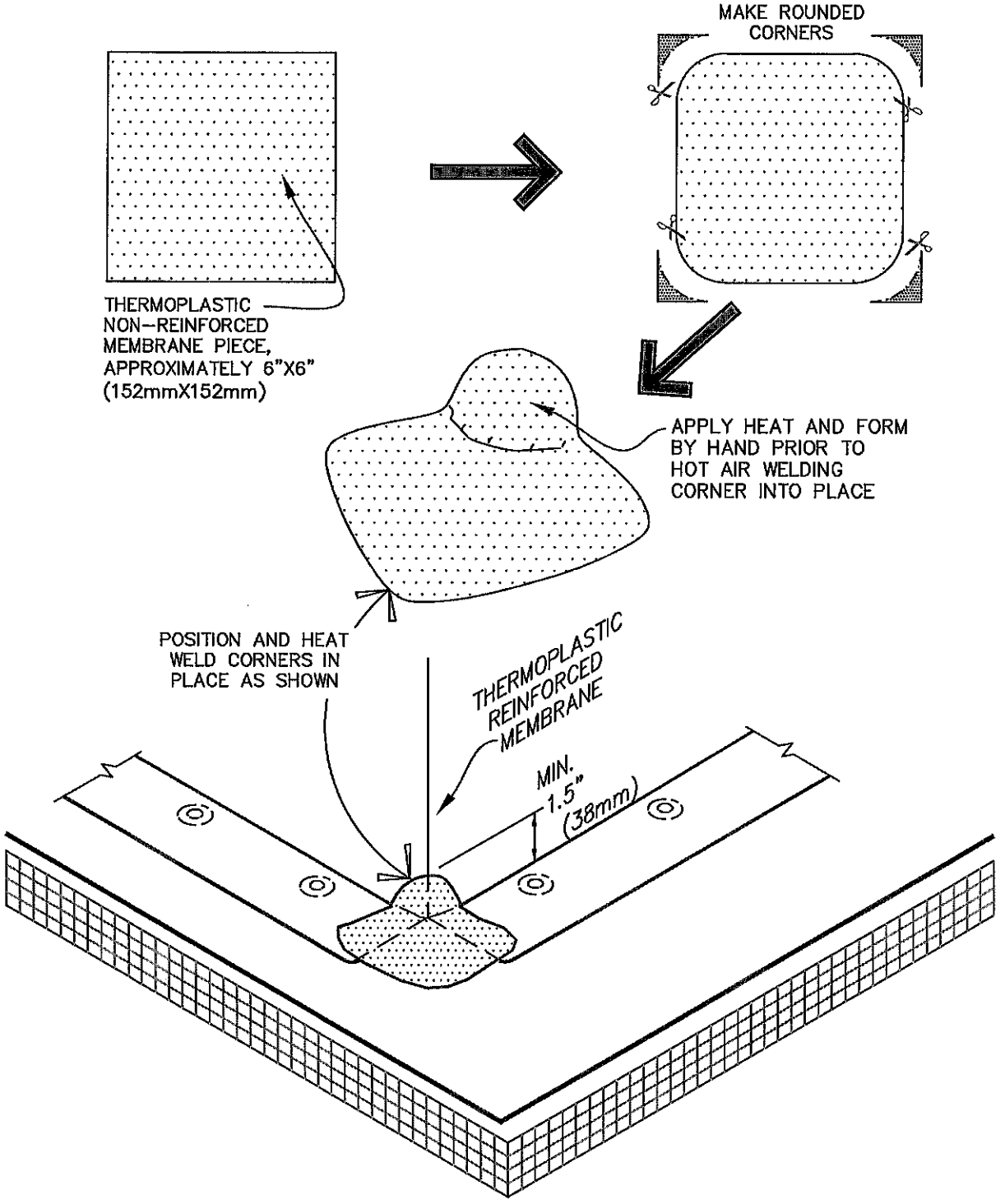


TPO ONLY (NOT FOR PVC)

EAVE/RAKE EDGE (NON-COATED METAL FASCIA)

- HIGH DENSITY RECOVER BOARD
- IN-FILL INSULATION
- ROOF MEMBRANE
- WOOD NAILER (BY OTHERS)
- 0 — SEE DRAWING NOTE(S)

CAUTION DETAIL NOT FOR USE ON 25 OR 30-YEAR WARRANTY PROJECTS, PRE-FABRICATED/PRE-MOLDED ACCESSORIES MUST BE UTILIZED. ACCEPTABLE FLASHING SHALL CONFORM WITH THERMOPLASTIC UNIVERSAL DETAIL U-15D.



THERMOPLASTIC REINFORCED MEMBRANE
APPROVED INSULATION
[0] SEE NOTE(S)

FIELD FABRICATED OUTSIDE CORNER FLASHING

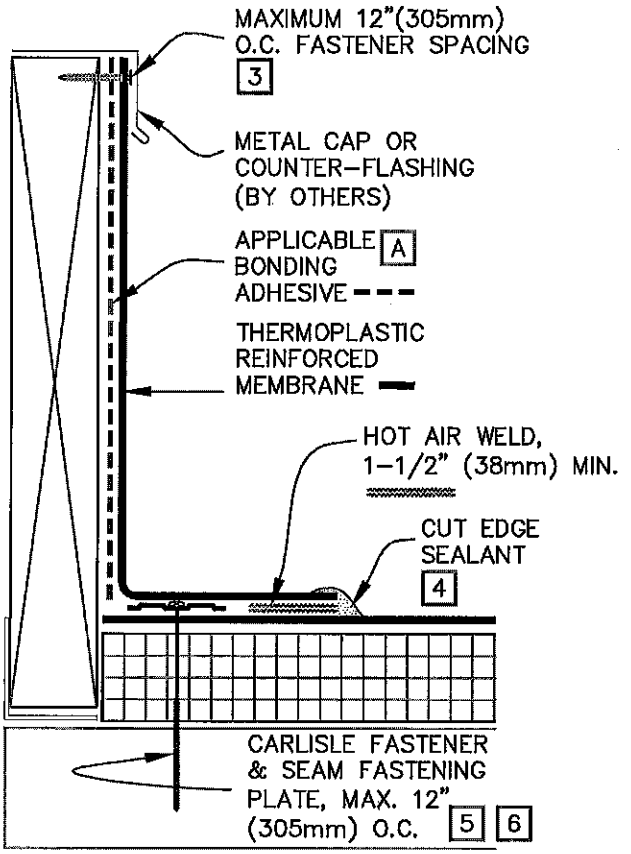
For additional information, refer to Specifications

