ADDENDUM TWO

FWCS 2026 Roof Replacement and Related Work at Various Locations
Project R1 & R2
1200 South Clinton Street
Fort Wayne, Indiana 46802

MARTINRILEY architects/engineers
221 West Baker Street
Fort Wayne, Indiana 46802
260-422-7994

Commission No.: F25079

Addendum Date: 14 November 2025

Conditions: The following clarifications, amendments, additions, deletions, revisions and modifications are a part of the contract documents and change the original documents only in the manner and to the extent stated.

Copies of the Addendum shall be bound with all contract sets of drawings and specifications.

CLARIFICATIONS:
None.

CHANGES TO THE SPECIFICATIONS:

Section *00 0110 Table of Contents*, **ADD** the Specification Section 044501 Masonry Maintenance and Restoration to the Table of Contents under **DIVISION 4 – MASONRY**.

Section *00 0125 FWCS School Year Calendars*, **ADD** '2026/2027 Calendar (Proposed)' to the calendar list. Insert PDF attachment (000125b 02 SchoolYearCalendar-2026-27.pdf) within Section 000125.

Section *04 4501 Masonry Maintenance and Restoration*, **ADD** the specification section to the Specification Volume.

Section *00 0132 EBE/MBE/WBE Information*, **REPLACE** the Emerging Business Directory with the attachment (000132a EBE Directory November 2025.pdf).

Section *00 4171 Bid Proposal Form R1*, **REMOVE** 'Unit Price No.2' and all associated content from page 2 of the Bid Proposal Form.

Section *00 4171 Bid Proposal Form R2*, **REMOVE** 'Unit Price No.2' and all associated content from page 2 of the Bid Proposal Form.

Section *01 7700 Closeout Procedures*, **MODIFY** a portion of paragraph P3-3.5-A to state: "…Contractor shall submit to the Architect **one (1) copy** of a comprehensive…"

Section *01 7700 Closeout Procedures*, **MODIFY** a portion of paragraph P3-3.5-C to state:
"…each Contractor shall submit **one (1)** corrected and completed **copy** of Operating and Maintenance …"

Section *07 7526 APP Modified Bituminous Sheet Roofing*, **MODIFY** paragraph P2-2.1-A-1 to state:
"1. Performance Roof Systems : www.performanceroofsystems.us"

Section *07 7526 APP Modified Bituminous Sheet Roofing*, **MODIFY** paragraph P2-2.3-A-1-a to state:
"a. Derbibase Ultra; Performance Roof Systems"

Section *07 7526 APP Modified Bituminous Sheet Roofing*, **MODIFY** paragraph P2-2.3-A-2-b to state:
"b. Derbicolor GP FR; Performance Roof Systems"

Section *07 7526 APP Modified Bituminous Sheet Roofing*, **MODIFY** paragraph P2-2.3-A-4-a-1 to state:
"1. Derbiflash"; Performance Roof Systems"

Section *07 7526 APP Modified Bituminous Sheet Roofing*, **MODIFY** paragraph P2-2.4-F-1-a to state:
"a. "Permastic"; Performance Roof Systems"

Section *07 7526 APP Modified Bituminous Sheet Roofing*, **MODIFY** paragraph P2-2.4-G-1-a to state:
"a. "Perflash"; Performance Roof Systems"

Section *07 7526 APP Modified Bituminous Sheet Roofing*, **MODIFY** paragraph P2-2.4-H-1-a to state:
"a. "Derbibond LR"; Performance Roof Systems"

Section *07 7526 APP Modified Bituminous Sheet Roofing*, **ADD** paragraph P2-2.6-D-1-c to state:
"c. OMG; 'Polymer Gyptec' Fastener and Plates"

Section *07 7527 SBS Modified Bituminous Sheet Roofing*, **ADD** paragraph P2-2.6-D-1-c to state:
"c. OMG; 'Polymer Gyptec' Fastener and Plates"

CHANGES TO DRAWINGS:
None.

ATTACHMENTS (PDF):
000110 Table of Contents.pdf
000125 FWCS School Year Calendar Header Sheet.pdf
000125b 02 SchoolYearCalendar-2026-27.pdf
000132a EBE Directory November 2025.pdf
004171 Bid Proposal Form R1.pdf
004171 Bid Proposal Form R2.pdf
017700 Closeout Procedures.pdf
044501 Masonry Maintenance and Restoration.pdf
077526 APP Modified Bitumen Roofing.pdf
077527 SBS Modified Bitumen Roofing.pdf

END OF ADDENDUM NUMBER TWO

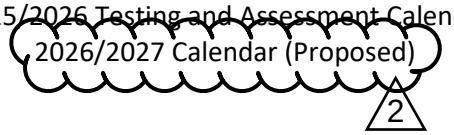
W:\2025 Projects\F25079 FWCS 2026 Work Building Envelope\Project Management\05-Bidding\R1-R2 ADDENDUM TWO

TABLE OF CONTENTS

SECTION 000125 – FWCS SCHOOL YEAR CALENDARS

Attached please find copies of the school calendars as adopted for the following school years:

2025/2026 Calendar (Revised 7/25/2025)
2025/2026 Testing and Assessment Calendar
2026/2027 Calendar (Proposed)



END OF SECTION

FORT WAYNE COMMUNITY SCHOOLS

2026-27 Calendar

First Semester (8/11/26 – 12/17/26)
1st Qtr {8/12 – 10/15} 2nd Qtr {10/20 – 12/18}

Second Semester (1/5 – 5/26/27)
3rd Qtr {1/5 – 3/11} 4th Qtr {3/15 – 5/26}

Q1 46/ Q2 40 = 86

Q3 47/ Q4 47 = 94

August 2026

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	◇10	◇11	12	**13**	**14**	15
16	**17**	**18**	**19**	**20**	**21**	22
23	**24**	**25**	**26**	**27**	**28**	29
30	**31**					

September 2026

S	M	T	W	T	F	S
		1	**2**	**3**	**4**	5
6	⊗7	**8**	**9**	**10**	**11**	12
13	**14**	**15**	**16**	**17**	**18**	19
20	21	**22**	**23**	**24**	**25**	26
27	**28**	**29**	**30**			

October 2026

S	M	T	W	T	F	S
				1	**2**	**3**
4	**5**	**6**	**7**	**8**	**9**	10
11	**12**	**13**	**14**	**15**	⊗16	17
18	⊗19	**20**	**21**	**22**	**23**	24
25	**26**	**27**	**28**	**29**	⊗30	31

November 2026

S	M	T	W	T	F	S
1	**2**	**3**	**4**	**5**	**6**	7
8	**9**	**10**	**11**	**12**	**13**	14
15	**16**	**17**	**18**	**19**	**20**	21
22	**23**	**24**	⊗25	⊗26	⊗27	28
29	**30**					

December 2026

S	M	T	W	T	F	S
		1	**2**	**3**	**4**	**5**
6	**7**	**8**	**9**	**10**	**11**	12
13	**14**	**15**	**16**	**17**	**18**	19
20	⊗21	⊗22	⊗23	⊗24	⊗25	26
27	⊗28	⊗29	⊗30	⊗31		

January 2027

S	M	T	W	T	F	S
					⊗1	2
3	4	**5**	**6**	**7**	**8**	9
10	**11**	**12**	**13**	**14**	**15**	16
17	⊗18	**19**	**20**	**21**	**22**	23
24	**25**	**26**	**27**	**28**	**29**	30
31						

February 2027

S	M	T	W	T	F	S
	1	**2**	**3**	**4**	**5**	6
7	8	**9**	**10**	**11**	**12**	13
14	**15**	**16**	**17**	**18**	**19**	20
21	**22**	**23**	**24**	**25**	**26**	27
28						

March 2027

S	M	T	W	T	F	S
	1	**2**	**3**	**4**	**5**	6
7	**8**	**9**	**10**	**11**	⊗12	13
14	**15**	**16**	**17**	**18**	**19**	20
21	**22**	**23**	**24**	**25**	⊗26	27
28	**29**	**30**	**31**			

April 2027

S	M	T	W	T	F	S
				1	**2**	3
4	⊗5	⊗6	⊗7	⊗8	⊗9	10
11	12	**13**	**14**	**15**	**16**	17
18	**19**	**20**	**21**	**22**	**23**	24
25	**26**	**27**	**28**	**29**	**30**	

May 2027

S	M	T	W	T	F	S
						1
2	**3**	**4**	**5**	**6**	**7**	8
9	**10**	**11**	**12**	**13**	**14**	15
16	**17**	**18**	**19**	**20**	**21**	22
23	**24**	**25**	**26**	27	28	29
30	⊗31					

June 2027

S	M	T	W	T	F	S
		1	2	3	⬠4	⬠5
6	7	8	9	10	11	12
13	14	15	16	17	⊗18	19
20	21	22	23	24	25	26
27	28	29	30			

July 2027

S	M	T	W	T	F	S
				1	2	3
4	⊗5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

◇PL Teacher △1st Day of PreK ⬡Transition ⬭P/T Conferences ⬠Graduations **Bold:** Students in Attendance
Circled X: No students in attendance **Double Line Box:** End of 1st & 3rd Quarters **Bold-Bordered Box:** Make-up day
Dotted Line: End of 2nd & 4th Quarters **Shaded:** District Closed **Green Shaded:** Teacher Day no students
Red Shaded: Weather Closing **Yellow Shaded:** Weather 2-Hr Delay **Bold-Bordered Box**: Make-up days

Transition Day (K,6,9)	TBD
Teacher Contract Day	August 10, 2026
Teacher PL/Work Day	August 11, 2026
First Student Day	August 12, 2026
First Day of PreK	TBD
Labor Day	September 7, 2026
Fall Break District Clsd 10/16	October 16 & 19, 2026
Release Day P/T Conf	October 30, 2026
Thanksgiving Break	November 25 - 27, 2026
Last Day of 1st Semester	December 18, 2026
Winter Vacation	Dec 21, '26 – Jan 1, '27

Teacher PL/Work Day	January 4, 2027
1st Student Day 2nd Semester	January 5, 2027
MLK Jr. Day	January 18, 2027
Q3 Break	March 12, 2027
Good Friday	March 26, 2027
Spring Vacation	April 5 - 9, 2027
Last day of 2nd Semester	May 26, 2027
Teacher Work/Make-up	May 27, 2027
Reserve Make Up Day	May 28, 2027
Graduations	June 4 & 5, 2027
Juneteenth (Observed)	June 18, 2027
Meeting Moratorium	June 28 – July 9, 2027

