Building Envelope Consultants, Ltd.
Architects • Engineers • Roof Consultants

Detroit, MI
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Minneapolis, MN
HQ: Waukesha, WI

Addendum #2

Project: IN130-Inlow Hall-Replace Roof Phase 2-20240666
Project Number: 20240666
Date: January 27, 2026

Notice to all Plan Holders/Bidders:
The following modifications, additions, deletions, clarifications and/or information are now part of the Contract Documents and shall be fully binding. This addendum must be acknowledged as part of the Bid Form.

Item #1 (pre-bid attendance sheet):
See the attached attendance sheet from the pre-bid meetings held on January 21, 2026.

Item #2 (Existing Building Plans):
Use the information below for access to the existing building's architectural and structural plans.

https://ftp.building-envelope.net:4443/web/client/pubshares/CEhLRhoECQKknk7mshPfiU/browse
password: 20240666

Item #3 (site access for bidding):
To schedule a site visit before the bid date, use the contact information below to schedule an appointment.
Shane Green – Facility Operations Leader, 317-278-1419, greensa@iu.edu

Item #4 (building access):
During construction, the roofing contractor will have access to the roof areas from the elevator to the penthouse mechanical level. The contractor must understand the building is active and respect the environment, limit foot traffic and noise, and schedule all access with building facilities.

Item #5 (revised wind loading and related items):
See attached pages, A1.3A, A1.3B and specification section (07 22 24) for the revised wind loading and above-deck attachment information.

Item #6 (deadline for bidding questions):
The deadline for bidding questions is February 2, 2026, 12:00 P.M. Send questions to toml@building-envelope.net

Item #7 (site staging areas):
All staging areas are to be confirmed/approved at the pre-construction meeting to avoid damage to landscaping and/or underground utilities if present.

Item #8 (replacement insulation):
In areas of damaged insulation, replacement insulation is to be adhered (concrete decks) or mechanically attached (metal decks) per the manufacturer's requirements, including wind uplift forces.

End of Addendum No. 2

1/21/2026 Pre-Bid Walk 11AM

Name	Company	Phone #	Email
Andy Barriento	BEC	317-432-1727	andyb@building-envelope.net
Tom Laufenberg	BEC	262-442-2679	tomL@building-envelope.net
Wayne Gustafson	BEC		
Ryan Cox	IU	317-274-4075	ryalcox@iu.edu
Alex Meher	IU	812-855-9315	maherad@iu.edu

1/21/2026 Pre-Bid Walk 2PM

Name	Company	Phone #	Email
Mark Hays	Steve's Roofing	812-824-3006	mhays@bluemarble.net
Nelson Smiley	Foster Contracting Inc	317-464-7597	nelson@fostercontracting.net
Mack Bell	B&L Sheet Metal & Roofing	812-318-5996	mbell@tectaamerica.com
Justin Burdine	Nu-Tec Roofing	317-255-4464	jburdine@nutecroofing.com;
Andy Barriento	BEC	317-432-1727	andyb@building-envelope.net
Tom Laufenberg	BEC	262-442-2679	tomL@building-envelope.net
Wayne Gustafson	BEC		
John Ekelof		317-552-9049	john.ekelof@myroofcare.com
Josh Woods	Bone Dry Roofing	317-671-0928	josh.woods@bonedry.com
Todd Cannon	Bone Dry Roofing	317-435-0905	Todd.cannon@bonedry.com
Bill Corya	AVS	317-518-5672	bill@advancedvacuum.com
Kevin Thompson		812-579-5733	admin@acroof.com
Ryan Cox	IU	317-274-4075	ryalcox@iu.edu
Alex Meher	IU	812-855-9315	maherad@iu.edu
Ronny Gauldin		317-223-4060	rgauldin@tectaamerica.com

WOOD NAILER INFORMATION AND ATTACHMENT:

1.) NAILERS: PRESSURE TREATED SOUTHERN PINE #2 OR BETTER

2.) NAILER ATTACHMENT TO OTHER NAILERS:
2x4 AND 2x6 NAILERS: (1) ROW OF #14x3" STAINLESS STEEL SCREWS SPACED 12" O.C.
2x8 THROUGH 2x12 NAILERS: (2) ROWS OF #14x3" STAINLESS STEEL SCREWS SPACED 12" O.C. OFFSET ROWS 6".
(ALL CASES PENETRATE WOOD SUBSTRATE 1-1/2")