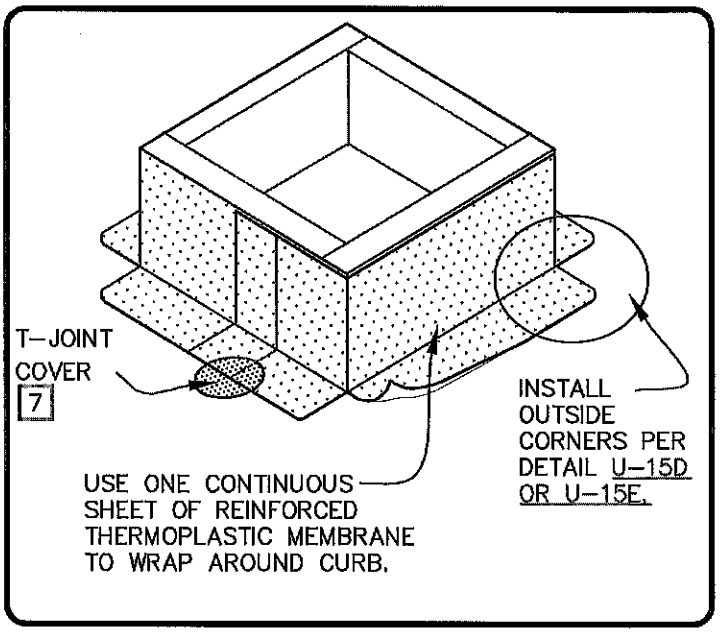
DETAIL NO. U-15E

THERMOPLASTIC UNIVERSAL

NOTES:

1. WHEN USING TPO MEMBRANE, BONDING ADHESIVE IS NOT REQUIRED WHEN THE FLASHING HEIGHT IS 12" (305mm) OR LESS AND THE MEMBRANE IS FASTENED "AS SHOWN" ON TOP OF THE CURB. WHEN CARLISLE TERMINATION BAR IS USED BENEATH THE COUNTER-FLASHING, BONDING ADHESIVE CAN BE ELIMINATED WHEN THE MEMBRANE HEIGHT IS 18" (457mm) OR LESS.
2. APPLICABLE BONDING ADHESIVE FOR PVC OR TPO. IN CASE OF TPO, CAV-GRIP ADHESIVE MAY ALSO BE USED ON VERTICAL PORTION.
3. WHEN MECHANICAL FASTENERS ARE USED TO PENETRATE THE METAL COUNTER-FLASHING, USE EPDM WASHERS, APPLY WATER CUT-OFF MASTIC UNDER THE COUNTER-FLASHING OR CAULK THE FASTENER HEADS.
4. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT-EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE.
5. REFER TO CARLISLE SPECIFICATIONS FOR ACCEPTABLE CARLISLE FASTENERS AND PLATES.
6. MECHANICAL SECUREMENT MAY BE INSTALLED INTO THE VERTICAL SUBSTRATE.
7. WHEN USING 80 MIL (2.03mm) THICK CURB FLASHING, THE INTERSECTIONS BETWEEN SPLICES MUST OVERLAID WITH A THERMOPLASTIC "T-JOINT" COVER.





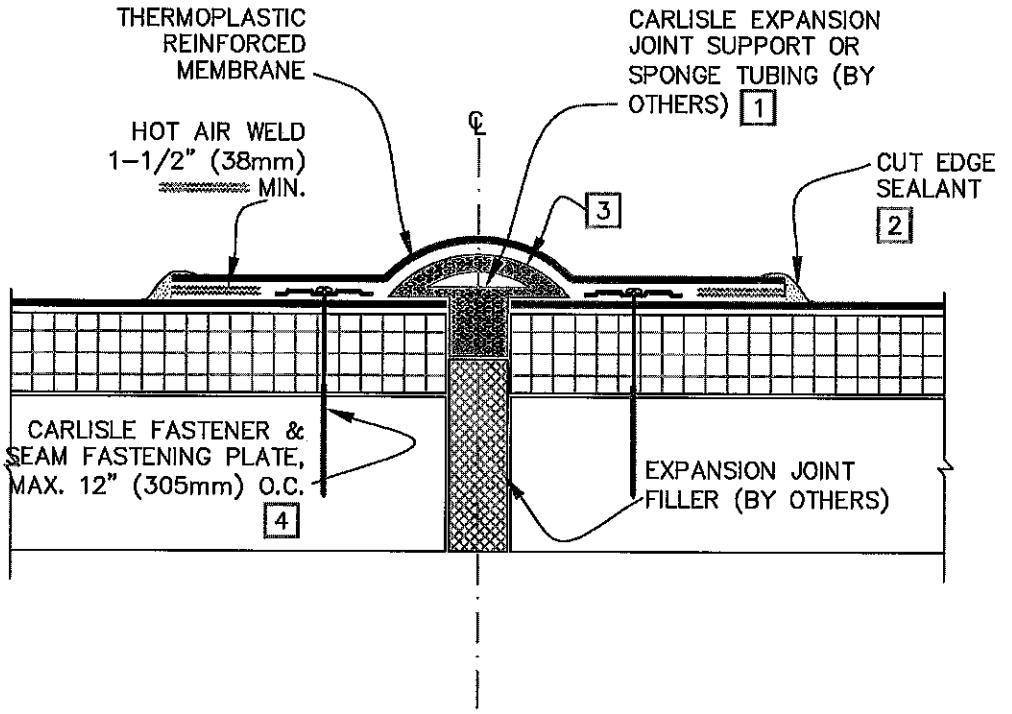
A TPO MEMBRANE ONLY
USE OF CAV-GRIP ADHESIVE MAY ALSO BE USED FOR UP TO 20 YEAR WARRANTY

THERMOPLASTIC REINFORCED MEMBRANE
APPROVED INSULATION
0 SEE NOTE(S)