*PL = Professional Learning

City of Fort Wayne
Emerging Business Enterprise Directory
November 2025

Company Name	Contact Name	EBE	WBE	MBE	VBE/VOSM	DBE	Phone Number	Type of Business	Address 1	Address 2	City	State	Zip	Email
Agency Landscape + Planning, LLC	Gina Ford	EBE	WBE				(617) 249-3790	Landscape architecture; urban planning; design of public parks, plazas, street and waterfront environments; planning for neighborhoods, downtowns, cultural, and educational institutions; public outreach and community engagement	1430 Massachusetts Avenue	4th Floor	Cambridge	MA	02138	info@agencylp.com
Angela Denise Manning LLC-S	Angela D. Manning	EBE					(260) 210-2689	Builder/Developer	6801 Hessen Cassel Rd		Fort Wayne	IN	46816	amdllc57@gmail.com
Apex Consulting & Surveying, Inc	Mr. Nana Opoku			MBE			(260) 755-5993	Land Surveying, Civil Engineering, Construction Layout, Staking, and Inspection	1313 Broadway		Fort Wayne	IN	46802	info@apexsurveying.net
Apex Electric, LLC	Alissa Hart	EBE					(260) 739-5948	Electrical contracting	1304 Maumee Ave		Fort Wayne	IN	46803	manager@apexfwa.com
Bixler Interiors LLC	Deborah Bixler		WBE			DBE	(260) 446-5952	Construction Cleaning	PO Box 8273		Fort Wayne	IN	46898	bixlerinteriors@hotmail.com
Black Shadow	Rhonda Wigfield	EBE					(260) 908-8898	Asphalt Emulsion Sealcoat Manufacturer; eco friendly, non toxic and non flammable. The only asphalt sealer on the market with 0.000% carcinogens.	1001 DeKalb Ave.		Auburn	IN	46706	RRWBlackshadowsealer@pm.me
Blackbird Design Resources	Melissa Hall	EBE	WBE				(260) 704-3243	We are in the process of reorganizing our ownership to distribute shares to Andrea, Brooklyn, Leah and Kolette to have 51% Women owned business. Should be completed soon.	1690 Broadway	Bldg. 19, Suite 10	Fort Wayne	IN	46802	melissa@blackbirddesignresources.com
Blue Marble, Inc.	Ramadan Abdul-Azeez			MBE		DBE	(260) 969-5700	Expertise in data strategy, management, and governance	2320 South Calhoun St.		Fort Wayne	IN	46807	cfillmore@bluemarbleinc.com
Bravo Companies	Christopher Camilo Renteria	EBE					(317) 439-8681	Construction Material Supply, Millwork, Demountable Walls, Bulk Purchasing, Project Management Services, XBE Outreach and Support	7212 S Meridian St.		Indianapolis	IN	46217	christopher.renteria@icloud.com
Briljent, LLC	Kim Gast		WBE				(260) 434-0990	Profession Services, curriculum design, project management, technical writing, program evaluation, help desk support, research/web services, change management	6114 Constitution Drive	Suite 101	Fort Wayne	IN	46804	kgast@briljent.com
C & Z Enterprises, LLC	Jacob Shifflett	EBE					(260) 409-7812	General Contractor	PO Box 9010		Fort Wayne	IN	46899	abbystark126@gmail.com
Campos Excavating	Pablo Campos	EBE	WBE	MBE			(260) 600-4428	General Construction, concrete work, excavation, demolition, trucking, snow removal, land clearing	6409 Georgetown North Blvd		Fort Wayne	IN	46815	campos_excavating@outlook.com
CBK Enterprises, Inc.	Krista Lee		WBE				(260) 312-3397	Trucking	6224 Bittersweet Lakes Run		Fort Wayne	IN	46814	kbay10@aol.com
CE Hughes Milling, Inc.	Caroline Hughes		WBE				(812) 725-8665	Pavement milling	3113 Holmans Lane		Jeffersonville	IN	47130	caroline@hughesmilling.com
City Lights & Signals II, Inc.	Rusty Denham	EBE					(260) 489-5450	Electrical contractor, installation of street lights, traffic lights, and poles	7120 Lewis Road		Fort Wayne	IN	46818	rusty@citylightsandsignals2.com
Cleaning Ops LLC	Carlos Borden			MBE			(937) 900-4422	Janitorial services including biohazard cleanup, post-construction cleaning, floor care, carpet cleaning, specialized commercial cleaning	110 E Wayne St	12th Floor	Fort Wayne	IN	46802	Carlos.borden@cleaningopsllc.com
CM Fritch Enterprises	Carissa Fritch	EBE	WBE			DBE	419-737-6141	Dump Truck Service	111 N. Michigan St.	PO Box 578	Edon	OH	43518	cmfenterprise21@gmail.com
Contract Dewatering Services	Lisa Jackson		WBE				(616) 642-9415	construction dewatering	5820 W Riverside Drive	PO Box 1	Saranac	MI	48881	lisa@contract-dewatering.com
Corrosion Technologies, Inc.	Kay M. Squires		WBE				(317) 894-0627	Pipe, fittings, valves, tanks, seals, shields and fabrication	6268 W. Stoner Drive	Suite C	Greenfield	IN	46140	kmsquires@corrosiontech.com
Design Build Electrical Contracting, LLC	Phillip Rorick	EBE					(260) 747-3470	Electrical Contracting	2403 Fairoak Drive		Fort Wayne	IN	46809	designbuildec@frontier.com
D. L. Banks & Sons LLC	DeAndre Banks	EBE					(260) 467-3332	General contractor and construction management	9148 River Hollow Cv		Fort Wayne	IN	46835	mrdbanks90@gmail.com
DLZ Indiana, LLC	Vikram Rajadhyaksha			MBE			(260) 420-3114	Architectural, engineering, construction services, survey, material testing	825 S. Barr Street		Fort Wayne	IN	46802	mbe@dlz.com
Do Work LLC	Joshua Cryer	EBE					(484) 375-3913	Licensed electrical contractor specializing in the installation of (1) electric vehicle charging stations [level 2 and level 3]; (2) power outage backup power generators; (3) electric service panel replacements; and (4) service upgrades.	919 Hugh Street		Fort Wayne	IN	46803	info@doworksafely.com; info@joshuadcryer.com
Engaging Solutions, LLC	Tammy Butler Robinson		WBE				(765) 757-8362	Health Outreach, Health Equity, Contact Center Operations, Diversity Services, Planning & Community Development, Business Intelligence & Data Analytics.	3965 N. Meridian St.	Suite 1-B	Indianapolis	IN	46208	tammy@engagingsolutions.net; cwilliams-lambert@engagingsolutions.net
Exterior Service LLC	Nathan Wilson	EBE					(260) 413-2821	Concrete Paving, Excavation, Site Work, Demolition, Asphalt Paving, Snow Removal	PO Box 9134		Fort Wayne	IN	46899	nathan@ext-service.com
Fox Contractors	Dallas Day			MBE			(260) 747-7461	Excavation & underground utilities	5430 W. Ferguson Road		Fort Wayne	IN	46809	tclark@foxcontractors.com

City of Fort Wayne
Emerging Business Enterprise Directory
November 2025

G3B Trucking, LLC	Karra Ferguson	EBE					(260) 637-1818	Trucking and leasing	2316 Southyard Court		Fort Wayne	IN	46818	K.Ferguson@garcia-concrete.com
Granny Beas Cleaning LLC	Lee J Wilson JR	EBE					(260) 760-6381	Residential and commercial cleaning services	7326 Mill Run Rd	Apt B	Fort Wayne	IN	46819	lee_wilson.jr@grannybeascleaning.com
Hamilton Hunter Builders, Inc.	Holly Hunter		WBE				(260) 423-3577	General Contractor, Commercial Construction	915 Lafayette Street		Fort Wayne	IN	46802	office@hamiltonhunterbuilders.com
Hawkins Famous Fish & More	Shelton Hawkins Sr			MBE			(260) 699-1081	Mobile Food Trailer, Corporate and Commercial catering for companies, companies picnics, fundraisers, festivals, ect.	2017 Black Bear Dr		Fort Wayne	IN	46808	hawkinsfamousfish@gmail.com
Hoosier Rocks, LLC	Sherice Hormann	EBE					(260) 223-4125	Trucking, delivery service	6242 N. Piqua Road		Decatur	IN	46733	shericehormann@gmail.com
Innovative Mechanical Solutions	Tammy Finn		WBE				(317) 496-8516	HVAC	160 W. Carmel Dr.	Suite 291	Carmel	IN	46032	tfinn@imechanical.com
JL Oetting Services Inc	Jennifer Oetting	EBE					(260) 747-7504	Commercial Property Maintenance, Street sweeping, Snow Removal, Lawn Care, Landscaping	7920 S Anthony Blvd		Fort Wayne	IN	46816	oettingservices@gmail.com
Journey Trucking, Inc	Lisa Shively		WBE				(260) 755-5825	Trucking & Heavy Equipment Repair	4077 Kraft Parkway		Fort Wayne	IN	46808	lshively@journeytruckingrepair.com
Kapur & Associates, Inc	Daniel Kropidlowski			MBE			(414) 751-7200	Engineering, survey, site design, construction inspection, construction management	7711 N Port Washington Rd		Milwaukee	WI	53217	dkropidlowski@kapurinc.com
Krafft Water Solutions LLC	Kyla Krafft	EBE					(260) 573-6593	Excavating and monitoring IDEM regulated drinking water facilities.	5543 County Road 60		Saint Joe	IN	46785	kyla.krafft@krafftwatersolutions.com
KT Trucking, Inc.	Kelly Springer		WBE				(260) 414-2396	Trucking	3601 W 200 N		Huntington	IN	46750	Kelly.KTTrucking@mail.com
LCK Trucking, LLC	Nancy Knox	EBE	WBE				(765) 348-3080	Trucking	1171 E. 400 N.		Hartford City	IN	47348	nancy@lcktrucking.com
LumberOne Supply LLC	Helen Creecy		WBE				(216) 408-4764	Supplier of lumber and misc. building supplies	4520 West 130th Street		Cleveland	OH	44135	helen@lumberone.com
MCFW Cleaners LLC	Maria Cisneros	EBE					(260) 715-9923	Residential and commercial cleaning including offices and Airbnb rentals	1612 High Street		Fort Wayne	IN	46808	mcfwcleaners@outlook.com
On the Mark Land Surveying	Shannon Mark	EBE					(260) 338-2052	Land Surveying	2305 Central Yard Ct	Suite B	Fort Wayne	IN	46818	SMARK@OTMLANDSURVEYING.COM
Pier Foundations, LLC	Derek Franke	EBE					(260) 417-6950	Ground improvement construction business, specializing in aggregate piers and helical piers	429 E Dupont Road		Fort Wayne	IN	46825	info@pierfoundations.com

We Are Your Schools

BID PROPOSAL FORM – SUPPLEMENT TO FORM 96

PROJECT NAME: Project R-1: FWCS 2026 Roof Replacement and Related Work at Northcrest E.S. & Northwood M.S.
P/B# BD101850

OWNER: Board of School Trustees
FORT WAYNE COMMUNITY SCHOOLS

BID DATE: November 18, 2025

TIME: 2:00pm (local time)
LOCATION: Fort Wayne Community Schools
Facilities Department
1519 Catalpa Street
Fort Wayne, IN 46802

I have received, carefully reviewed, and understand the Contract Documents. I propose to furnish all materials and labor necessary to complete the Work according to the Contract Documents as prepared by:

Martin-Riley Architects / Engineers

BIDDER NAME: _____

ADDRESS: _____

P.O.BOX/ZIP: _____

CITY/STATE/ZIP: _____

TELEPHONE: _____ FAX: _____

E-MAIL: _____

BASE BID AMOUNT: $_____

(Written) _____

_____

UNIT PRICE: The following lists an enumeration of Unit Prices and are indicated on the Drawings and within these specifications.

UNIT PRICE No. 1: The bidder shall state the amount to replace existing damaged or deteriorated wood blocking with new wood blocking. The unit price for this item shall include the removal and disposal of damaged or deteriorated wood blocking. New wood blocking to be fastened per industry standards.

$_____/ Board Foot

2

ADDENDA RECEIVED: I have received Addenda as noted below and have included their provisions in my Proposal.

Addenda No. _____ Dated:_____

Addenda No. _____ Dated:_____

Addenda No._____Dated:_____

REQUIRED BID CHECKLIST	
	BID PROPOSAL FORM – SUPPLEMENT TO FORM 96
	STATE FORM 96 (Revised 2010) *as prescribed by Indiana State Board of Accounts*
	BID SECURITY - 5%
	LIST OF MAJOR SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
	E-VERIFY AFFIDAVIT – SIGNED AND EXECUTED
	CONTRACTOR'S STATEMENT OF EQUAL EMPLOYMENT OPPORTUNITY POLICY
	RECORD OF CONTACTED M/W/E BUSINESS ENTERPRISES
	IRAN CERTIFICATIONS
	SUBMITTED IN DUPLICATE
	SEALED ENVELOPE MARKED WITH NAME & BID ACCOUNT NUMBERS
	ROOFING CONTRACTORS INSTALLER'S CERTIFICATION
	ROOFING CONTRACTORS MANUFACTURER'S CERTIFICATION

LIST OF MAJOR SUBCONTRACTORS AND MANUFACTURERS: (to be submitted in its entirety in the space below)

Each bidder, with their bid, shall submit a complete list of major subcontractors, suppliers and manufacturers furnishing and/or installing materials and products specified on this project.

PRINCIPAL SUBCONTRACTORS & MATERIAL SUPPLIERS (Use Base Bid as criteria for determinations)

ROOFING _____

ELECTRICAL _____

MECHANICAL _____

OTHER _____

We Are Your Schools

ROOFING CONTRACTOR'S INSTALLER'S CERTIFICATION

The following is required from the Specified Roofing System Manufacturer for each Project ***AT SUBMISSION OF BID.***

Project Name: _____

_____

Building's Name

_____

_____

_____

Be advised that as of this date _____ *the following*

Roofing Contractor _____,
(contractor's name)

_____ *is fully certified*
(contractor's address)

to install and repair any and all roofing systems warranted and without warranty as offered by

_____.
(name of manufacturer)

_____
(Manufacturer's Authorized Warranty Representative's Signature)

_____
(Print or Type Name)

_____
(Title & Date)

We Are Your Schools

ROOFING CONTRACTOR'S MANUFACTURER'S CERTIFICATION

*The following is required from the Specified Roofing System Manufacturer for each Project **AT SUBMISSION OF BID.***

Project Name: _____

_____

Building's Name

_____

_____

_____

Be advised that as of this date _____,

_____ *certifies*
(name of manufacturer)

that is reviewed the plans and specifications as prepared by Martin Riley architects/engineers bearing commission number _____ *and dated* _____, *with regard to the new or replacement roofing system at*

_____

_____

_____

for _____.*(name of Owner)*

_____ *further certifies that*
(name of manufacturer)
the design meets the criteria for their guarantee or warranted system for the specified period.