3.) NAILER ATTACHMENT TO STEEL DECK:
2x4 AND 2x6 NAILERS: (1) ROW OF #14x3" STAINLESS STEEL SCREWS SPACED 6" O.C.
2x8 THROUGH 2x12 NAILERS: (2) ROWS OF #14x3" STAINLESS STEEL SCREWS SPACED 8" O.C. OFFSET ROWS 4".
CONTRACTOR TO VERIFY THE EXISTING STEEL DECK THICKNESS IS GREATER THAN OR EQUAL TO 22 GAUGE. CONTACT, BEC FOR ALTERNATE ATTACHMENT TO THE STEEL DECK IF DECK THICKNESS LESS THAN 22 GUAGE. FASTENER LENGTH ADEQUATE TO PENETRATE SUBSTRATE A MINIMUM OF 3/4". VERIFY ITEMS BELOW DECK AS NOT TO CAUSE DAMAGE.

4.) NAILER ATTACHMENT TO CONCRETE FILLED CMU:
2x4 AND 2x6 NAILERS: (1) ROW OF 3/16"Ø TAPCONS WITH A MINIMUM EMBEDMENT OF 1-3/4" SPACED 16" O.C.. PROVIDE MINIMUM EDGE DISTANCE OF 3" AND MINIMUM SPACING OF 4".
2x8 THROUGH 2x12 NAILERS: (2) ROWS OF 3/16"Ø TAPCONS WITH A MINIMUM EMBEDMENT OF 1-3/4" SPACED 16" O.C.. OFFSET ROWS 8". PROVIDE MINIMUM EDGE DISTANCE OF 3" AND MINIMUM SPACING OF 4"
FASTENERS LENGTH AS REQUIRED TO SECURE THE NAILER AND MEET THE REQUIRED MINIMUM EMBEDMENT.

5.) PLYWOOD ATTACHMENT TO CONCRETE FILLED CMU OR CONCRETE PARAPET WALLS:
3/4" PLYWOOD: (1) 3/16"Ø TAPCONS WITH A MINIMUM EMBEDMENT OF 1" SPACED 12" O.C. EACH WAY.
FASTENERS LENGTH AS REQUIRED TO SECURE PLYWOOD AND MEET THE REQUIRED MINIMUM EMBEDMENT.

WIND DESIGN DATA:

SITE/BUILDING INFORMATION (BASED ON IBC 2018 AND ASCE 7-16):

OCCUPANCY GROUP - MAIN BUILDING:	E (EDUCATION)
RISK CATEGORY:	III
GRADE LEVEL ABOVE SEA LEVEL:	710 FT (C_e=1.0 CONSERVATIVE)
EXPOSURE CATEGORY:	B
ULTIMATE WIND SPEED:	113 MPH
WIND SPEED (NOMINAL):	87.5 MPH
ENCLOSURE CLASSIFICATION:	ENCLOSED
MEAN ROOF HEIGHT, PARAPET HT. AND a:	VARIES PER ROOF AREA SEE ROOF AREA TABLES

NOTES:
STATED PRESSURES ARE BASED ON THE FOLLOWING:
1.) DESIGN UPLIFT-RESISTANCE CAPACITY = ASD METHOD WIND LOAD X S.F.
2.) ASD = ALLOWABLE STRESS DESIGN
3.) S.F. = SAFETY FACTOR OF 2.0

ROOF DESIGN UPLIFT PRESSURES: ROOF AREAS A, B, F, G, H AND J

DESIGN UPLIFT PRESSURES (PSF): ZONE 1	ZONE 2	ZONE 3
55	75	100

NOTES:
- MEAN ROOF HEIGHT = 60 FT
- 0.6h = 36 FT
- 0.2h = 12 FT

ZONE KEY:
- ZONE 1 (FIELD) - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 2 (PERIMETER) - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 3 (CORNER) - SEE CHART SPECIFIC TO ROOF AREA

ROOF DESIGN UPLIFT PRESSURES: ROOF AREA C

DESIGN UPLIFT PRESSURES (PSF): ALL ZONES
160

NOTES:
- MEAN ROOF HEIGHT = 65 FT
- a = 8 FT
- 2a = 16 FT

ZONE KEY:
- ALL ZONES - SEE CHART SPECIFIC TO ROOF AREA

ROOF DESIGN UPLIFT PRESSURES: ROOF AREA D

DESIGN UPLIFT PRESSURES (PSF): ZONE 1	ZONE 2	ZONE 3	OVERHANG
50	75	105	160

NOTES:
- MEAN ROOF HEIGHT = 65 FT
- a = 8 FT
- 2a = 16 FT

ZONE KEY:
- ZONE 1 (FIELD) - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 2 (PERIMETER) - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 3 (CORNER) - SEE CHART SPECIFIC TO ROOF AREA
- OVERHANG - SEE CHART SPECIFIC TO ROOF AREA