CURB FLASHING

For additional information, refer to Specifications

DETAIL NO.
U-5A
THERMOPLASTIC UNIVERSAL

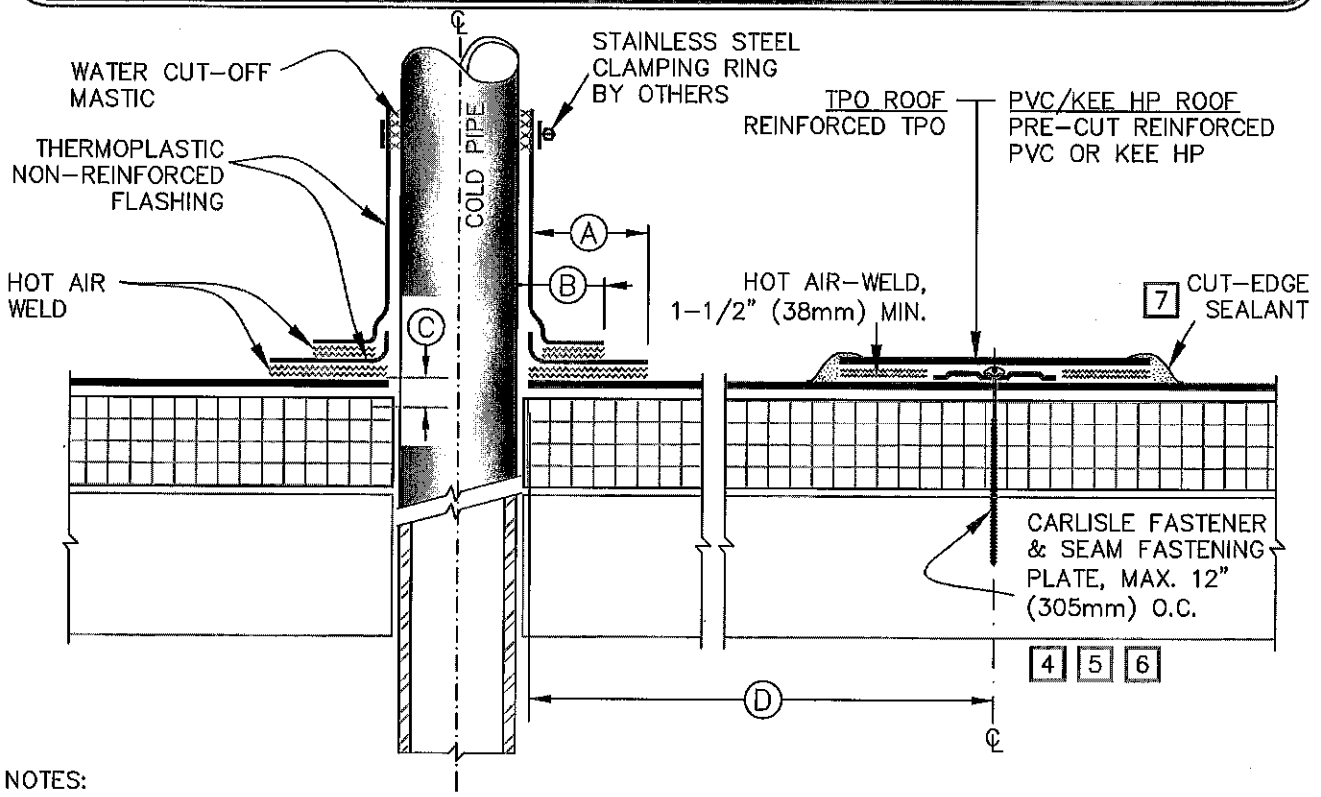


NOTES:

1. WHEN CARLISLE EXPANSION JOINT SUPPORT IS USED, WIDTH OF JOINT SHALL BE A MINIMUM OF 3/4" (19mm) AND SHALL NOT EXCEED 3" (75mm).
2. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT-EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE.
3. MEMBRANE FLASHING SHALL NOT BE ADHERED OVER THE EXPANSION JOINT SUPPORT OR SPONGE TUBING.
4. ON MECHANICALLY FASTENED SYSTEMS, HP-X FASTENERS AND PIRANHA PLATES OR HP-XTRA FASTENERS AND PIRANHA XTRA PLATES ARE REQUIRED OVER STEEL AND WOOD DECKS. ON CONCRETE DECKS, CD-10 OR HD 14-10 FASTENERS ARE USED WITH PIRANHA PLATES.

THERMOPLASTIC REINFORCED MEMBRANE APPROVED INSULATION 0 SEE NOTE(S)	DECK-TO-DECK EXPANSION DETAIL For additional information, refer to Specifications	DETAIL NO. U-3A THERMOPLASTIC UNIVERSAL

CAUTION DETAIL NOT FOR USE ON 25 OR 30-YEAR WARRANTY PROJECTS, PRE-FABRICATED/PRE-MOLDED ACCESSORIES MUST BE UTILIZED. ACCEPTABLE PIPE FLASHINGS SHALL CONFORM WITH THERMOPLASTIC UNIVERSAL DETAILS U-8A, 8C OR 8D.



NOTES:

1. REMOVE ALL EXISTING LEAD AND FLASHING MATERIAL BEFORE INSTALLING FIELD FABRICATED PIPE FLASHING.
2. TEMPERATURE OF THE PIPE PENETRATION MUST NOT EXCEED 140°F (60°C) WHEN USING PVC AND 160°F (71°C) WHEN USING TPO FLASHING.
3. THERMOPLASTIC NON-REINFORCED FLASHING WRAPPED AROUND PIPE SHALL HAVE MINIMUM 1-1/2" (38mm) VERTICAL HOT AIR WELD.

DIMENSIONS		mm	
A	1-1/2"	38	TO
	2"	51	
B	1"	25	MIN.
C	1/2"	13	MIN.
D	12"	305	APPROX.

4. INSTALL A MINIMUM OF 4 SEAM FASTENING PLATES FOR PIPES WITH A DIAMETER UP TO 6" (152mm). ADDITIONAL SEAM FASTENING PLATES WILL BE REQUIRED FOR PIPES GREATER THAN 6" (152mm) IN DIAMETER AND SHALL BE SPACED 12" (305mm) ON CENTER MAXIMUM.
5. FASTENERS/PLATES ARE NOT REQUIRED ON ADHERED SYSTEMS UNLESS PIPE DIAMETER EXCEEDS 18" (500mm).
6. ON MECHANICALLY FASTENED SYSTEMS, HP-X FASTENERS AND PIRANHA PLATES OR HP-XTRA FASTENERS AND PIRANHA XTRA PLATES ARE REQUIRED OVER STEEL AND WOOD DECKS. ON CONCRETE DECKS, CD-10 OR HD 14-10 FASTENERS ARE USED WITH PIRANHA PLATES.
7. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT-EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE.