_____
(Manufacturer's Authorized Warranty Representative's Signature)

_____
(Print or Type Name)

_____
(Title & Date)

We Are Your Schools

INDIANA LEGAL EMPLOYMENT DECLARATION

The State of Indiana has enacted a law (I.C. 22-5-1.7) requiring all state agencies and political subdivisions request verification from their contractors that their employees are legally eligible to work in the United States. This Declaration serves as notice that all Contractors doing business with the Fort Wayne Community Schools must, as a term of their contract:

1. Enroll in and verify the work eligibility status of newly hired employees of the contractor through the E-Verify programs (but is not required to do this if the E-Verify program no longer exists); and
2. Verify, by signature below, that the Contractor does not knowingly employ unauthorized aliens.

I, _____, a duly authorized agent of _____(name of Company), declare under penalties of perjury that _____(name of Company) does not employ unauthorized aliens to the best of its knowledge and belief.

_____
(Name of Company)

By:_____
(Authorized Representative of Company)

Subscribed and sworn to before me on this _____day of _____, 20___.

My Commission Expires: _____

County of Residence: _____

_____
Notary Public – Signature

_____
Notary Public – Printed Name

PLEASE SEE https://e-verify.uscis.gov/enroll/StartPage.aspx?JS=YES FOR INSTRUCTIONS AND ELECTRONIC REGISTRATION FOR E-VERIFY.
Submit with bid package

BID PROPOSAL FORM SIGNATURE SHEET:

USE THIS FORM IF BIDDER IS SOLE PROPRIETOR:

IN TESTIMONY WHEREOF, the Bidder has hereunto set his hand this
_____ day of _____, 20( ).

_____
(signature)

_____
(printed name)

USE THIS FORM IF BIDDER IS A PARTNERSHIP:

IN TESTIMONY WHEREOF, the Bidder, (a firm) has hereunto set its hand this
_____day of _____, 20( ).

FIRM NAME

_____

_____
(signature)

_____
(printed name)

USE THIS FORM IF BIDDER IS A CORPORATION:

IN TESTIMONY WHEREOF, the Bidder, (a corporation) has caused this proposal to be signed by its President and Secretary and affixed its corporate seal this
_____ day of _____, 20( ).

CORPORATION NAME

_____

_____
(signature of President)

_____
(printed name)

_____
(signature of Secretary)

_____
(printed name)

(SEAL)

****

CONTRACTOR'S STATEMENT OF
EQUAL EMPLOYMENT OPPORTUNITY POLICY

The undersigned contractor declares to Fort Wayne Community Schools that the following is its policy with respect to equal employment opportunity:

1. That in the hiring of employees for the performance of work under any contract or any subcontract with Fort Wayne Community Schools, neither it nor any of its subcontractors, nor any person acting on behalf of it or any of its subcontractors, shall, by reason of race, religion, color, sex, national origin or ancestry, discriminate against any citizen of the State of Indiana who is qualified and available to perform the work to which the employment relates.

2. That neither it nor any of its subcontractors, nor any person or behalf of it or any of its subcontractors, shall in any manner, discriminate against or intimidate any employee hired for the performance of work under this contract on account of race, religion, color, sex, national origin or ancestry.

3. That it understands and agrees that there may be deducted from the amount payable to it by Fort Wayne Community Schools under any contract with Fort Wayne Community School a penalty of five dollars ($5.00) for each person for each calendar day during which such person was discriminated against or intimidated.

4. That it understands and agrees that any contract with Fort Wayne Community Schools may be cancelled or terminated by Fort Wayne Community Schools and all money due or to become due thereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this policy.

****

_____
Signature

_____
Name Printed

****

RECORD OF CONTACTED MINORITY, WOMEN & EMERGING BUSINESS ENTERPRISES

We, the undersigned bidder, have contacted qualified MBE, WBE and EBE enterprises during this bidding period and have informed them of the opportunities to participate in the bidding process for the project. This record shall be submitted with the bid as a part of the bid documents. The following are the names of the enterprises contacted, the name of the person contacted and the date of the contact.

NAME OF ENTERPRISE CONTACTED	NAME OF PERSON CONTACTED	DATE CONTACTED

****

IRAN CERTIFICATION

The undersigned contractor hereby certifies in accordance with I.C. 5-22-16.5-1 et seq. to Fort Wayne Community Schools that the undersigned is not engaged in investment activities in Iran as defined in the above cited statute.

****

_____
Signature

_____
Name Printed

END OF SECTION

We Are Your Schools

BID PROPOSAL FORM – SUPPLEMENT TO FORM 96

PROJECT NAME: Project R-2: FWCS 2026 Roof Replacement and Related Work at North Side H.S. & Brentwood E.S.
P/B# BD101851

OWNER: Board of School Trustees
FORT WAYNE COMMUNITY SCHOOLS

BID DATE: November 20, 2025

TIME: 2:00pm (local time)
LOCATION: Fort Wayne Community Schools
Facilities Department
1519 Catalpa Street
Fort Wayne, IN 46802

I have received, carefully reviewed, and understand the Contract Documents. I propose to furnish all materials and labor necessary to complete the Work according to the Contract Documents as prepared by:

Martin-Riley Architects / Engineers

BIDDER NAME: _____

ADDRESS: _____

P.O.BOX/ZIP: _____

CITY/STATE/ZIP: _____

TELEPHONE: _____ FAX: _____

E-MAIL: _____

BASE BID AMOUNT: $_____

(Written) _____

_____

UNIT PRICE: The following lists an enumeration of Unit Prices and are indicated on the Drawings and within these specifications.

UNIT PRICE No. 1: The bidder shall state the amount to replace existing damaged or deteriorated wood blocking with new wood blocking. The unit price for this item shall include the removal and disposal of damaged or deteriorated wood blocking. New wood blocking to be fastened per industry standards.

$_____/ Board Foot

2

ADDENDA RECEIVED: I have received Addenda as noted below and have included their provisions in my Proposal.

Addenda No. _____ Dated:_____

Addenda No. _____ Dated:_____

Addenda No._____Dated:_____

REQUIRED BID CHECKLIST	
	BID PROPOSAL FORM – SUPPLEMENT TO FORM 96
	STATE FORM 96 (Revised 2010) *as prescribed by Indiana State Board of Accounts*
	BID SECURITY - 5%
	LIST OF MAJOR SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
	E-VERIFY AFFIDAVIT – SIGNED AND EXECUTED
	CONTRACTOR'S STATEMENT OF EQUAL EMPLOYMENT OPPORTUNITY POLICY
	RECORD OF CONTACTED M/W/E BUSINESS ENTERPRISES
	IRAN CERTIFICATIONS
	SUBMITTED IN DUPLICATE
	SEALED ENVELOPE MARKED WITH NAME & BID ACCOUNT NUMBERS
	ROOFING CONTRACTORS INSTALLER'S CERTIFICATION
	ROOFING CONTRACTORS MANUFACTURER'S CERTIFICATION

LIST OF MAJOR SUBCONTRACTORS AND MANUFACTURERS: (to be submitted in its entirety in the space below)

Each bidder, with their bid, shall submit a complete list of major subcontractors, suppliers and manufacturers furnishing and/or installing materials and products specified on this project.

PRINCIPAL SUBCONTRACTORS & MATERIAL SUPPLIERS (Use Base Bid as criteria for determinations)

ROOFING _____

ELECTRICAL _____

MECHANICAL _____

OTHER _____

ROOFING CONTRACTOR'S INSTALLER'S CERTIFICATION

*The following is required from the Specified Roofing System Manufacturer for each Project **AT SUBMISSION OF BID.***

Project Name: _____

_____

Building's Name

_____

_____

_____

Be advised that as of this date _____ *the following*

Roofing Contractor _____,
(contractor's name)

_____ *is fully certified*
(contractor's address)

to install and repair any and all roofing systems warranted and without warranty as

offered by

_____.
(name of manufacturer)

_____
(Manufacturer's Authorized Warranty Representative's Signature)

_____
(Print or Type Name)

_____
(Title & Date)

We Are Your Schools

ROOFING CONTRACTOR'S MANUFACTURER'S CERTIFICATION

*The following is required from the Specified Roofing System Manufacturer for each Project **AT SUBMISSION OF BID.***

Project Name: _____

_____

Building's Name

_____

_____

_____

Be advised that as of this date _____,

_____ *certifies*
(name of manufacturer)

that is reviewed the plans and specifications as prepared by Martin Riley architects/engineers bearing commission number _____ *and dated* _____, *with regard to the new or replacement roofing system at*

_____

_____

_____

for _____.*(name of Owner)*

_____ *further certifies that*
(name of manufacturer)
the design meets the criteria for their guarantee or warranted system for the specified period.

_____
(Manufacturer's Authorized Warranty Representative's Signature)

_____
(Print or Type Name)

_____
(Title & Date)

We Are Your Schools

INDIANA LEGAL EMPLOYMENT DECLARATION

The State of Indiana has enacted a law (I.C. 22-5-1.7) requiring all state agencies and political subdivisions request verification from their contractors that their employees are legally eligible to work in the United States. This Declaration serves as notice that all Contractors doing business with the Fort Wayne Community Schools must, as a term of their contract:

1. Enroll in and verify the work eligibility status of newly hired employees of the contractor through the E-Verify programs (but is not required to do this if the E-Verify program no longer exists); and
2. Verify, by signature below, that the Contractor does not knowingly employ unauthorized aliens.

I, _____, a duly authorized agent of _____(name of Company), declare under penalties of perjury that _____(name of Company) does not employ unauthorized aliens to the best of its knowledge and belief.

_____
(Name of Company)

By:_____
(Authorized Representative of Company)

Subscribed and sworn to before me on this _____day of _____, 20___.

My Commission Expires: _____

County of Residence: _____

_____
Notary Public – Signature

_____
Notary Public – Printed Name

PLEASE SEE https://e-verify.uscis.gov/enroll/StartPage.aspx?JS=YES FOR INSTRUCTIONS AND ELECTRONIC REGISTRATION FOR E-VERIFY.
Submit with bid package

BID PROPOSAL FORM SIGNATURE SHEET:

USE THIS FORM IF BIDDER IS SOLE PROPRIETOR:

IN TESTIMONY WHEREOF, the Bidder has hereunto set his hand this
_____ day of _____, 20( ).

_____
(signature)

_____
(printed name)

USE THIS FORM IF BIDDER IS A PARTNERSHIP:

IN TESTIMONY WHEREOF, the Bidder, (a firm) has hereunto set its hand this
_____day of _____, 20( ).

FIRM NAME

_____

_____
(signature)

_____
(printed name)

USE THIS FORM IF BIDDER IS A CORPORATION:

IN TESTIMONY WHEREOF, the Bidder, (a corporation) has caused this proposal to be signed by its President and Secretary and affixed its corporate seal this
_____ day of _____, 20( ).

CORPORATION NAME

_____

_____
(signature of President)

_____
(printed name)

_____
(signature of Secretary)

_____
(printed name)

(SEAL)

****

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EQUAL EMPLOYMENT OPPORTUNITY POLICY

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1. That in the hiring of employees for the performance of work under any contract or any subcontract with Fort Wayne Community Schools, neither it nor any of its subcontractors, nor any person acting on behalf of it or any of its subcontractors, shall, by reason of race, religion, color, sex, national origin or ancestry, discriminate against any citizen of the State of Indiana who is qualified and available to perform the work to which the employment relates.

2. That neither it nor any of its subcontractors, nor any person or behalf of it or any of its subcontractors, shall in any manner, discriminate against or intimidate any employee hired for the performance of work under this contract on account of race, religion, color, sex, national origin or ancestry.

3. That it understands and agrees that there may be deducted from the amount payable to it by Fort Wayne Community Schools under any contract with Fort Wayne Community School a penalty of five dollars ($5.00) for each person for each calendar day during which such person was discriminated against or intimidated.

4. That it understands and agrees that any contract with Fort Wayne Community Schools may be cancelled or terminated by Fort Wayne Community Schools and all money due or to become due thereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this policy.

****

_____
Signature

_____
Name Printed

****

RECORD OF CONTACTED MINORITY, WOMEN & EMERGING BUSINESS ENTERPRISES

We, the undersigned bidder, have contacted qualified MBE, WBE and EBE enterprises during this bidding period and have informed them of the opportunities to participate in the bidding process for the project. This record shall be submitted with the bid as a part of the bid documents. The following are the names of the enterprises contacted, the name of the person contacted and the date of the contact.

NAME OF ENTERPRISE CONTACTED	NAME OF PERSON CONTACTED	DATE CONTACTED

****

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The undersigned contractor hereby certifies in accordance with I.C. 5-22-16.5-1 et seq. to Fort Wayne Community Schools that the undersigned is not engaged in investment activities in Iran as defined in the above cited statute.

****

_____
Signature

_____
Name Printed

END OF SECTION

We Are Your Schools

SECTION 017700 – CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The Work of this Section shall be included as a part of the Contract Documents to the Contractors on this Project.

B. Refer to the General and Supplementary Conditions of the Contract, for Substantial Completion and final payment.

1.2 SUMMARY

A. Closeout is hereby defined to include general requirements near the end of Contract Time in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner, and similar actions evidencing completion of the work. Specific requirements for individual parts of the Work are specified in Sections of Division 2 through 49. Time of closeout is directly associated to Date of Substantial Completion.