ROOF DESIGN UPLIFT PRESSURES: ROOF AREA E

DESIGN UPLIFT PRESSURES (PSF): ZONES 1, 2e	ZONES 2n, 2r, 3e	ZONE 3r
90	130	155

NOTES:
- MEAN ROOF HEIGHT = 86 FT
- a = 4 FT ROUND - USE a = 4 FT

ZONE KEY:
- ZONE 1 AND 2e - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 2n, 2r AND 3e - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 3r - SEE CHART SPECIFIC TO ROOF AREA

3 ZONES W/ WIND PRESSURES
SCALE: NONE

ABOVE DECK COMPONENT ATTACHMENT: AREAS A, B AND J

ATTACHMENT FOR CONCRETE DECKS	FIELD OF ROOF	PERIMETERS	CORNERS
COVER BOARD	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 36 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 0.89 SF).
INSULATION	LOOSE-LAID	LOOSE-LAID	LOOSE-LAID

ABOVE DECK COMPONENT ATTACHMENT: OVERHANGS AREA C

ATTACHMENT FOR CONCRETE DECKS	OVERHANG
COVER BOARD	MECH. ATTACH WITH 54 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 0.59 SF).
INSULATION	LOOSE-LAID

ABOVE DECK COMPONENT ATTACHMENT: AREA E

ATTACHMENT FOR STEEL DECKS	ZONES 1 AND 2e	ZONES 2r, 2n AND 3e	ZONE 3r
COVER BOARD	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 32 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.00 SF).

ABOVE DECK COMPONENT ATTACHMENT: AREAS D, F AND H

ATTACHMENT FOR STEEL DECKS	FIELD OF ROOF	PERIMETERS	CORNERS AND OVERHANGS IN ROOF AREA D
COVER BOARD	MECH. ATTACH WITH 12 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 2.67 SF).	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 32 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.00 SF).
TOP INSULATION LAYER	LOOSE-LAID	LOOSE-LAID	LOOSE-LAID

ABOVE DECK COMPONENT ATTACHMENT: AREAS G

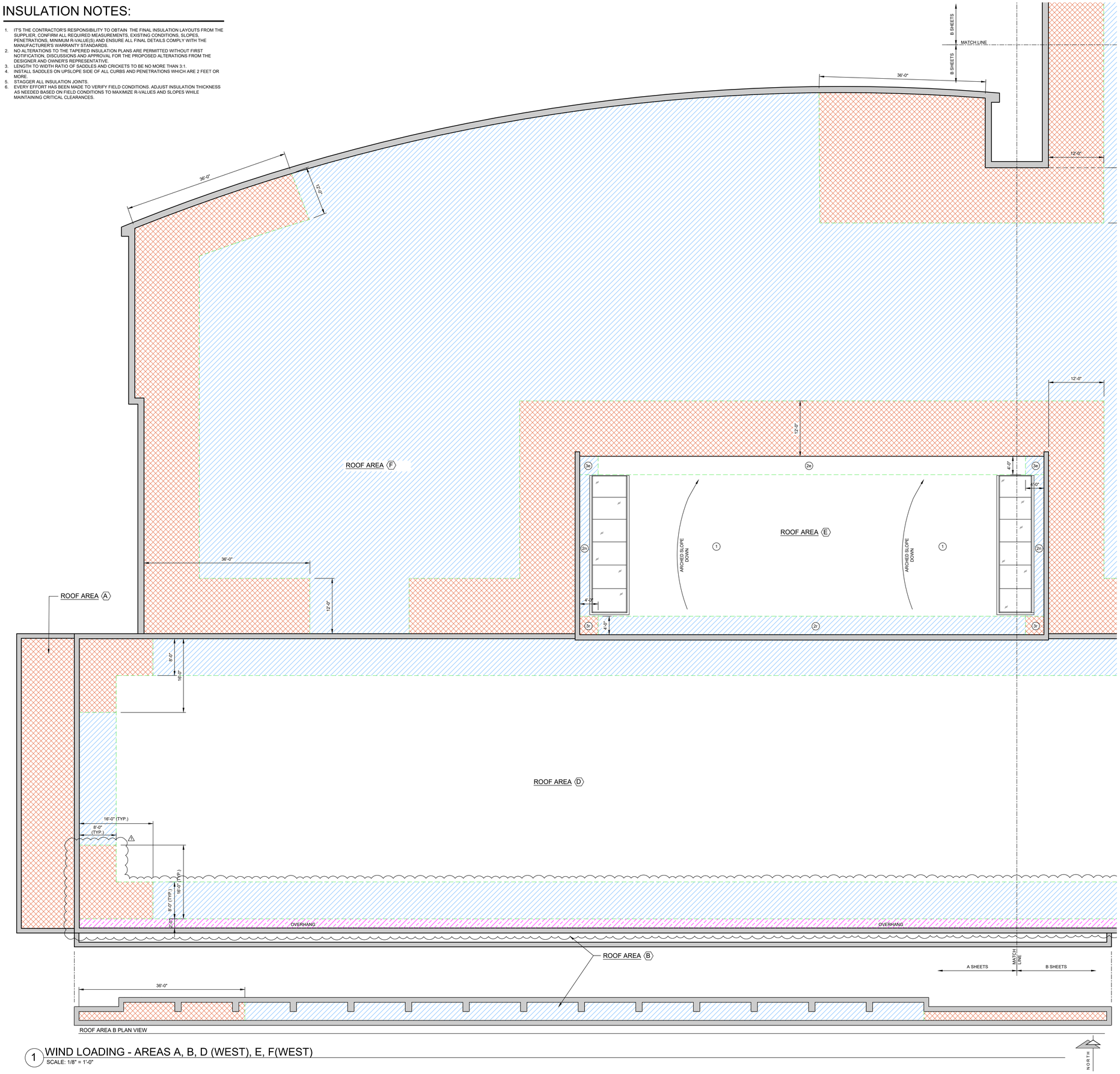
ATTACHMENT FOR STEEL DECKS	FIELD OF ROOF	PERIMETERS	CORNERS
COVER BOARD	MECH. ATTACH WITH 12 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 2.67 SF).	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 32 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.00 SF).