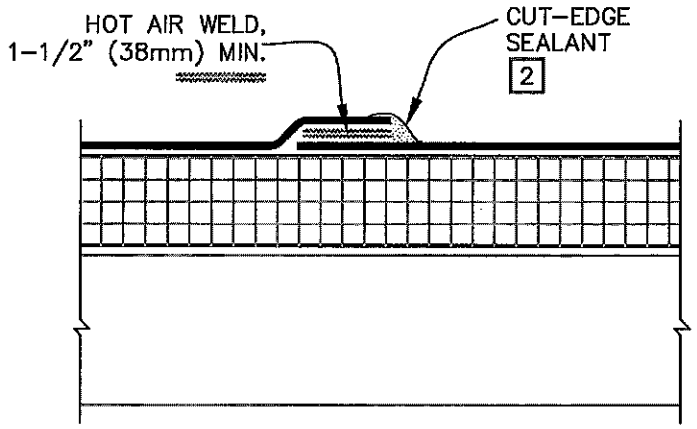
THERMOPLASTIC REINFORCED MEMBRANE
APPROVED INSULATION
0 SEE NOTE(S)

FIELD FABRICATED PIPE FLASHING

For additional information, refer to Specifications

DETAIL NO. U-8B

THERMOPLASTIC UNIVERSAL

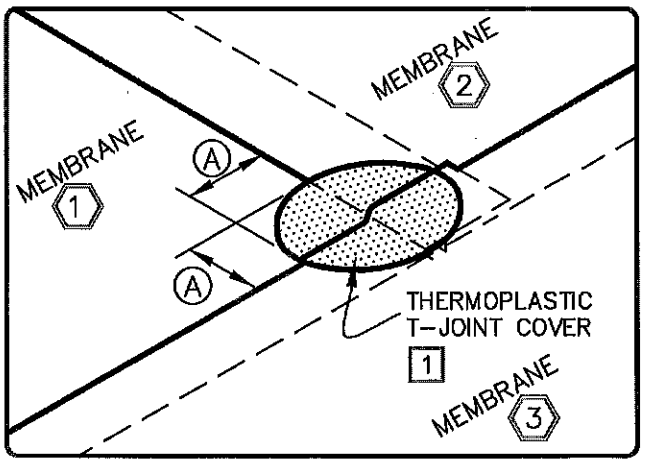


DIMENSIONS	mm	
(A) 2–1/4"	57	MIN.

NOTES:

1. WHEN USING 80–MIL (2.03mm) MEMBRANE, APPLY A 4–1/2" (114mm) DIAMETER "T–JOINT" COVER AT ALL FIELD SPLICE INTERSECTIONS.
2. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT–EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE.

MEMBRANE		THICKNESS		
		45/50	60	80
(A)	PVC	N/A	N/A	YES
(B)	KEE HP	N/A	N/A	YES
(C)	TPO	N/A	YES	YES



THERMOPLASTIC REINFORCED MEMBRANE
APPROVED INSULATION
0 SEE NOTE(S)

MEMBRANE SPLICE

For additional information, refer to Specifications

DETAIL NO.
U–2
THERMOPLASTIC UNIVERSAL

THERMA SEAL
ROOF SYSTEMS, LLC

Date: February 01, 2018

Project Name: Meter Shop Roof Replacement

THERMA SEAL ROOF SYSTEMS, LLC.
(Qualification Letter -Roofing Contractor)

I would like to qualify our company, Therma Seal Roof Systems, LLC. Please be advised that we have been in the roofing industry in South Florida for over 25 years. We are Licensed, Insured, and Bondable. It is our ultimate goal to offer our customer's a quality product at a competitive price and provide a service that will leave no customer unsatisfied. We count on your referrals to build our business and our reputation.

Our areas of expertise include: **BUR "Built Up", Single Ply (PVC & TPO), Modified Bitumen, Shingles, Tile (Clay & Concrete), Standing Seam Metal and Waterproofing** and we are comfortable with new construction, re-roofing and roof maintenance. Our diversified range of manufacturers allows us to offer virtually unlimited products with warranties up to 25 years. We are a certified drug-free workplace and our #1 priority is to maintain a safe work environment for our employees and customers. Our crews are thoroughly trained and are monitored by a full time supervisor on every job. It is our commitment to you that your job will be installed per our agreement and local building code requirements with no exceptions.

We have included a list of references that reflect some of our current projects and our versatility. As a final gesture for your consideration, please feel free to call us at any time to address of your concerns or questions. We take great pride in communicating with our customers on every level.

Main Office: 1421 Oglethorpe Rd. * West Palm Beach, FL 33405 ▪ Tel: 561-223-2096 ▪ Fax: 561-444-2272
License # CCC1325862
Solutions Driven and Customer Focused

THERMA SEAL™
ROOF SYSTEMS, LLC.
State License #CCC1 325862

Therma Seal Roof Systems, LLC
1421 Oglethorpe
West Palm Beach, FL 33405
Phone: (561) 223-2096
Fax: (561) 444-2272

REFERENCES

Project:	**AC Hotel by Marriott Aventura**
Project Address:	20805 Biscayne Blvd., Aventura, FL 33180
Contract Amount:	$200,000.00
Contractor:	Craft Construction Company, LLC.
Property Manager:	Eddie Mezardjian
Contact Information:	954-372-1017
Description:	New construction with lightweight concrete and single ply

Project:	**Broward County Public Safety**
Project Address:	2601 West Broward Blvd, Fort Lauderdale, FL 33312
Contract Amount:	$860,000.00
Contractor:	West Construction, Inc.
Project Manager:	Mr. Matt West
Contact Information:	561-588-2027 or mwest@westconstructioninc.net
Description:	Complete tear off and reroof of four (4) buildings totaling 40,000 SF. Installed new Fibertite single ply membrane over tapered insulation.

Project:	**Dorms A, B, C, Multipurpose Building and Administration Building Re-Roof at Martin Correctional Institution**
Project Address:	1150 SW Allapattah Road, Indiantown, FL 34956
State Project Number:	NX-30
Contract Amount:	$780,000.00
Owner:	Florida Department of Corrections
Construction Consultant:	Kent Bass
Contact Information:	850-688-5098 or kent.bass@fdc.myflorida.com
Description:	Re-Roof

Project:	**Cortina Apartments**
Project Address:	1000-1070 Audace Ave., Boynton Beach, FL 33436
Contract Amount:	$995,000.00
Contractor:	Kast Construction
Contact:	Matt Sears
Contact Information:	954-479-4743
Description:	Single Ply Lightweight Concrete

Project:	**Palmetto Promenade**
Project Address:	365 East Palmetto Park Road, Boca Raton, FL 33432
Contract Amount:	$1,105,000.00
Contractor:	Kast Construction
Project Manager:	Jason Kunk
Contact Information:	954-816-3803
Description:	Single Ply Lightweight Concrete & Tile

CARLISLE
CONSTRUCTION MATERIALS

January 28, 2015

ISO 9001 registration provides an organization the opportunity and discipline to document and follow a systematic manufacturing and audit process. Although Carlisle Construction Materials does not currently have an ISO 9001 registration, many of the requirements for this system are met through listings with various reputable third party certifying bodies and stringent internal standards. Our products are listed with FM and UL with follow up services. In addition we are also certified with SECO, Intron and BBA with routine audits required to maintain certification. These audits validate product characteristics and the plant process for compliance with published codes as well as require us to have traceability and process control for all materials manufactured in our plants.