B. Project Completion Date: The buildings will be ready for occupancy by the Owner by the date listed in section 00 01 33 “Liquidated Damages”.

1.3 PREREQUISITES TO SUBSTANTIAL COMPLETION

A. Prior to requesting Architect review for Certificate of Substantial Completion, (for either entire Work or portions thereof), complete the following and list known exceptions in request.

1. Advise Owner of pending insurance changeover requirements.
2. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, agreements, final certifications, and other required closeout documents.
3. Obtain and submit release enabling Owner's full and unrestricted use of the Work and access to services and utilities, including occupancy permits, operating certificates, and other similar required releases.
4. Deliver tools, spare parts, extra stocks of materials, and similar physical items as specified to the Owner. ALL deliveries must be to FWCS – Facilities 1519 Catalpa St. to the attention of the Project’s assigned FWCS Project Coordinator. Obtain receipts for deliveries. Do NOT leave extra materials at schools.
5. Make final changeover of locks and transmit keys to Owner and advise Owner's personnel of changeover in security provisions.
6. Complete start-up testing of systems and instruction of Owner's operating/maintenance personnel. Discontinue and remove from project site temporary facilities and service,

construction tools and facilities, mock-ups, and other construction elements.

7. Complete final cleaning up requirements as specified in Section 017400 and Section 017700.

1.4 PREREQUISITES TO FINAL PAYMENTS

A. Prior to requesting Architect final review for certification of final payment, complete the following:

1. Refer to the Supplementary Conditions.
2. Submit final payment request with required closeout attachments.
3. Submit copy of Architect's final punch list of itemized Work to be completed or corrected, stating that each and every item has been completed or otherwise resolved for acceptance.
4. Submit record drawings, maintenance manuals, and similar final record information as specified.
5. Submit certification of code compliance.
6. Submit certification stating that no materials containing asbestos were incorporated into the Work.
7. Plumbing Contractor shall submit certification stating that no flux or solder used for drinking water piping containing more than 0.2 percent lead, and that no pipe or fittings used for drinking water piping contained no more than 0.8 percent lead.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 PUNCH LIST

A. Prior to the Architect's preparation of a Project Punch List, the General Prime Contractor shall prepare his own punch list and submit to the Architect, for use by the Architect and Owner to facilitate completion of the Work.

B. The Contractor's inspection shall be as thorough as possible, in accordance with his aspiration to provide first-class workmanship and maintain good reputation and shall include Work under his Contract, including that of his subcontractors.

C. The Architect shall then observe the Work, providing that the Work on the Contractor's punch list has been completed. The Architect will then verify through inspection observation and prepare an Architect’s Project Punch List for use by the Contractor and their subcontractors to expedite proper completion of the Work.

D. The Architect will repeat the inspection observation when requested and assured by the Contractor that the Work from the Architect's Project Punch List has been substantially completed. Results of the completed inspection will form the basis of requirements for final acceptance.

1. If the Architect's Project Punch List has not been completed, the Architect will repeat inspection observation under the Reinspection Procedure listed below.

E. Reinspection Procedure: The Architect will reinspect the Work upon receipt of notice that the Work has been completed, except for items whose completion is delayed under circumstances that have been accepted by the Architect and Owner.

1. Upon completion of Reinspection, the Architect will prepare a certificate of final acceptance. If the Work is incomplete, the Architect will advise the Contractor of Work that is incomplete or obligations that have not been fulfilled, but are required.

2. The Architect's time, due to Reinspection, will be invoiced directly to the contractor. The billing rates applied will be the current billing rate at time of Reinspection. A copy of the billing rates can be attained through the offices of the Architect. Retainage will be held until proof of payment to Architect has been received.

3. If necessary, Reinspection will be repeated.

3.2 WARRANTY - CORRECTION OF THE WORK

A. Prior to the expiration of the one year warranty period, the Architect will check to see if additional Work by the Contractor(s) is needed to make good the warranties. An itemized list will be furnished to the Contractor for corrective or replacement work.

B. This Work shall be completed immediately by the Contractor(s) after receiving notification.

3.3 PROJECT RECORD DRAWINGS

A. Each Contractor shall keep current during the progress of the Work, and submit updated Project Record Drawings at the completion of the project, especially for the purpose on this project. Drawings shall incorporate changes made in the Work of the respective trades during the construction period. Such changes shall be indicated at the time they occur for accuracy.

B. Maintain at the job site one copy of Drawings, Project Manual, Addenda, approved shop drawings, change orders, field orders, other Contract modifications, and other approved documents submitted by the Contractor(s), in compliance with various Sections of the Project Manual.

C. Each of these Project Record Documents shall be clearly marked "Project Record Copy"; maintained in good condition; available for observation by the Architect; and shall not be used for construction purposes. Mark up the documents to indicate the following:

1. Significant changes and selections made during the construction process;

2. Significant detail not shown in the original Contract Documents including change orders;
3. The location of underground utilities and appurtenances dimensionally referenced to permanent surface improvements;
4. The location of internal utilities and appurtenances concealed in building structures, referenced to visible and accessible features of the structure;
5. When elements are placed exactly as shown on the Drawings, so indicate; otherwise, indicate changed location.

D. Keep Project Record Documents current. Do not permanently conceal Work until the required information has been recorded.

E. Prior to final payment on the Project, submit to the Architect the Project Record Drawings for changes recorded for the Work of Divisions 2 through 14.

F. Prior to final completion and payment, the Contractors for Mechanical Work and Electrical Work, Division 22, 23, 26 and 27, shall update their working drawings with changes made in his Work. Submit two (2) complete sets of prints of these changed working drawings to the Architect.

1. Each drawing shall be labeled "Project Record Drawing", dated and signed by the Contractor.

G. The General Contractor shall certify that the Project Record Drawings show complete and accurate as-built conditions, including without limitation, sizes, kinds of materials, vital piping and valves, conduit locations, and other similar and required items.

H. Contractor(s) shall include as part of the Project Record Drawings, a complete and current Project Manual, indicating changes made relating to the specifications. All requirements for the Project Record Drawings apply to the Project Record Project Manual.

I. The General Contractor shall maintain all approved Permit Drawings in a manner so as to make them accessible to governmental inspectors and other authorized agencies. All approved Drawings shall be wrapped, marked, and delivered to the Owner within 30 days of the Date of Final Completion of the Work.

3.4 CERTIFICATION OF CODE COMPLIANCE

A. Prior to final payment, the Contractor indicated below shall submit to the Architect (in duplicate), letters of certification of code compliance as follows:

1. The Contractor(s) for Division 22 and 23, shall submit a letter certifying that mechanical installations comply with UMC current applicable editions.
2. The Contractor(s) for Division 26 and 27, shall submit letters certifying that electrical wiring complies with NEC current applicable editions.
3. The Contractor for Division 26 and 27, shall submit letters certifying that alarm systems and smoke and heat detection systems comply with State of Indiana Codes and

Regulations, current applicable editions.

3.5 MAINTENANCE AND OPERATING MANUALS

A. Prior to Date of Substantial Completion, and a requirement prior to receiving final payment, each Contractor shall submit to the Architect one (1) copy of a comprehensive Maintenance and Operating Manuals labeled and bound separately for each school presenting complete directions and recommendations for the proper care and maintenance of visible surfaces as well as maintenance and operating instructions for equipment items that were provided. Operation and Maintenance Manuals shall include the following:

1. Schematic and piping and wiring diagrams.
2. Valve charts and schedules.
3. Lubrication charts and schedules.
4. Guides for troubleshooting.
5. Pertinent diagrams of equipment with main parts identification.
6. Manufacturer's data on all equipment.
7. Operating and maintenance instructions for all equipment.
8. Manufacturer's parts list.
9. Any testing procedures for operating tests.

B. Operating instructions shall include necessary printed directions for correct operations, adjustments, servicing, and maintenance of movable parts. Also included shall be suitable parts lists, approved shop drawings, and diagrams showing parts location and assembly.

C. Upon Architect's approval and prior to issuance of final payment(s), each Contractor shall submit one (1) corrected and completed copy of Operating and Maintenance Manuals to the Architect.

D. Contractor to provide a separate manual for each item for each site. For example: Three schools all receive the same model of a Sloan flush valve; provide each school a separate manual even though it is the same model. Use durable 3-ring binders or clear front report covers with three double tang fasteners (to hold three hole punched sheets) depending on the size of the manual. On the front cover clearly identify: year of installation, building/site name, and project name.

E. For each titled item or portion of the Work, manual must provide the names, addresses, and phone numbers of the following parties:

1. Contractor/installer.
2. Manufacturer.
3. Nearest dealer/supplier.

4. Nearest agency capable of supplying parts and service.

F. For each manual label on front cover or spine, indicate the following information:

1. Project name and address.
2. Owner's name.
3. Name and address of Architect.
4. Name and address of all contractors and their contacts.
5. Date of submission.

G. The Contractor(s) shall instruct the Owner's operating personnel in the proper use, care and emergency repair of all equipment installed before final payment. The Contractor(s) shall call particular attention to any safety measures that should be followed. The instruction shall be adequate to train the Owner's operating personnel in the proper use, care, and emergency repair of such equipment.

H. Refer to Section 013300 – Submittal Procedures for additional requirements.

I. Provide to Owner via upload to Procore, one copy of all Maintenance and Operating Manuals in .pdf format. Provide Folders for each school with its pertinent manuals.

3.6 CHARTS AND LOCATIONS OF CONCEALED WORK

A. The Contractor(s) for Mechanical Work (Division 23), shall prepare suitable charts identifying and locating each concealed control or other concealed item requiring repair, adjustment, and maintenance. Charts shall be mounted in suitable frames with glass covers secured to wall where directed.

B. Charts shall list each item, together with its function, item number and location.

C. Locations throughout the building shall be identified on the wall or ceiling by permanent, non-obstructive plates, labels, or other approved means secured in a permanent manner.

D. Chart details, identification methods, locations, and methods of attachment shall be specified or approved by the Architect at the jobsite upon full submission of proposed procedures and proper execution of same.

END OF SECTION

SECTION 04 45 01 - MASONRY MAINTENANCE AND RESTORATION

1.1 GENERAL:

A. SECTION INCLUDES
1. Brick Replacement
2. Concealed or Thru-wall Flashing

B. Related Documents: The general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications sections, apply to work of the section.

C. Submittals: Prior to the commencement of work Masonry Contractor shall submit, for approval by Architect, a written narrative of the Work to be accomplished and the methods and materials to execute same.

D. Quality Assurance:
1. Restoration Specialist: Work must be performed by a firm having not less than 5 years successful experience in comparable masonry restoration projects and employing personnel skilled in the restoration processes and operations indicated.
2. Field Constructed Mock-ups: Prior to start of general masonry repointing or resetting, prepare sample panels on building where directed by Architect. Obtain Architect's acceptance of visual qualities before proceeding with the Work. Retain acceptable panels in undistributed condition, suitably marked, during construction as a standard for judging completed work.
   a. Repointing Mock-up: Prepare 2 separate sample areas of approximately 3' high by 6' wide for each type of repointing required, one sample for demonstrating methods and quality of workmanship expected in removal of mortar from joints and the other for demonstrating quality of materials and workmanship expected in pointing mortar joints. Contractor to provide different color & texture samples as required for approval of matching mortar by Owner
   b. Sealant Joint Sample: Prepare 2 separate samples joints of approximately 5lf. One sample for demonstrating methods and quality of workmanship expected preparing a joint for new backer rod and sealant and the other for demonstrating quality of materials and workmanship expected in installation of new sealant. Contractor to provide different color & texture samples as required for approval of sealant by Owner
   c. Brick Sample: Contractor to provide samples of replacement brick for approval by Owner

1.2 PRODUCTS

A. Building Brick: Provide building brick where required for replacement work concealed from view, of same vertical dimension as replaced units. Grade SW.

B. Mortar:
   1. All mortar testing documentation and mix design to be submitted to Architect for approval of mortar mix.
   2. Mortar Mix: Where mortar testing is indicated in the Drawings - samples shall be taken from existing masonry areas to be rebuilt or repointed (Multiple tests to be conducted if areas identified have different mortar make-up). Samples shall be crushed, washed and reduced to their base elements to determine composition and type of aggregate used. Samples shall be washed to determine color, size and percentages of sand, oyster shell or silica aggregate. For the successful match of new mortar with old mortar quantitative analysis of the existing mortar components by weight and proportion shall be necessary.
   3. THE STRENGTH OF THE NEW MORTAR SHALL NOT EXCEED THAT OF THE EXISTING MATERIALS. Where mortar testing is indicated in the Drawings - Contractor is responsible for testing strength of new mortar mix (7 & 28-day compressive strength breaks) and existing mortar mix (In-Situ testing) of all areas where mortar is identified for re-pointing or replacement (Multiple tests to be conducted if areas identified have different mortar make-up).
   4. All mortar testing documentation and mix design to be submitted to Architect for approval of mortar mix.
   5. Mortar Materials for rebuilding or repointing:
      a. Portland Cement: ASTM C 150, Type I, non-staining, no air entrainment, white if needed for color match.
      b. Lime: Hydrated lime, ASTM C 270, Type N.
      c. Sand: ASTM C 144, or finer if needed for joint sizes less than 1/4”.
      d. Use pre-hydrated type N Portland-sand-lime mortar for repointing and rebuilding. Comply with ASTM C 270, proportion specifications, except limit materials to those specified herein and limit cement/lime ratio by volume.
      e. Type N: Not more than 1/2-part lime per part of Portland Cement.