NOTES:
1.) IF ANY PORTION OF THE BOARD LIES IN PERIMETER OR CORNER ZONE, ENHANCE THE FASTENING OF THE ENTIRE BOARD
2.) VERIFY WITH THE MANUFACTURER ALL ATTACHMENT REQUIREMENTS INCLUDING BUT NOT ARE LIMITED TO FASTENER TYPE, DIAMETER, LENGTH, MATERIALS, SPACINGS, ENGAGEMENT AND EMBEDMENT.

2 ABOVE DECK ATTACHMENTS
SCALE: NONE

INSULATION NOTES:

1. IT'S THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE FINAL INSULATION LAYOUTS FROM THE SUPPLIER, CONFIRM ALL REQUIRED MEASUREMENTS, EXISTING CONDITIONS, SLOPES, PENETRATIONS, MINIMUM R-VALUE(S) AND ENSURE ALL FINAL DETAILS COMPLY WITH THE MANUFACTURER'S WARRANTY STANDARDS.
2. NO ALTERATIONS TO THE TAPERED INSULATION PLANS ARE PERMITTED WITHOUT FIRST NOTIFICATION, DISCUSSIONS AND APPROVAL FOR THE PROPOSED ALTERATIONS FROM THE DESIGNER AND OWNER'S REPRESENTATIVE.
3. LENGTH TO WIDTH RATIO OF SADDLES AND CRICKETS TO BE NO MORE THAN 3:1.
4. INSTALL SADDLES ON UPSLOPE SIDE OF ALL CURBS AND PENETRATIONS WHICH ARE 2 FEET OR MORE.
5. STAGGER ALL INSULATION JOINTS.
6. EVERY EFFORT HAS BEEN MADE TO VERIFY FIELD CONDITIONS. ADJUST INSULATION THICKNESS AS NEEDED BASED ON FIELD CONDITIONS TO MAXIMIZE R-VALUES AND SLOPES WHILE MAINTAINING CRITICAL CLEARANCES.



1 WIND LOADING - AREAS A, B, D (WEST), E, F(WEST)
SCALE: 1/8" = 1'-0"

NORTH

Indianapolis Office:
8888 Keystone Crossing
Suite 1300
Indianapolis, IN 46240
Phone: 463-230-8116

Detroit, MI
Chicago, IL
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Tiburon, CA
St. Louis, MO
Indianapolis, IN
Kansas City, KS
Minneapolis, MN
HQ: Waukesha, WI

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Design • Inspect • TEST

DATE:	NOTES:
8/28/2025	75% CD REVIEW SET
11/20/2025	95% CD REVIEW SET
1/9/2026	BID SET
1/23/2026	ADDENDUM #2 (2)

PROJECT NO.: N/A
INITIALS: JS/TL

IN130 INLOW HALL-REPLACE ROOF PHASE 2 (20240666)

INDIANA UNIVERSITY - INDIANAPOLIS
530 W. NEW YORK STREET
INDIANAPOLIS, IN 46202

SHEET TITLE:
WIND LOADING INFORMATION - AREAS A, B, D (WEST), E, F(WEST)