Additionally, the focus of Carlisle's Quality Management System is the Carlisle Operating System, COS. The COS approach is based on Lean 6-Sigma methods and utilizes Kaizen as part of the continual improvement journey. GEMBA walks and huddles identify and resolve challenges and needs on a daily basis in real time. The GEMBA walks are focused around our SQDC metric boards (Safety, Quality, Delivery, and Cost). The respective teams review the boards throughout our plants to identify urgent and long term issues preventing us from meeting customer needs. Issues are tracked via a corrective action system. Each plant is audited by our Quality Services team.

For Carlisle Construction Materials, the Carlisle Operating System is the natural evolution from a reactive inspection based QMS to a proactive continual improvement system. We welcome customers to our facilities and are confident our systems meet requirements of ISO 9001.

We are confident that the quality assurance systems currently in place ensure that quality products and roofing systems are supplied to our customers.

P.O. Box 7000 Carlisle, PA 17013 Phone: 800.453.2554 Fax: 717.245.7053 www.CarlisleConstructionMaterials.com

Carlisle Quality Services Mission:

> The Quality Services Team will lead Carlisle CCM to provide Best in Class Performance to our Customers. The team will promote the vision through robust processes and methods. Quality Services team will provide training and support to insure accurate data, precise analysis, optimal processes and continual reductions in variation. We will insure the voice of the customer, the voice of the process, and the voice of supply are aligned.

Carlisle QMS Critical Processes

Many of our systems meet the requirements of ISO 9000. The following is an overview of what is typical for the Carlisle QMS:

Incoming raw materials are based on our Purchasing Specifications and require vendor-supplied Certificate of Analysis with each supplied lot. The Purchasing Specifications are typically generated and maintained by the Research and Development group in Carlisle, PA.

Depending on the final product a wide variety of in-process tests are performed to verify physical properties and performance characteristics. In addition, operators are continuously monitoring the product to insure not only the above characteristics but also a number of aesthetic properties including the general product and package appearance. Our finished products also include a lot-tracking feature so that products in the field can be traced back to the manufacturing operation in order to tie back to the date and time of manufacture and therefore the above-mentioned test results.

Destructive testing and final product tests on the various physical properties are also performed in the labs of the manufacturing facilities. These are independently validated in the Research and Development Laboratory. Depending on the finished product these tests will include gauge over scrim, ply-to-ply adhesion, breaking strength, tear strength, color, compressive strength, density, dimensional data, heat aging, etc. Most of the above tests are performed using ASTM standards as well as a number of internally developed methods.

All of the lab and test equipment is on a calibration program to insure that the data is true and accurate. Providers of calibration services are accredited under ISO/IEC 17025 or ANSI Z540.3.

New product development follows our review process. The process starts with a core steering committee review which determines the complexity of the new product design and then will direct into the phase gate review process.

It is the daily performance and engagement of our employees that makes the difference in the quality of Carlisle roofing systems.

Tim Wickard
Director of Quality Services

Tom Timmerman
VP of Manufacturing

CITY OF HOLLYWOOD
DEPARTMENT OF PUBLIC UTILITIES
ENGINEERING AND CONSTRUCTION SERVICES DIVISION

1621 N. 14th Avenue
Hollywood, FL 33020
Phone: 954-921-3930; Fax: 954-921-3258

ADDENDUM NUMBER 1

DATE: **January 17, 2018**

FOR: **METER SHOP ROOF REPLACEMENT PROJECT**

PROJECT NUMBER: **17-2142**

ALL BIDDERS BE ADVISED OF THE FOLLOWING CHANGES TO THE ABOVE REFERENCED PROJECT AS LISTED BELOW:

This addendum is issued as part of the Bidding Documents for the above described project. The changes incorporated in this addendum shall be considered as a part of the documents and shall supersede, amend, add to, clarify, or subtract from those conditions shown in the original documents. The bidder shall coordinate all modifications herein with all trades and disciplines related to the work. The Bidder shall acknowledge receipt of this addendum on the Bid Form by addendum number and date. **Failure to do so may subject Bidder to disqualification**.

Please note that this addendum includes a total of twenty-three (23) sheets, including this Cover sheet. If you have not received all twenty-three (23) sheets, or have any questions pertaining to this addendum, please contact Mr. Vernal Sibble, PE, of the City of Hollywood Department of Public Utilities, Engineering and Construction Services Divisions (ECSD), 954-921-3930.

REVISIONS TO CONTRACT DOCUMENTS:

Item No. 1 Pre-Bid Conference Questions from Bidders

A. Minutes from the Pre-Bid Meeting are attached.

B. Sign – in sheet is attached.

Item No. 2 –Revision to Scope; Existing Gutters

A. Existing gutters are to be removed and disposed of in accordance with rules of the agencies having jurisdiction and the associated costs are to be included in the bid. Revised *Sections 01025 (Basis of Payment)* and *00301 (Proposal Bid Form)* have been attached to include this item (See attached photograph example).

CITY OF HOLLYWOOD
DEPARTMENT OF PUBLIC UTILITIES
ENGINEERING AND CONSTRUCTION SERVICES DIVISION

1621 N. 14th Avenue
Hollywood, FL 33020
Phone: 954-921-3930; Fax: 954-921-3258

ADDENDUM NUMBER 1

Item No. 3 Revisions to Scope; Replacement Gutters

A. Replacement gutters are to be installed on the north, east and south sides of the east building and on the south side of the west building. Revised *Sections 01025 (Basis of Payment)* and *00301(Proposal Bid Form)* and photograph have been attached to include this item.

Item No. 4 Revisions Scope – Replacement of Rooftop Mechanical Vents

A. Replace existing turbine vent, APV vent, and 2 – 2' X 2' exhaust vents. (See attached photograph example). Revised *Sections 01025 (Basis of Payment)* and *00301(Proposal Bid Form)* and photograph have been attached to include this item.

Item No. 5 Revisions to Scope – Replacement of Electrical Conduits

A. The existing electrical conduits and appurtenances are to be replaced (See attached photograph example). *Revised Sections 01025 (Basis of Payment) and 00301(Proposal Bid Form)* have been attached to include this item.