C. Pre-hydrate mortar by first dry mixing all ingredients. Then mix again, adding only enough water to produce a damp, workable mix which will retain its form when pressed into a ball. Keep in this damp condition for 1 or 2 hours, then add sufficient water to bring to workable consistency somewhat drier than masonry mortar for new work.

D. Water: Should be clean, free of oils, acids alkalis and organic matter.

E. Brushes: Provide brushes for cleaning that have fiber bristles only.

F. Concealed or Thru-wall Flashing: For Flashing not exposed to the exterior, use the following:

   1. Stainless steel fabric flashing: Manufacturer’s standard laminated flashing consisting of a layer of polymeric fabric with a single sheet of 304 stainless steel bonded to one side.
      a. Hohmann and Barnard Mighty-Flash, Inc; www.h-b.com
         i. Membrane Thickness: 0.004 inch
         ii. Stainless Steel thickness: 0.004 inch
         iii. Width: As required for single piece

iv. Termination Bar: Stainless Steel (type 304)
v. Seam/Overlap Tape: X-Seal Splice Tape (4" Wide)
vi. Mastic: HB Sealant
vii. Self-Adhering Flexible Flashing: TeXtroflash Flashing
viii. Primer: Primer-SA Water-Based Primer for Self-Adhering Flashing
ix. Stainless Steel Drip Edge: Fabricated as shown on drawings

G. Weep Vents: Honeycomb design allows passage of moisture from cavity to the building exterior while restricting ingress of insects and other debris. Allows passage of moisture up to its full height of the product. Polypropylene tested in conformance with ASTM D2240, D790B, D638 and D1238B.

1. Size: 3/8" wide available in varying height and depth to match brick size.
2. Color: selected by owner from standard color selections

1.3 EXECUTION

A. Protect masonry restoration materials during storage and construction from wetting by rain, snow, or ground water and from staining or intermixture with earth or other type of materials.

B. Protect grout, mortar and other materials from deterioration by moisture and temperature. Store in a dry location or on waterproof containers. Keep containers tightly closed and away from open flames. Comply with manufacturer's recommendation for minimum and maximum temperature requirements for storage.

C. Do Not repoint mortar joints or repair masonry unless air temperatures are between 40^0 F and 80^0 F and will remain so for at least 48 hours after completion of work.

D. Prevent grout or mortar used in repointing and repair work from staining face of surrounding masonry and other surfaces. Remove immediately grout or mortar in contact with exposed masonry and other surfaces.

E. Mortar Measuring and Mixing: Measure cementitious and aggregate material in a dry condition by volume or equivalent weight. Do not measure by shovel, use known measurement. Mix materials in a clean mechanical batch mixer. Commence mortar measurement and mixing only after preconstruction mortar analysis is completed and accepted by the architect.

1. Thoroughly mix cementitious and aggregate materials together before adding any water. Then mix again, adding water only enough water to produce a damp unworkable mix which will retain its form when pressed into a ball. Maintain mortar in this state for 1 to 2 hours. Add remaining water in small portions until mortar of desired consistency is reached. Use mortar with 30 minutes of final mixing, do not re-temper or use partially hardened material.

F. Thru–Wall Flashing Application: All masonry surfaces receiving through-wall flashings shall be free from loose materials, and reasonably smooth. There are to be no slopes present that will form pockets or prevent free drainage of water to the exterior surfaces of the wall. All work is to be executed in conformance with manufacturers' recommendations.

1. Turn flashing perpendicular to wall to create end dams at all thru-wall terminations
2. Flashing material seams are to be made by lapping flashing material a minimum of 6" and coating the contact surfaces with manufacturer's recommended approved mastic.

G. Brick Removal: Carefully remove by hand at locations indicated any brick which is damaged, spalled or deteriorated as indicated on drawings. Cut out units from joint to joint and in a manner to permit replacement with full size units.

1. Clean edges of existing brick remaining by removing mortar, dust, and loose debris in preparation for rebuilding. Cleaning may be accomplished by either air blast or low-pressure water.
2. Take extra care when removing cracked brick not to damage/crack adjacent brick to remain. Cut out old brick and mortar near adjacent brick to remain by hand with chisel and mallet to keep adjacent brick intact. Contractor is responsible for replacing damaged/cracked brick due to masonry operations

H. Brick Rebuilding: Install new or salvaged brick to replace remove brick. Fit replacement units into bonding and coursing pattern of existing brick/ CMU. If cutting is required use motor driven saw designed to cut masonry with clean, sharp unchipped edges.

1. Lay replacement brick with completely filled bed, head and collar joints. Butter edges with sufficient mortar to fill head joints and shove into place. Wet clay brick which have ASTM C 67 initial rates of absorption of more than 30 grams per 30 sq. in. per minute. Use wetting methods which ensure that units are nearly saturated but surface dry when laid. Maintain joint width for replacement units to match existing.
2. Tool exposed mortar joints in repair areas to match joints of surrounding existing brickwork.
3. Repoint new mortar joints in repair are to comply with requirements for repointing existing masonry, except rake out joints before mortar sets.
4. Hold tooled joint back from unit masonry face where unit edges have eroded or weathered to "round" edges or corners. Match existing or modify new joint as required to produce a textural match with existing masonry.

I. Repointing Existing Masonry: Existing joints to be repointed must be at least 3/4" deep and must also be prepared so as to provide bond with new mortar. Remove sufficient existing mortar to expose sound, solid material with clean, sharp surface. Remove friable, eroded, loose or unsound existing mortar by cutting out with proper hand tools.

1. Do not spall edges of masonry units or widen joints. Replace any masonry units which become damaged.
2. Cut out old mortar by hand with chisel and mallet, unless otherwise approved.

    a. Power operated rotary hand saws and grinders will be permitted but only on specific written approval of Architect based on submission by Contractor of a satisfactory quality control program and demonstrated ability of operators to use tools without damage to masonry. Quality control program shall include provisions for supervising performance and preventing damage due to worker fatigue.

3. Remove all deteriorated mortar joints, before repointing. Do not commence with repointing any mortar joints until the removal and cleaning of existing joints has been inspected by the Architect.

J. Remove and rinse masonry joint surface of all loose material with water from hose stream, or other approved method. If rinsing is by water, time application so that, at time of pointing, excess water has evaporated or run off, and joint surfaces are damp but free of standing water.

K. Repoint mortar to areas where existing mortar was removed. Apply in layers not greater than 1/4 inch until a uniform depth is formed. Compact each layer thoroughly and allow to become thumbprint hard before applying next layer.

1. After joints have been filled to a uniform depth, place remaining pointing mortar in 3 layers with each of the first and second layers filling approximately 2/5 of joint depth and the third layer the remaining 1/5. Fully compact each layer and allow to become thumbprint hard before applying next layer. Take care not to spread mortar over edges onto exposed masonry surfaces, or to feather edge of mortar.
2. When mortar is thumbprint hard, tool joints to match original appearance of joints, unless otherwise indicated. Remove excess mortar from edge of joint by brushing.
3. Cure mortar by maintaining in a damp condition for not less than 72 hours.

L. Grind/chisel stone, brick, block and other joints noted 3/4” minimum for sealant. See Division 7.

M. Clean all mortar smears, droppings, etc. from wall with drybrush as work proceeds.

N. Dry clean wall with wood paddles. Use chisel or wire brush, if required.

O. Clean finished work with solution of 1/2 cup trisodium phosphate/gallon, or commercial alkaline masonry cleaner, scrubbing down with fiber brushes. Following BIA recommendations.

P. Flush with clean pressurized water.

Q. Muriatic Cleaning will not be permitted.

R. Remove all droppings, smears, etc. from brick, weep holes, and adjacent materials. Remove all bags, tools, containers from site.

END OF SECTION 04 45 01

SECTION 07 75 26 - APP MODIFIED BITUMINOUS SHEET ROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Extent of Work: APP modified bituminous roofing (MBR) is shown on the drawings and is hereby defined to include multiple layers of APP modified bitumen sheet membrane, rigid insulation boards and includes associated flashings and strippings.

1.2 RELATED REQUIREMENTS

A. Section 06 6105 - Miscellaneous Carpentry: Wood nailers, curbs, cant strips, and items installed on roof.

B. Section 07 0001 - General Roofing Consideration.

C. Section 07 7620 - Sheet Metal Flashing and Trim: Counter flashings, reglets, gutters, and fascias.

D. Section 07 7720 - Roof Accessories

E. Section 07 7900 - Joint Protection

1.3 REFERENCE STANDARDS

A. ASTM D41 - Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing; 2011. (Reapproved 2016)

B. ASTM C79/C79M - Standard Specification for Treated Core and Nontreated Core Gypsum Sheathing Board; 2001.

C. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2008.

D. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2021.

E. ASTM D312 - Standard Specification for Asphalt Used in Roofing; 2016a.

F. ASTM D4601/D4601M - Standard Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing; 2004 (Reapproved 2020).

G. ASTM D4897 - Standard Specification for Asphalt-Coated Glass-Fiber Venting Base Sheet Used in Roofing; 2001 (Reapproved 2009).

H. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2010.

I. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings; 2007a.

J. FM P7825 - Approval Guide; Factory Mutual Research Corporation; current edition.

K. FM DS 1-28 - Wind Design; Factory Mutual Research Corporation; current edition.

L. UL (RMSD) - Roofing Materials and Systems Directory; Underwriters Laboratories Inc.; current edition.

M. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

N. ANSI/SPRI/FM 4435/ES-1 2011 - Wind Design Standard for Edge Systems Used with Low Slope Roofing

O. ASCE 7-10 – Minimum Design Loads for Building and Other Structures

1.4 PRE-INSTALLATION MEETING

A. See Section 07 71 01 General Roofing Considerations

B. Convene one week before starting work of this section

C. Review preparation and installation procedures and coordinating and scheduling required with related work.

1.5 SUBMITTALS

A. Product Data Submittals: Include manufacturer’s technical product data for each type of roofing product required and additional data as specified in Section 07 71 01.

B. Shop Drawings: Tapered insulation plans, details, and attachment to other work.

C. Manufacturer's Installation Instructions: Indicate special procedures.

D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

E. Certificate of Analysis: Manufacturer shall submit a Certificate of Analysis from the manufacturing facility laboratory, listing the physical properties for each production lot shipped to project site.

F. Installer's qualification: Contractor shall be experienced to perform work in this section and who has specialized in installing roofing similar to that required for this Project; who is approved, authorized, or licensed by the roofing system manufacturer to install manufacturer's product; and who is eligible to receive the standard roofing manufacturer's warranty.

G. Manufacturer qualification: Manufacturer shall submit on manufacturer letterhead from the manufacturing facility laboratory, stating that the product shipped to the project site meets or exceeds the same physical properties as published on the manufacturer's product data sheets and as specified herein. Manufacturer also shall state that they understand the penalties as outlined below in the Quality Assurance of this specification section, if that product does not meet the manufacturer's published physical properties.

H. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.6 QUALITY ASSURANCE

A. Obtain primary products, including each type of membrane sheet, from a single manufacturer. Provide secondary products as recommended by manufacturer of primary products for use with roofing system specified.

B. Sampling and Testing: Random roll good samples may be taken from each different production lot that is shipped to job site for independent third party testing to insure that product shipped to the job site meets or exceeds the manufacturer's published physical properties and as specified herein. MRae will provide the contractor with a six foot sample from each roll sampled for testing. MRae will tag and store the remaining portion at their facility. Cost associated with material testing will be paid by the owner unless the material fails to meet the manufacturer's published physical properties and as specified herein. Any Modified Bituminous Roofing material that does not meet the published physical properties and as specified herein will be replaced with new material that meets the published physical properties at no cost to the owner including labor cost to remove material that may have already been installed.

C. Installer Qualifications: Installer should have a minimum of five (5) years experience in installing modified bitumen roofing, who is approved, authorized, or licensed by the specified roof system manufacturer to install manufacturer's roof system and who is eligible to receive specified roofing manufacturer's basic roofing guarantee.

D. Perform work in accordance with NRCA Roofing and Waterproofing Manual and manufacturer's instructions.

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.

B. Coordinate the storage of insulation, base sheets, and modified bitumen roofing sheets so that materials are not exposed to precipitation or night air. All materials shall be completely protected while in storage and during application to keep dry at all times.

1. When stored outdoors, roofing materials shall be stacked on pallets or dunnage at least 4 inches above ground level or existing roof membrane level. Roofing materials shall be covered with tarpaulins or other approved covering. Plastic shrink wrap used for transit of palleted materials will not be allowed as an approved covering.

C. Do not leave unused roll goods and other sheet materials or insulation on the roof overnight or when roofing work is not in progress unless protected from weather or other moisture sources.

D. Handle and store materials or equipment in a manner to avoid significant or permanent deflection of deck.

E. Store products in weather protected environment, clear of ground and moisture; ballast materials may be stored outdoors.

F. Protect foam insulation from direct exposure to sunlight.

1.8 FIELD CONDITIONS:

A. Do not apply roofing membrane when environmental conditions are outside the ranges recommended by manufacturer.

B. Do not apply roofing membrane during unsuitable weather.

C. Do not apply roofing membrane when ambient temperature is below 40 degrees F.

D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

1.9 WARRANTY:

A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.

B. Roofing Contractor's Warranty: Provide roofing contractor's "Roofing Warranty" typical in form and content indicated by Midwest Roofing Contractors Association, Inc. approved guarantee form No. 2007B, 2- years.

C. Manufacturer's Warranty: Provide modified bitumen roofing manufacturer's standard unlimited product and contractor workmanship liability "Roofing Manufacturer's Basic Roofing Guarantee" from date of Substantial Completion against leaks caused by defective materials or workmanship and against normal wear and tear for the following period of time with respect to the following system designations

1. 2 ply ICAG-MBR 20 Years "NDL"

PART 2 PRODUCTS

2.1 MANUFACTURERS:

A. Manufacturer basis of design: Provide APP modified bituminous sheet roofing system by one of the following:

1. Performance Roof Systems : www.performanceroofsystems.us

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2.2 ROOFING – CONVENTIONAL APPLICATION

A. Modified Bituminous Roofing System: System designation explained in Section 07 0001. Provide the following systems:

1. 2 ply ICAG-MBR (insulated substrate, 1 ply APP modified base ply set in cold adhesive with laps heat welded and 1 ply APP modified bitumen sheet membrane set in cold adhesive with laps heat welded, granule coated MBR): (NOTE: Laps of base ply (both membrane and flashing) of APP sheets are to be hot air welded. Torches can be used on laps of cap ply (both membrane and flashing).

B. Roofing Assembly Requirements:

1. Underwriters Laboratories, Inc. (UL)

a. Exterior Fire-Test Exposure: Class A or B; UL 790 for application and roof slopes indicated.
b. Internal Fire Spread Below Deck: UL 1256 for application and roof slopes indicated

2. Factory Mutual Research Corp. (FMRC)

a. Resistance to Fire, Wind, Hail, Leakage, Corrision, Ultraviolet Weathering and Foot Traffic when tested in accordance with Approval Standard 4470: Class 1 for application and roof slopes indicated.
b. Resistance to Wind: Minimum 90 pounds per square foot uplift pressure resistance when tested in accordance with Approval Standard 4470.

3. ASTM International

a. Standard Test Methods for Sampling and Testing Modified Bituminous Sheet Material: ASTM D 5147

2.3 MEMBRANE AND SHEET MATERIALS

A. Products: Provide the following:

1. Base Ply Membrane:

a. Derbibase Ultra Performance Roof Systems.

2. Cap Ply Membrane:

b. Derbicolor GP FR Performance Roof Systems.

3. Modified Bituminous Flashing Material: 2-ply flashing same as membrane or as follows

4. Liquid Applied Flashings: Two coats manufacturer's liquid flashing resin encapsulating a layer of polyester fleece.

a. Products: subject to compliance with requirements, provide one of the following

1) "Derbiflash" Performance Roof Systems.

2.4 BITUMINOUS MATERIALS

A. Night Cutoffs: APP – Modified Bituminous Sheet to match base ply membrane sheet.

B. Base Sheet (Vented): ASTM D 4601, Type II, perforated, asphalt-impregnated and coated, glass-fiber sheet.

C. Separation/Slip Sheet (Wood deck): Standard red rosin paper, 70-pound basis with thin film of polyurethane coating.

D. Primer: ASTM D41, asphalt type.

E. Roof Cement: ASTM D4586, Type II.

F. Cold Adhesive (for membrane application): Provide special high-flash, quick drying solvent adhesive, complying with ASTM D 4479, Type II.

1. Products: subject to compliance with requirements, provide one of the following:

a. "Permastic"; Performance Roof Systems. 2

G. Cold Adhesive (for flashing application): Provide special high-flash, quick drying solvent adhesive, complying with ASTM D 4479, Type II.

1. Products: subject to compliance with requirements, provide one of the following:

a. "Perflash"; Performance Roof Systems. 2

H. Cold Adhesive (for insulation application): Single or double component, non-flammable, spray dispensed, moisture curing low-rise polyurethane foam adhesive.

1. Products: subject to compliance with requirements, provide one of the following:

a. "Derbibond LR"; Performance Roof Systems. 2
b. “Insta-stik”; Insta-foam Products, Inc.

2.5 INSULATION

A. Rigid insulation boards and air/vapor retarder filler foams shall not be produced with, or contain, any of the United States Environmental Protection Agency (USEPA) regulated chlorofluorocarbon (CFC) compounds listed in the Montreal Protocol of the United Nations Environmental Program.

B. Polyisocyanurate Board Insulation: Rigid closed cellular polyisocyanurate foam core board, complying with ASTM C 1289, Type II, Class 1, cellulose felt or glass fiber mat both faces; Grade 1, for Class A Construction with the following characteristics:

1. Compressive Strength: 20 psi
2. Board Size: 48x48inch (tapered); 48x96 (flat stock)
3. Board Thickness: Varies (see drawings)
4. Thermal Resistance (LTTR): R-value of 5.41 per inch
5. Board Edges: Square

C. Cover Board Insulation (Overlay for polyisocyanurate foam board roof insulation): Provide manufacturer’s standard water-resistant treated gypsum core with the following characteristics.

1. Board Size: 48x48inch
2. Board Thickness: ¼”

3. Board Edges: Square
4. Manufactures:
   a. G-P Gypsum Company; “DENS-DECK Prime”
   b. Gold Bond Building Products; “DEXcell FA”

2.6 ACCESSORIES

A. Air/Vapor Retarder Filler Foam: Single-component, non-flammable, spray dispensed, adhesive polyurethane foam used as filler around obstructions and penetrations to mitigate both air and vapor infiltration from both interior and exterior origin.
   1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to the following:

      a. Hilti Construction Chemicals, Inc.; “Hilt CF 124”.

B. Self Adhering Waterproof Underlayment: Laminated sheet of polymer rubberized asphalt and elastomeric 5-mil polymer film with release paper to self adhere to substrate.
   1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include the following:

      a. Ice and Water Shield; W.R. Grace Corp.
      b. Winterguard; CertainTeed Corporation.

C. Fasteners for Steel and Wood Deck: Galvanized steel, fluoropolymer-coated steel, or nonferrous metal screws recommended by manufacturer for material to be fastened and substrate and complying with requirements of governing authorities and listing agencies
   1. Length as required for thickness of insulation material and penetration of deck substrate.

      a. Metal Deck: ¾-inch minimum penetration of top flute in deck.
      b. Structural Concrete: 1-inch minimum embedment.
      c. Wood Deck: 1-inch minimum embedment or ½” minimum penetration underside of deck.

D. Fasteners for Gypsum and Cementitious Wood Fiber Deck: Galvanized steel, galvalume-coated steel for material to be fastened to substrate and complying with requirements of governing authorities and listing agencies
   1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include the following:

      a. Trufast; “Versa-Fast” Fastener and Plates
      b. OMG; “Lite-Deck” Fastener and Plates
      c. OMG; “Polymer Gyptec” Fastener and Plates

2. Length as required for thickness of insulation material and penetration of deck substrate.

   a. Gyp or CWF Deck: 2-inch minimum deck penetration.

3. Contractor to perform on site pull out test with manufacturer to determine proper fastener type and layout unless instructed otherwise by Architect.

E. Base Sheet Fasteners: "Olylok" Locking Impact Nail, Galvanized (G-90) coated tube, Galvalume (AZ-55) coated disk 2.7" diameter, Steel wire locking staple.
   1. Contractor to perform on site pull out test with manufacturer to determine proper fastener type and layout.

E. Roofing Systems Edge/ Penetration Materials: Provide materials as follows:
   1. Roofing Cement: Asphaltic cement, asbestos-free; ASTM D 4586-86.

   2. Glass Fiber Fabric: Type I, minimum 1.5 pound sheet of woven glass fiber, impregnated with asphalt; complying with Federal Spec. HH-C-466-B, ASTM D 1668-86.

   3. Preformed Edge Strips: Rigid insulation units matching roof insulation, or asphalt-impregnated organic fiber insulation units, molded to form 3 1/2-inch by 3 1/2-inch by 45 degree cant strips and 1 5/8-inch by 18 inch tapered edge strips to receive roofing ply sheet courses and lift edges above main roofing surface.

F. Glass Fiber Fabric: Type I, minimum 1.5 pound sheet of woven glass fiber, impregnated with asphalt; complying with ASTM D 1668.

G. Sheet Metal Accessory Materials: Provide materials as specified in Section 07 76 20.

I. Sealants: As recommended by membrane manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that surfaces and site conditions are ready to receive work.

B. Verify deck is supported and secure.

C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.

D. Verify deck surfaces are dry and free of moisture and dew.

E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.

F. Coordinate the storage and protection of insulation, base sheets, modified bitumen roofing sheets so that materials are not exposed to precipitation or night air. All materials shall be completely protected while in storage and during application to keep it dry at all times.
   1. When stored outdoors, roofing materials shall be stacked on pallets or dunnage at least 4-inches above ground level or existing roof membrane level. Roofing materials shall be covered with tarpaulins or other approved covering. **Plastic shrink wrap used for transit of palleted materials will not be allowed as an approved covering.**

G. Examine substrate surface to receive modified bituminous roofing system and associated work and conditions under which roofing will be installed. Do not proceed with roofing work until unsatisfactory conditions have been corrected in a manner acceptable to the Manufacturer and Architect.
   1. Verify substrate moisture - do not install roofing on wet insulation or other moist substrates. Do not install insulation to deck that is wet or has standing water in the flutes. Remove moisture and verify that the deck and/or insulation is dry. Do not apply hot bitumen under any condition that would cause foaming (due to moisture).

H. Substrate Joint Penetrations: Prevent adhesive from penetrating substrate joints, entering building and drains, or damaging roofing system components or adjacent building construction.

3.2 BASE SHEET APPLICATION

A. Installation of Base Sheets: On lightweight concrete, gypsum, and CWF decks install ply lapped courses, mechanically fastened base sheet to substrate as accepted by FMRC system meeting requirements for wind uplift resistance. Shingle base sheet in proper direction to shed water.

3.3 INSULATION INSTALLATION – CONVENTIONAL APPLICATION

A. Attachment of Insulation: Comply with insulation manufacturer's instructions and recommendations for handling, installing, and bonding or anchorage of insulation to substrate.
   1. Provide standard red rosin paper between existing wood decking and new mechanically attached insulation board.

F. Secure insulation to metal and wood using mechanical fasteners specifically designed and sized for attachment of specified board type insulation to deck type shown. Fasten insulation over entire area of roofing at spacing as required by FM for Windstorm Resistance Classification 1-90 or higher as wind design pressures indicate on drawings. Run long joints for insulation in continuous straight lines, perpendicular to roof slope with end joints staggered between rows.

a. Size mechanical fasteners with insulation so they do not extend beyond the bottom flute in metal deck.
b. Mechanically fasten insulation to deck in accordance with insulation manufacturer's instructions and Factory Mutual requirements.

G. Remove all existing felts and/or vapor retarders from concrete decks and clean substrate free of dust and debris. Set insulation in cold adhesive. Run long joints of insulation in continuous straight line, perpendicular to roof slope, with end joints staggered between rows.

H. Two-layer Installation: Where indicated, install required thickness in two layers with joints of second layer staggered from joints of first layer a minimum of 12 inches each direction. Install insulation layers in cold adhesive at manufacturers required pattern, bead width and spacing. Provide temporary ballast on each individual insulation board for sufficient time that adhesive is cured and insulation board is fully adhered to substrate. Run long joints of insulation in continuous straight line, perpendicular to roof slope, with end joints staggered between rows.

I. Nailers: Where insulation substrates slope 3/4 inch per foot or more, install wood nailers minimum 2 inches wide and as same thickness as base layer of insulation, set nailers between insulation boards. Anchor nailers to substrate and run nailers perpendicular to slope of roof. Install nailers at the following spacing:

a. 3/4 inch to 3 inch per foot slope; 96 inches face to face of nailer.
b. 3 inches or more; 48 inches face to face of nailer.