Item No. 6 Revisions to Scope – Concrete Repair

A. Broken Concrete roof elements (See attached photograph example) are to be repaired/replaced. (See attached photograph). *Revised Sections 01025 (Basis of Payment) and 00301(Proposal Bid Form)* have been attached to include this item.

ALL OTHER TERMS, CONDITIONS AND SPECIFICATIONS SHALL REMAIN THE SAME.

THIS ADDENDUM SHALL BE ATTACHED TO THE CONTRACT DOCUMENTS AND THE RECEIPT OF THE SAME SHALL BE NOTED IN THE PROPOSAL IN THE SPACE PROVIDED.

Clece Aurelus, P.E., Engineering and Construction Services Manager
Department of Public Utilities - ECSD

City of Hollywood
Department of Public Utilities
Engineering and Construction Services Division

PRE-BID MINUTES
for
METER SHOP ROOF REPLACEMENT PROJECT
(Dixie Highway and Wilson St.)
Project No.17-2142

Date/Time: January 16, 2017 / 11:00AM ET

Meeting Location: Southern Regional Wastewater Treatment Plant
1621 N. 14th Avenue, Hollywood, Florida, 33019
ECSD 1nd Floor Conference Room

1. **Introductions-;** *the following personnel and their respective roles were discussed;*
   a. *City Project Manager – Vernal Sibble, PE*
      Telephone: (954) 921-3930
      Email: vsibble@hollywoofl.org

   b. *ESCD Manager*
      Clece Aurelus, PE
      Telephone: (954-921-3930
      Email: caurelus@hollywoodfl.org

   c. *Consultants*
      Matt DeBonis
      Roofing & Waterproofing Consultant
      phone (561) 542-8220
      fax (561) 499-2909
      email mattdebonis@comcast.net

      Role of the following City personnel;

   d. *Project Manager– Vernal Sibble, PE*
      Email: vsibble@hollywoofl.org,
      Telephone: 954-921-3930

   e. *Robert Walker (for facility access)*
      Underground Utilities Manager
      City of Hollywood,Fl. Department of Public Utilities, Underground Utilities Division
      Phone: 954-921-3046
      Fax: 954-967-4574

2. **Dates –** *The following dates were discussed;*
   a. Advertisement – 01/08/2018
   b. Pre-bid Meeting – 01/11/2018
   c. Deadline for Questions – 01/18/2018 5:00 PM in writing to Mr. Vernal Sibble, PE
   d. Bid Receipt Deadline – 02/01/2018 10:00 AM ET
   e. Bid Opening – 11:00AM ET on 02/01/2018 at Dept. of Public Utilities 1621 N 14th Avenue, Bldg. A, ECSD Conference Room

City of Hollywood
Department of Public Utilities
Engineering and Construction Services Division

PRE-BID MINUTES
for
METER SHOP ROOF REPLACEMENT PROJECT
(Dixie Highway and Wilson St.)
Project No.17-2142

3. ***Notes Regarding Bid Responses*** – *The City stated that it was the Contractor's responsibility to check with the City's Procurement website for project –related items - addenda, etc.*

   a. Bid Documents can be downloaded from the City's website: http://www.hollywoodfl.org/Bids.aspx

   b. Deliver two (2) copies to: City Clerk's Office (City Hall) 2600 Hollywood Blvd., Room 221, Hollywood, FL 33020

   c. Cone of Silence (Section 30.15(F) of City Code of Ordinances)

   d. Contract Dates: The reiterated the dates the milestones shown below;

      i. Substantial Completion – **60** calendar days from issuance of NTP.
      ii. Project Closeout -**30** calendar days from issuance of NTP

4. **Scope of Project;** *The scope, as described below, of the project was reiterated by the City's roofing consultants, Matt Debonis;*
   a. Meter Shop roof replacement includes:

      1. Approximately 11,700 SF of roof area – bidding contractor is responsible for verifying quantities.

      2. Existing gravel surface roof system shall be power broomed, vacuumed, or wet vacuumed to ensure all loose gravel, dust and / or debris have been removed from existing roof surface.

      3. Install new pressure treated wood nailer to perimeter of roof areas to match insulation thickness in roof manufacturer's product approval.

      4. Install new expansion joint in compliance with manufacturer's recommendations.

      5. Install roof insulation over existing roof system set in roof manufacturer's approved adhesive in compliance with manufacturer's recommendations and product approval.

6. Install 60 mil TPO Fleece Back Membrane and associated flashings in compliance with manufacturer's recommendations.

7. Install sheet metal curb caps to concrete curbs.

8. Install TPO coated drip edge to perimeter in compliance with manufacturer's recommendations.

9. Any / all mechanical and / or electrical work necessary to complete the project shall be included in the price.

10. Any / all testing, engineering, and permit fees necessary to complete the project shall be included in the price.

11. Provide manufacturer's warranty as specified.

12. Bid shall include line item price to provide and install aluminum gutters and downspouts.

b. **Phasing Plan** -The City's re-stated its preference/requirement for the completion and acceptance of one of the roofs prior to the commencement of demolition of the other roof.

5. **Bidding Document Description** -.
   a. Bidding Contract Document Package -
   b. Bidding Package
   c. Construction Budget Estimate_$110,000
   d. Addenda
   e. *The City's roofing consultant, stated that the bidder are to include product submittal data/information with their respective bids. He also stated that, the bidder are to include in their respective bids, the costs to have a manufacturer's inspection three (3) times per week.*

6. **Key Concerns;;**

   a. **The location of existing rooftop opening vents.** *The City stated it was necessary for contractor to establish the location of all existing roof openings prior to the commencement of roof removal and installation.*
   a. **Encroachment of fumes from roofing material into working spaces.** *The City stated it was necessary for contractor to establish the location of all existing roof openings and to take step to prevent the encroachment of construction debris and fumes from the entering the work area beneath.*
   b. **The condition and disposition of existing rooftop utility conduits.** *The City stated that there are a number of conduits on the roof that need to be replaced after the installation of*

the new roof. The cost needed for the disposition of the conduits therefore needs to be included in the bid.