1. Install tapered insulation for crickets and saddles between the first and second layers of insulation.

2. Trim surface of insulation where necessary at roof drains so completed surface is flush with drain ring.

3.3 MEMBRANE AND FLASHING APPLICATION:

A. Apply membrane in accordance with manufacturer's instructions.

B. Apply membrane; lap and seal edges and ends permanently waterproof.

C. Apply smooth, free from air pockets, wrinkles, fish-mouths, or tears. Ensure full bond of membrane to substrate.

D. Prime substrate when installing membranes or flashing direct to surfaces with 1.0 gal. per square of asphalt cut back primer, ASTM D41.

E. At end of day's operation, install waterproof tie-in. Remove tie-in before resuming roofing.

F. Roof Membrane and Flashing Installation (Cold Applied System): Install membrane with modified bitumen sheets lapped and shingled uniformly to achieve required number of membrane plies throughout. Shingle in proper direction to shed water.
   1. Apply 2-courses stripping of glass-fiber fabric and roofing cement at obstructions and penetrations.
   2. Cant Strips/Tapered Edge Strips: Install preformed 45-deg insulation cant strips set in roof cement at junctures of modified bitumen roofing system membrane with vertical surface. Provide preformed, tapered edge strips at perimeter of roof that do not terminate flush with vertical surfaces.
   3. Extend first ply of modified field sheet, set in cold adhesive with laps heat welded, to top edge of cant strip and terminate.
   4. Install first ply of APP modified base flashing sheet, cold adhesive applied with laps heat welded, minimum 4 inches onto roof beyond cant and turn sheet up above cant to finish flashing height.
   5. Provide second ply of APP modified field sheet, set in cold adhesive with laps heat welded, to top edge of cant and terminate.
   6. Install second ply of APP modified base flashing, set in cold adhesive with laps heat welded, minimum 8 inches onto roof beyond cant strip and turn sheet up above cant to finish flashing height. Nail top of flashing a minimum 6 inches o.c. or provide other form of mechanical attachment.
   7. Nail edges of roofing membrane to wood blocking at perimeter edges of roof prior to installing gutters, fascias and gravel stops. Space nails at a minimum of 6 inches o.c.
   8. Liquid Flashing Installation: Apply flashing in accordance with manufacturer's instructions.

G. Roof Sumps (Drains): Cut-out insulation around roof drains and provide new taper insulation sump to drain. Fill clamping ring base with a heavy coating of roofing cement. Provide a primed minimum 30 inch square, 4 lb. lead flashing sheet in a bed of roofing cement sandwiched between base and cap plies of modified bituminous roofing plies. Lead flashing sheet is not to extend beyond edge of sump created by tapered insulation.

H. Set-on Accessories: Where small roof accessories are set on modified bituminous roofing sheet membrane, prime metal flanges and set in a bed of roofing cement and seal penetration of membrane with bed of roofing cement to prevent flow of bitumen from membrane.

I. Installation of Roof Accessories: Miscellaneous sheet metal accessory items and major items of roof accessories (if any) to be coordinated with modified bituminous sheet roof system work, are specified in other sections of these specifications.

3.5 FIELD QUALITY CONTROL

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

B. Require site attendance of roofing material manufacturers prior to installation of the Work.

3.6 CLEANING

A. Remove bituminous markings from finished surfaces.

B. In areas where finished surfaces are soiled by bitumen or other source of soiling caused by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.

C. Repair or replace defaced or damaged finishes caused by work of this section.

3.7 PROTECTION

A. Protect installed roofing and flashings from construction operations.

B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.

END OF SECTION 07 75 26

SECTION 07 75 27 - SBS MODIFIED BITUMINOUS SHEET ROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Extent of Work: SBS modified bituminous roofing (MBR) is shown on the drawings and is hereby defined to include multiple layers of SBS modified bitumen sheet membrane, rigid insulation boards and includes associated flashings and strippings.

1.2 RELATED REQUIREMENTS

A. Section 06 6105 - Miscellaneous Carpentry: Wood nailers, curbs, cant strips, and items installed on roof.

B. Section 07 0001 - General Roofing Consideration.

C. Section 07 7620 - Sheet Metal Flashing and Trim: Counter flashings, reglets, gutters, and fascias.

D. Section 07 7720 - Roof Accessories

E. Section 07 7900 - Joint Protection

1.3 REFERENCE STANDARDS

A. ASTM D41 - Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing; 2011. (Reapproved 2016)

B. ASTM C79/C79M - Standard Specification for Treated Core and Nontreated Core Gypsum Sheathing Board; 2001.

C. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2008.

D. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2021.

E. ASTM D312 - Standard Specification for Asphalt Used in Roofing; 2016a.

F. ASTM D4601/D4601M - Standard Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing; 2004 (Reapproved 2020).

G. ASTM D4897 - Standard Specification for Asphalt-Coated Glass-Fiber Venting Base Sheet Used in Roofing; 2001 (Reapproved 2009).

H. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2010.

I. ASTM D5849 - 07 Standard Test Method for Evaluating Resistance of Modified Bituminous Roofing Membrane to Cyclic Fatigue (Joint Displacement)

J. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings; 2007a.

K. FM P7825 - Approval Guide; Factory Mutual Research Corporation; current edition.

L. FM DS 1-28 - Wind Design; Factory Mutual Research Corporation; current edition.

M. UL (RMSD) - Roofing Materials and Systems Directory; Underwriters Laboratories Inc.; current edition.

N. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

O. ANSI/SPRI/FM 4435/ES-1 2011 - Wind Design Standard for Edge Systems Used with Low Slope Roofing

P. ASCE 7-10 – Minimum Design Loads for Building and Other Structures

1.4 PRE-INSTALLATION MEETING

A. See Section 07 71 01 General Roofing Considerations

B. Convene one week before starting work of this section

C. Review preparation and installation procedures and coordinating and scheduling required with related work.

1.5 SUBMITTALS

A. Product Data Submittals: Include manufacturer’s technical product data for each type of roofing product required and additional data as specified in Section 07 71 01.

B. Shop Drawings: Tapered insulation plans, details, and attachment to other work.

C. Manufacturer's Installation Instructions: Indicate special procedures.

D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

E. Certificate of Analysis: Manufacturer shall submit a Certificate of Analysis from the manufacturing facility laboratory, listing the physical properties for each production lot shipped to project site.

F. Installer's qualification: Contractor shall be experienced to perform work in this section and who has specialized in installing roofing similar to that required for this Project; who is approved, authorized, or licensed by the roofing system manufacturer to install

manufacturer's product; and who is eligible to receive the standard roofing manufacturer's warranty.

G. Manufacturer qualification: Manufacturer shall submit on manufacturer letterhead from the manufacturing facility laboratory, stating that the product shipped to the project site meets or exceeds the same physical properties as published on the manufacturer's product data sheets and as specified herein. Manufacturer also shall state that they understand the penalties as outlined below in the Quality Assurance of this specification section, if that product does not meet the manufacturer's published physical properties.

H. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.6 QUALITY ASSURANCE

A. Obtain primary products, including each type of membrane sheet, from a single manufacturer. Provide secondary products as recommended by manufacturer of primary products for use with roofing system specified.

B. Sampling and Testing: Random roll good samples may be taken from each different production lot that is shipped to job site for independent third party testing to insure that product shipped to the job site meets or exceeds the manufacturer's published physical properties and as specified herein. MRae will provide the contractor with a six foot sample from each roll sampled for testing. MRae will tag and store the remaining portion at their facility. Cost associated with material testing will be paid by the owner unless the material fails to meet the manufacturer's published physical properties and as specified herein. Any Modified Bituminous Roofing material that does not meet the published physical properties and as specified herein will be replaced with new material that meets the published physical properties at no cost to the owner including labor cost to remove material that may have already been installed.

C. Installer Qualifications: Installer should have a minimum of five (5) years experience in installing modified bitumen roofing, who is approved, authorized, or licensed by the specified roof system manufacturer to install manufacturer's roof system and who is eligible to receive specified roofing manufacturer's basic roofing guarantee.

D. Perform work in accordance with NRCA Roofing and Waterproofing Manual and manufacturer's instructions.

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.

B. Coordinate the storage of insulation, base sheets, and modified bitumen roofing sheets so that materials are not exposed to precipitation or night air. All materials shall be completely protected while in storage and during application to keep dry at all times.

1. When stored outdoors, roofing materials shall be stacked on pallets or dunnage at least 4 inches above ground level or existing roof membrane level. Roofing materials shall be covered with tarpaulins or other approved covering. Plastic shrink wrap used for transit of palleted materials will not be allowed as an approved covering.

C. Do not leave unused roll goods and other sheet materials or insulation on the roof overnight or when roofing work is not in progress unless protected from weather or other moisture sources.

D. Handle and store materials or equipment in a manner to avoid significant or permanent deflection of deck.

E. Store products in weather protected environment, clear of ground and moisture; ballast materials may be stored outdoors.

F. Protect foam insulation from direct exposure to sunlight.

1.8 FIELD CONDITIONS:

A. Do not apply roofing membrane when environmental conditions are outside the ranges recommended by manufacturer.

B. Do not apply roofing membrane during unsuitable weather.

C. Do not apply roofing membrane when ambient temperature is below 40 degrees F.

D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

1.9 WARRANTY:

A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.

B. Roofing Contractor's Warranty: Provide roofing contractor's "Roofing Warranty" typical in form and content indicated by Midwest Roofing Contractors Association, Inc. approved guarantee form No. 2007B, 2- years.

C. Manufacturer's Warranty: Provide modified bitumen roofing manufacturer's standard unlimited product and contractor workmanship liability "Roofing Manufacturer's Basic Roofing Guarantee" from date of Substantial Completion against leaks caused by defective materials or workmanship and against normal wear and tear for the following period of time with respect to the following system designations

1. 2 ply ICSG-MBR 20 Years "NDL"

PART 2 PRODUCTS

2.1 MANUFACTURERS:

A. Manufacturer: Provide SBS modified bituminous sheet roofing system by one of the following:

1. Siplast, Inc: www.siplast.com
2. Holcim Elevate: www.holcimelevate.com
3. Soprema Inc, www. soprema.us
4. Johns Manville: www.jm.com

2.2 ROOFING – CONVENTIONAL APPLICATION

A. Modified Bituminous Roofing System: System designation explained in Section 07 0001. Provide the following systems:

1. 2 ply ICSG-MBR (insulated substrate, 1 ply SBS modified base ply set in cold adhesive and 1 ply SBS modified bitumen sheet membrane set in cold adhesive, white granule coated MBR): NOTE: Laps of base ply (both membrane and flashing) of SBS sheets are to be hot air welded. Torches can be used on laps of cap ply (both membrane and flashing).

B. Roofing Assembly Requirements:

1. The roof system shall pass ASTM D 5849 - 07 Standard Test Method for Evaluating Reistance of Modified Bituminous Roofing Membrane to Cyclical Fatigue (Joint Displacement) – Initial at 500 cycles.

2. Underwriters Laboratories, Inc. (UL)

a. Exterior Fire-Test Exposure: Class A or B; UL 790 for application and roof slopes indicated.
b. Internal Fire Spread Below Deck: UL 1256 for application and roof slopes indicated

3. Factory Mutual Research Corp. (FMRC)

a. Resistance to Fire, Wind, Hail, Leakage, Corrision, Ultraviolet Weathering and Foot Traffic when tested in accordance with Approval Standard 4470: Class 1 for application and roof slopes indicated.
b. Resistance to Wind: Minimum 90 pounds per square foot uplift pressure resistance when tested in accordance with Approval Standard 4470.

4.ASTM International

a. Standard Test Methods for Sampling and Testing Modified Bituminous Sheet Material: ASTM D5147

2.3 MEMBRANE AND SHEET MATERIALS

A. Products: Provide one of the following:

1. Base Ply Membrane:

   a. Paratech 180 Base; Siplast
   b. SBS Premium Base; Holcim Elevate
   c. Elastophene HR 3.0; Soprema
   d. Dynabase; Johns Manville

2. Cap Ply Membrane:
   a. Paratech 180 Cap FR; Siplast
   b. SBS Premium FR; Holcim Elevate
   c. Elastophene HR FR GR; Soprema
   d. Dynalastic 250 FR; Johns Manville

3. Modified Bituminous Flashing Material: 2-ply flashing same as membrane or as follows

   a. Cap Ply: Siplast; “Parafor 30 FR”

4. Liquid Applied Flashings: Two coats manufacturers liquid flashing encapsulating a layer of polyester fleece.

   a. Products: subject to compliance with requirements, provide one of the following
      1)“Parapro 123”; Siplast
      2)“Ultraflash”; Holcim Elevate
      3)“Alson RS”; Soprema
      4)“Permaflash”; Johns Manville

2.4 BITUMINOUS MATERIALS

A. Night Cutoffs: SBS – Modified Bituminous Sheet to match base ply membrane sheet.

B. Base Sheet (Vented): ASTM D 4601, Type II, perforated, asphalt-impregnated and coated, glass-fiber sheet.

C. Separation/Slip Sheet (Wood Deck): Standard red rosin paper, 70-pound basis with thin film of polyurethane coating.

D. Primer: ASTM D41, asphalt type.

E. Roof Cement: ASTM D4586, Type II.

F. Cold Adhesive (for membrane application): Provide special high-flash, quick drying solvent adhesive, complying with ASTM D 4479, Type II.

1. Products: subject to compliance with requirements, provide one of the following:

   a. "PA-311 M Adhesive"; Siplast
   b. "Multi-Purpose MB Cold Adhesive" ; Holcim Elevate
   c. "MBR Cold Application Adhesive"; Johns Manville
   d. "FM Adhesive Squeegee Grade"; Soprema

G. Cold Adhesive (for flashing application): Provide special high-flash, quick drying solvent adhesive, complying with ASTM D 4479, Type II.

1. Products: subject to compliance with requirements, provide one of the following:
   a. "PA-828"; Siplast.
   b. "Multi-Purpose MB Flashing Cement"; Holcim Elevate
   c. "MBR Utility Cement"; Johns Manville
   d. "FM Adhesive Trowel Grade"; Soprema

H. Cold Adhesive (for insulation application): Single or double component, non-flammable, spray dispensed, moisture curing low-rise polyurethane foam adhesive.

1. Products: subject to compliance with requirements, provide one of the following:
   a. "Olybond"; OMG Roofing Products
   b. "Insta-stik"; Insta-foam Products, Inc.
   c. "Para-Stick"; Siplast.
   d. "ISO Twin Pack"; Holcim Elevate
   e. "Urethane Insulation Adhesive"; Johns Manville

2.5 INSULATION

A. Rigid insulation boards and air/vapor retarder filler foams shall not be produced with, or contain, any of the United States Environmental Protection Agency (USEPA) regulated chlorofluorocarbon (CFC) compounds listed in the Montreal Protocol of the United Nations Environmental Program.

B. Polyisocyanurate Board Insulation: Rigid closed cellular polyisocyanurate foam core board, complying with ASTM C 1289, Type II, Class 1, cellulose felt or glass fiber mat both faces; Grade 1, for Class A Construction with the following characteristics:
1. Compressive Strength: 20 psi
2. Board Size: 48x48inch (tapered); 48x96 (flat stock)
3. Board Thickness: Varies (see drawings)
4. Thermal Resistance (LTTR): R-value of 5.41 per inch
5. Board Edges: Square

C. Cover Board Insulation (Overlay for polyisocyanurate foam board roof insulation): Provide manufacturer's standard water-resistant treated gypsum core with the following characteristics.
1. Board Size: 48x48inch
2. Board Thickness: ¼"

3. Board Edges: Square
4. Manufacturers:
   a. G-P Gypsum Company; “DENS-DECK Prime”
   b. Gold Bond Building Products; “DEXcell FA”

2.6 ACCESSORIES

A. Air/Vapor Retarder Filler Foam: Single-component, non-flammable, spray dispensed, adhesive polyurethane foam used as filler around obstructions and penetrations to mitigate both air and vapor infiltration from both interior and exterior origin.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to the following:

   a. Hilti Construction Chemicals, Inc.; “Hilt CF 124”.

B. Self Adhering Waterproof Underlayment: Laminated sheet of polymer rubberized asphalt and elastomeric 5-mil polymer film with release paper to self adhere to substrate.
1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include the following:

   a. Ice and Water Shield; W.R. Grace Corp.
   b. Winterguard; CertainTeed Corporation.

C. Fasteners for Steel Deck: Galvanized steel, fluoropolymer-coated steel, or nonferrous metal screws recommended by manufacturer for material to be fastened and substrate and complying with requirements of governing authorities and listing agencies
1. Length as required for thickness of insulation material and penetration of deck substrate.
   a. Metal Deck: ¾-inch minimum penetration of top flute in deck.
   b. Structural Concrete: 1-inch minimum embedment.
   c. Wood Deck: 1-inch minimum embedment

2. Roofing Nails: Galvanized, hot dipped type, size and configuration as required to suit application.

D. Fasteners for Gypsum and Cementitious Wood Fiber Deck: Galvanized steel, galvalume-coated steel for material to be fastened to substrate and complying with requirements of governing authorities and listing agencies
1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include the following:

   a. Trufast; “Versa-Fast” Fastener and Plates
   b. OMG; “Lite-Deck” Fastener and Plates
   c. OMG; “Polymer Gyptec” Fastner and Plates

2. Length as required for thickness of insulation material and penetration of deck substrate.

   a. Gyp or CWF Deck: 2-inch minimum deck penetration.

3. Contractor to perform on site pull out test with manufacturer to determine proper fastener type and layout unless instructed otherwise by Architect.

E. Base Sheet Fasteners: "Olylok" Locking Impact Nail, Galvanized (G-90) coated tube, Galvalume (AZ-55) coated disk 2.7" diameter, Steel wire locking staple.
   1. Contractor to perform on site pull out test with manufacturer to determine proper fastener type and layout.

E. Roofing Systems Edge/ Penetration Materials: Provide materials as follows:
   1. Roofing Cement: Asphaltic cement, asbestos-free; ASTM D 4586-86.
   2. Glass Fiber Fabric: Type I, minimum 1.5 pound sheet of woven glass fiber, impregnated with asphalt; complying with Federal Spec. HH-C-466-B, ASTM D 1668-86.
   3. Preformed Edge Strips: Rigid insulation units matching roof insulation, or asphalt-impregnated organic fiber insulation units, molded to form 3 1/2-inch by 3 1/2-inch by 45 degree cant strips and 1 5/8-inch by 18 inch tapered edge strips to receive roofing ply sheet courses and lift edges above main roofing surface.

F. Glass Fiber Fabric: Type I, minimum 1.5 pound sheet of woven glass fiber, impregnated with asphalt; complying with ASTM D 1668.

G. Sheet Metal Accessory Materials: Provide materials as specified in Section 07 76 20.

I. Sealants: As recommended by membrane manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that surfaces and site conditions are ready to receive work.

B. Verify deck is supported and secure.

C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.

D. Verify deck surfaces are dry and free of moisture and dew.

E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.

F. Coordinate the storage and protection of insulation, base sheets, modified bitumen roofing sheets so that materials are not exposed to precipitation or night air. All materials shall be completely protected while in storage and during application to keep it dry at all times.

1. When stored outdoors, roofing materials shall be stacked on pallets or dunnage at least 4-inches above ground level or existing roof membrane level. Roofing materials shall be covered with tarpaulins or other approved covering. **Plastic shrink wrap used for transit of palleted materials will not be allowed as an approved covering.**

G. Examine substrate surface to receive modified bituminous roofing system and associated work and conditions under which roofing will be installed. Do not proceed with roofing work until unsatisfactory conditions have been corrected in a manner acceptable to the Manufacturer and Architect.

1. Verify substrate moisture - do not install roofing on wet insulation or other moist substrates. Do not install insulation to deck that is wet or has standing water in the flutes. Remove moisture and verify that the deck and/or insulation is dry. Do not apply hot bitumen under any condition that would cause foaming (due to moisture).

H. Substrate Joint Penetrations: Prevent adhesive from penetrating substrate joints, entering building and drains, or damaging roofing system components or adjacent building construction.

3.2 BASE SHEET APPLICATION

A. Installation of Vented Base Sheets: On Lightweight concrete, CWF and gypsum decks install ply lapped courses, mechanically fastened vented base sheet to substrate as accepted by FMRC system meeting requirements for wind uplift resistance. Shingle base sheet in proper direction to shed water.

3.3 INSULATION INSTALLATION – CONVENTIONAL APPLICATION

A. Attachment of Insulation: Comply with insulation manufacturer's instructions and recommendations for handling, installing, and bonding or anchorage of insulation to substrate.

1. Provide standard red rosin paper between existing wood decking and new mechanically attached insulation board

2. Secure insulation to metal and wood deck using mechanical fasteners specifically designed and sized for attachment of specified board type insulation to deck type shown. Fasten insulation over entire area of roofing at spacing as required by FM for Windstorm Resistance Classification 1-90 or higher as wind design pressures indicate on drawings. Run long joints for insulation in continuous straight lines, perpendicular to roof slope with end joints staggered between rows.
   a. Size mechanical fasteners with insulation so they do not extend beyond the bottom flute in metal deck.
   b. Mechanically fasten insulation to deck in accordance with insulation manufacturer's instructions and Factory Mutual requirements.

3. Remove all existing felts and/or vapor retarders from concrete decks and clean substrate free of dust and debris. Set insulation in cold adhesive. Run long joints of insulation in continuous straight line, perpendicular to roof slope, with end joints staggered between rows.
4. Two-layer Installation: Where indicated, install required thickness in two layers with joints of second layer staggered from joints of first layer a minimum of 12 inches each direction. Install insulation layers in cold adhesive at manufacturers required pattern, bead width and spacing. Provide temporary ballast on each individual insulation board for sufficient time that adhesive is cured and insulation board is fully adhered to substrate. Run long joints of insulation in continuous straight line, perpendicular to roof slope, with end joints staggered between rows.
5. Nailers: Where insulation substrates slope 3/4 inch per foot or more, install wood nailers minimum 2 inches wide and as same thickness as base layer of insulation, set nailers between insulation boards. Anchor nailers to substrate and run nailers perpendicular to slope of roof. Install nailers at the following spacing:

    a. 3/4 inch to 3 inch per foot slope; 96 inches face to face of nailer.
    b. 3 inches or more; 48 inches face to face of nailer.

6. Install tapered insulation for crickets and saddles between the first and second layers of insulation.
7. Trim surface of insulation where necessary at roof drains so completed surface is flush with drain ring.

3.4 MEMBRANE AND FLASHING APPLICATION:

A. Apply membrane in accordance with manufacturer's instructions.

B. Apply membrane; lap and seal edges and ends permanently waterproof.

C. Apply smooth, free from air pockets, wrinkles, fish-mouths, or tears. Ensure full bond of membrane to substrate.

D. Prime substrate when installing membranes or flashing direct to surfaces with 1.0 gal. per square of asphalt cut back primer, ASTM D41.

E. At end of day's operation, install waterproof tie-in. Remove tie-in before resuming roofing.

F. Roof Membrane and Flashing Installation (Cold Applied System): Install membrane with modified bitumen sheets lapped and shingled uniformly to achieve required number of membrane plies throughout. Shingle in proper direction to shed water.
    1. Apply 2-courses stripping of glass-fiber fabric and roofing cement at obstructions and penetrations.
    2. Cant Strips/Tapered Edge Strips: Install preformed 45-deg insulation cant strips set in roof cement at junctures of modified bitumen roofing system membrane with vertical surface. Provide preformed, tapered edge strips at perimeter of roof that do not terminate flush with vertical surfaces.

3. Extend first ply of modified field sheet, set in cold adhesive with laps heat welded, to top edge of cant strip and terminate.
4. Install first ply of SBS modified base flashing sheet, cold adhesive applied with laps heat welded, minimum 4 inches onto roof beyond cant and turn sheet up above cant to finish flashing height.
5. Provide second ply of SBS modified field sheet, set in cold adhesive with laps heat welded, to top edge of cant and terminate.
6. Install second ply of SBS modified base flashing, set in cold adhesive with laps heat welded, minimum 8 inches onto roof beyond cant strip and turn sheet up above cant to finish flashing height. Nail top of flashing a minimum 6 inches o.c. or provide other form of mechanical attachment.
7. Nail edges of roofing membrane to wood blocking at perimeter edges of roof prior to installing gutters, fascias and gravel stops. Space nails at a minimum of 6 inches o.c.
8. Liquid Flashing Installation: Apply flashing in accordance with manufacturer's instructions.

G. Roof Sumps (Drains): Cut-out insulation around roof drains and provide new taper insulation sump to drain. Fill clamping ring base with a heavy coating of roofing cement. Provide a primed minimum 30 inch square, 4 lb. lead flashing sheet in a bed of roofing cement sandwiched between base and cap plies of modified bituminous roofing plies. Lead flashing sheet is not to extend beyond edge of sump created by tapered insulation.

H. Set-on Accessories: Where small roof accessories are set on modified bituminous roofing sheet membrane, prime metal flanges and set in a bed of roofing cement and seal penetration of membrane with bed of roofing cement to prevent flow of bitumen from membrane.

I. Installation of Roof Accessories: Miscellaneous sheet metal accessory items and major items of roof accessories (if any) to be coordinated with modified bituminous sheet roof system work, are specified in other sections of these specifications.

3.5 FIELD QUALITY CONTROL

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

B. Require site attendance of roofing material manufacturers prior to installation of the Work.

3.6 CLEANING

A. Remove bituminous markings from finished surfaces.

B. In areas where finished surfaces are soiled by bitumen or other source of soiling caused by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.

C. Repair or replace defaced or damaged finishes caused by work of this section.

3.7 PROTECTION

A. Protect installed roofing and flashings from construction operations.

B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.

END OF SECTION 07 75 27