c. **Conflict between roofing operations and those of the City forces (occupants) – schedule and space.** *The city stated the facility was an active one and that the contractor needs manage his/her staging and installation operation as to not interfere with the City forces performing their normal work activities.*

a. **Staging – material and vehicles-** *The city stated the facility was an active one and that the contractor needs manage his/her staging and installation operation as to not interfere with the movement of material and vehicles associated with City forces performing their normal work activities.*

b. **Existing roof conditions –** *The City's consultants described the existing roof material and conditions - Gravel surface coal tar pitch mopped directly to concrete plank.*

c. **Gutter locations.** *City stated that the existing street-side gutters need to be replaced with ones located on the parking- lot-side of the building. City's consultant stated that the site visit provide more information about the conditions of the existing gutters and that an addendum would be issued to address the gutter locations (See attached revised Bid Proposal Form (Section 00301) and Basis of Payment (Section 010250).*

d. **Activities on or near the Fire Station -** *The City said that the north-side of east building fronts the Fire Station and it is the City's recommendation that the contractor does not perform any activities that would necessitate the use the Fire Station compound without prior authorization from the City.*

e. **Permitting.** *The City stated the contractor would need a permit/s from the Building Dept. and that the price of the permit/s would be reimbursed to the contractor as part of the contract with the City.*

7. **Questions / Comments**
   a. **A bidder inquired about tests being performed on the existing roof.** *The City's consultant response is a follows; bonded pull tests were performed to determine that the existing roof was adequately adhered to the substrate.*
   b. **During the site visit, it was decided by the City that an addendum would be issued to the account for the following items;** *i) Remove / replace turbine vent, APV vent and 2 – 2' X 2' exhaust vents east side of expansion joint and ii) Price for any / all mechanical and / or electrical work necessary to complete project.*
8. **Meeting adjourned**
9. **Attendance sheet attached.**

SECTION 01025

BASIS OF PAYMENT

PART 1 – GENERAL

1.01 GENERAL

A. Payments to the CONTRACTOR shall be made on the basis of the bid items listed on the Proposal Bid Form as full and complete payment for furnishing all materials, labor, tools and equipment, and for performing all operations necessary to complete the work included in the Contract Documents. Such compensation shall also include payments for any loss or damages arising directly or indirectly from the work, or from any discrepancies between the actual quantities of work and those shown in the Contract Documents, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the CITY.

B. The prices stated in the proposal include full compensation for overhead and profit, all costs and expenses for taxes, labor, equipment, materials, commissions, transportation charges and expenses, patent fees and royalties, labor for handling materials during inspection, furnishing and repairing small tools and ordinary equipment, mobilization, home office expenses and general supervision, bond, insurance, labor for handling materials during inspection, together with any and all other costs and expenses for performing and completing the work as shown on the plans and specified herein. In addition, the Contractor shall include the actual cost of social security taxes, unemployment insurance, worker's compensation, fringe benefits, inclusive of life and health insurance, union dues, pension, pension plans, vacations, and insurance and contractor's public liability and property damage insurance involved in the work based on the actual wages paid to such labor and all other general costs and profits, prorated to each item.

C. Unless otherwise specifically stated elsewhere herein, the Contractor shall include in the prices bid all materials, electrical supply, fuel, lubricants, temporary equipment, temporary wiring, temporary piping and fittings, pumps, gages, and all other items of whatever nature required to completely test, balance, disinfect if required, and put into fully operational condition all equipment and/or systems supplied by either the City or the Contractor and installed as a part of this Project. Further, any test materials supplied by the Contractor shall be completely satisfactory to the City. Any decision as to whether a particular material is suitable for test purposes shall be at the sole discretion of the Engineer whose decision shall be final. Any material considered not suitable shall be immediately replaced by the Contractor with suitable material and no extra compensation will be allowed.

D. The Basis of Payment for an item at the price shown in the Proposal shall be in accordance with its description of the item in this Section and as related to the work specified and as shown on the Drawings. Unit prices where used will be applied to the actual quantities furnished and installed in conformance with the Contract Documents.

E. The CONTRACTOR'S attention is called to the fact that the quotations for the various items of work are intended to obtain a complete and working installation under this Contract, and any items of labor, equipment or materials which may reasonably be assumed as necessary to accomplish this end shall be supplied whether or not they are specifically shown on the Plans or stated herein. Should the CONTRACTOR feel that the cost of any item of work has not been established by the Proposal or Basis of Payment, he shall include the cost for that work in the Bid Item most closely associates with that work so that his proposal for the project does reflect his total price for completing the work in its entirety.

1.02 MEASUREMENT

The quantities for payment under this Contract shall be determined by actual measurement of the completed items, in place, ready for service and accepted by the CITY, in accordance with the Schedule of Payment Values as described in Section 01300, unless otherwise specified. A representative of the CONTRACTOR shall witness all field measurements.

1.03 PAYMENT ITEMS

A. Descriptions, method of measurement and basis of payment for each pay item:

1. Bid Item No. 1 – Mobilization/Demobilization and Insurance: The lump sum price bid for this item shall be full compensation for all mobilization and demobilization activities, including but limited to bonds, insurance, project meetings, manufactures inspections, preparation of submittals, including schedules, as-builts, permit packages and other temporary facilities and offices, safety equipment and first aid supplies, audio-video documentation of existing conditions, any space required for staging, laydown, storage, parking and all other activities necessary to prepare , execute and complete the contractor work. This payment item amount shall not exceed 10% of the sum of bid items no. 2 through no. 10. Payment for this item shall be made in equal installments over two (2) months. The CITY reserves the right to award any, all, or none of the money associated with this allowance.

2. Bid Item No. 2 – Install New Roof – East Section from Expansion Joint: The lump sum price bid for this item shall be full compensation for all mobilization/demobilization activities, including but not limited to bonds, insurance, scheduling and other permit package, temporary facilities, photo documentation of the existing site, any space required for staging, laydown, survey, storage, parking, etc., and all other activities necessary to prepare to complete the contract work. This lump sum bid price shall

include all work associated with the removal and disposal of existing roof and the installation of the new roof on the East Section (Meter Shop) Building per attached roofing specifications: Payment for all labor, equipment and material for all work necessary and required for the installation of the roof, sealing around existing roof drains, protection all existing building surfaces/equipment, preparation and submittal of shop drawings, mobilization/demobilization, material disposal fees, all necessary accessories required for a complete installation, as-built, other restorations and other related work not defined in other Base Bid Package Items.

3. Bid Item No. 3 – Install New Roof – West Section from Expansion Joint: The lump sum price bid for this item shall be full compensation for all mobilization/demobilization activities, including but not limited to bonds, insurance, scheduling and other permit package, temporary facilities, photo documentation of the existing site, any space required for staging, laydown, survey, storage, parking, etc., and all other activities necessary to prepare to complete the contract work. This lump sum bid price shall include all work associated with the removal and disposal of the existing roof of the and the installation of the new roof on the West Section (Warehouse) Building per attached roofing specifications: Payment for all labor, equipment and material for all work necessary and required for the installation of the roof, sealing around existing roof drains, protection all existing building surfaces/equipment, preparation and submittal of shop drawings, mobilization/demobilization, material disposal fees, all necessary accessories required for a complete installation, as-built, other restorations and other related work not defined in other Base Bid Package Items.

4. Bid Item No. 4 – Install New Gutter - East Section from Expansion Joint: The lump sum price bid for this item shall be full compensation for all mobilization/demobilization activities, including but not limited to bonds, insurance, scheduling and other permit package, temporary facilities, photo documentation of the existing site, any space required for staging, laydown, survey, storage, parking, etc., and all other activities necessary to prepare to complete the contract work. This lump sum bid price shall include all work associated with the installation of the new gutters on the East Building and the removal of the existing gutters per attached roofing specifications: Payment for all labor, equipment and material for all work necessary and required for the installation of the gutters, submittal of shop drawings, mobilization/demobilization, material disposal fees, all necessary accessories required for a complete installation, as-built, other restorations and other related work not defined in other Base Bid Package Items.

5. Bid Item No. 5 – Install New Gutter-West Section from Expansion Joint: The lump sum price bid for this item shall be full compensation for all mobilization/demobilization activities, including but not limited to bonds, insurance, scheduling and other permit package, temporary facilities, photo documentation of the existing site, any space required for staging, laydown, survey, storage, parking, etc., and all other activities necessary to prepare to complete the contract work. This lump sum bid price shall include all work associated with the installation of the new gutters on the and the removal of the existing gutters on the West Building per attached roofing specifications: Payment for all labor, equipment and material for all work necessary and required for the installation of the gutters, submittal of shop drawings, mobilization/demobilization, material disposal fees, all necessary accessories required for a complete installation, as-built, other restorations and other related work not defined in other Base Bid Package Items.

6. Bid Item No. 6 – Replace/replace turbine vent, APV vent and two (2) 2'x2'-exhaust vents: The lump sum price bid for this item shall be full compensation for all mobilization/demobilization activities, including but not limited to bonds, insurance, scheduling and other permit package, temporary facilities, photo documentation of the existing site, any space required for staging, laydown, survey, storage, parking, etc., and all other activities necessary to prepare to complete the contract work. This lump sum bid price shall include all work associated with the removal and of the existing exhaust, turbine .and other types of vents and their re-installation and/or the installation of code-compliant replacement per attached roofing specifications: Payment for all labor, equipment and material for all work necessary and required for the installation of the vents, submittal of shop drawings, mobilization/demobilization, material disposal fees, all necessary accessories required for a complete installation, as-built, other restorations and other related work not defined in other Base Bid Package Items.

7. Bid Item No. 7 – Perform all Mechanical and Electrical Tasks: The lump sum price bid for this item shall be full compensation for all mobilization/demobilization activities, including but not limited to bonds, insurance, scheduling and other permit package, temporary facilities, photo documentation of the existing site, any space required for staging, laydown, survey, storage, parking, etc., and all other activities necessary to prepare to complete the contract work. This lump sum bid price shall include all work associated with the removal, disposal of the existing mechanical items, electrical conduits and appurtenances and the installation of code-compliant replacement items, conduits, appurtenances and supports with performance similar to existing items, per attached roofing specifications: Payment for all labor, equipment and material for all work necessary and required for the installation of the code-compliant vents, submittal of shop drawings, mobilization/demobilization, material disposal fees, all necessary accessories required for a complete installation, as-built, other restorations and other related work not defined in other Base Bid Package Items.

8. Bid Item No. 8 – Repair and/or Replace Existing Concrete Features: The lump sum price bid for this item shall be full compensation for all mobilization/demobilization activities, including but not limited to bonds, insurance, scheduling and other permit package, temporary facilities, photo documentation of the existing site, any space required for staging, laydown, survey, storage, parking, etc., and all other activities necessary to prepare to complete the contract work. This lump sum bid price shall include all work associated with the removal, disposal of the existing broken rooftop concrete features and the installation of their code-compliant replacements and the reconnection of previously attached items, per attached roofing specifications: Payment for all labor, equipment and material for all work necessary and required for the installation of the vents, submittal of shop drawings, mobilization/demobilization, material disposal fees, all necessary accessories required for a complete installation, as-built, other restorations and other related work not defined in other Base Bid Package Items.

9. Bid Item No. 9 - Owner's Contingency: Included in this contingency are works associated with undefined conditions or conflicts developing from undefined conditions. All work authorized for payment will be authorized in writing by the CITY. Amount to be paid per undefined conditions or conflict shall be negotiated or agreed to by both parties. The CITY reserves the right to award any, all, or none of the money associated with this allowance.

10. Bid Item No. 10 – Permits, Licenses and Fee Allowance: The allowance indicated for this item is to pay for all permits, licenses and other fees required of the CONTRACTOR from the various agencies having jurisdiction for construction of the project. The allowance shown on the Schedule of Bid Prices is an estimate of fees required. Payment will be based on the actual permit, license or fee paid directly to agency, documented by paid receipts, specifically excluding any labor, mark-up, overhead and profit, administration and other costs involved in obtaining permits or licenses or paying fees. Fees specifically excluded from this allowance include but are not limited to re-inspection fees and expired permit fees. The CITY reserves the right to award any, all, or none of the money associated with this allowance.

11. Bid Item No. 11 – Consideration for Indemnification: In recognition of the CONTRACTOR'S indemnification obligations, the CITY will pay to the CONTRACTOR the specific consideration of ten dollars ($10.00). Payment of said specific consideration shall be made at the time of the payment of the first progress estimate and the CONTRACTOR shall acknowledge payment of this consideration by letter to the CITY after receipt of the progress payment.

B. The price bid for each item shall be stated in both words and figures in the appropriate places in the Proposal Bid Form. All blank spaces for bid prices must be filled in with ink, or with a typewriter. The Bidder is further directed that any and all alterations, changes, corrections and modifications, made to the Proposal Bid Form prior to submission of the bids, must be initialed by the Bidder. Non-compliance by the Bidder of this directive may be grounds for rejection of his bid.

C. In the event that there is a discrepancy between the price written in words and the price written in numbers, the price written in words shall govern except where the number of units multiplied by the unit price shown in numbers equals the total price for that bid item. In such case, the unit price shown in numbers shall govern over the unit price shown in words.

D. Where an error is made in the calculation of the total bid price of an item, the unit price shall govern.

E. If the bidder makes an error in his addition of the total bid prices of the applicable items in the Quotation, the correct sum of its' applicable bid item totals shall be the Total Bid.

- END OF SECTION -