SHEET NUMBER:
A1.3A

WIND DESIGN DATA:

SITE/BUILDING INFORMATION (BASED ON IBC 2018 AND ASCE 7-16):

OCCUPANCY GROUP - MAIN BUILDING:	E (EDUCATION)
RISK CATEGORY:	III
GRADE LEVEL ABOVE SEA LEVEL:	710 FT (K_{zt}=1.0 CONSERVATIVE)
EXPOSURE CATEGORY:	B
ULTIMATE WIND SPEED:	113 MPH
WIND SPEED (NOMINAL):	87.5 MPH
ENCLOSURE CLASSIFICATION:	ENCLOSED
MEAN ROOF HEIGHT, PARAPET HT. AND a:	VARIES PER ROOF AREA SEE ROOF AREA TABLES

NOTES:
STATED PRESSURES ARE BASED ON THE FOLLOWING:
1.) DESIGN UPLIFT-RESISTANCE CAPACITY = ASD METHOD WIND LOAD X S.F.
2.) ASD = ALLOWABLE STRESS DESIGN
3.) S.F. = SAFETY FACTOR OF 2.0

ROOF DESIGN UPLIFT PRESSURES: ROOF AREAS A, B, F, G, H AND J

DESIGN UPLIFT PRESSURES (PSF):

ZONE 1	ZONE 2	ZONE 3
55	75	100

ZONE KEY:

- ZONE 1 (FIELD) - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 2 (PERIMETER) - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 3 (CORNER) - SEE CHART SPECIFIC TO ROOF AREA

NOTES:
- MEAN ROOF HEIGHT = 60 FT
- 0.6h = 36 FT
- 0.2h = 12 FT

ROOF DESIGN UPLIFT PRESSURES: ROOF AREA C

DESIGN UPLIFT PRESSURES (PSF):

ALL ZONES
160

ZONE KEY:

- ALL ZONES - SEE CHART SPECIFIC TO ROOF AREA

NOTES:
- MEAN ROOF HEIGHT = 65 FT
- a = 8 FT
- 2a = 16 FT

ROOF DESIGN UPLIFT PRESSURES: ROOF AREA D

DESIGN UPLIFT PRESSURES (PSF):

ZONE 1	ZONE 2	ZONE 3	OVERHANG
50	75	105	160

ZONE KEY:

- ZONE 1 (FIELD) - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 2 (PERIMETER) - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 3 (CORNER) - SEE CHART SPECIFIC TO ROOF AREA
- OVERHANG - SEE CHART SPECIFIC TO ROOF AREA

NOTES:
- MEAN ROOF HEIGHT = 65 FT
- a = 8 FT
- 2a = 16 FT

ROOF DESIGN UPLIFT PRESSURES: ROOF AREA E

DESIGN UPLIFT PRESSURES (PSF):

ZONES 1, 2e	ZONES 2n, 2r, 3e	ZONE 3r
90	130	155

ZONE KEY:

- ZONE 1 AND 2e - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 2n, 2r AND 3e - SEE CHART SPECIFIC TO ROOF AREA
- ZONE 3r - SEE CHART SPECIFIC TO ROOF AREA

NOTES:
- MEAN ROOF HEIGHT = 86 FT
- a = 4 FT ROUND - USE a = 4 FT

5 ZONES W/ WIND PRESSURES
SCALE: NONE

ABOVE DECK COMPONENT ATTACHMENT: AREAS A, B AND J

ATTACHMENT FOR CONCRETE DECKS	FIELD OF ROOF	PERIMETERS	CORNERS
COVER BOARD	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 36 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 0.89 SF).
INSULATION	LOOSE-LAID	LOOSE-LAID	LOOSE-LAID

ABOVE DECK COMPONENT ATTACHMENT: OVERHANGS AREA C

ATTACHMENT FOR CONCRETE DECKS	OVERHANG
COVER BOARD	MECH. ATTACH WITH 54 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 0.59 SF).
INSULATION	LOOSE-LAID

ABOVE DECK COMPONENT ATTACHMENT: AREA E

ATTACHMENT FOR STEEL DECKS	ZONES 1 AND 2e	ZONES 2r, 2n AND 3e	ZONE 3r
COVER BOARD	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 32 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.00 SF).

ABOVE DECK COMPONENT ATTACHMENT: AREAS D, F AND H

ATTACHMENT FOR STEEL DECKS	FIELD OF ROOF	PERIMETERS	CORNERS AND OVERHANGS IN ROOF AREA D
COVER BOARD	MECH. ATTACH WITH 12 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 2.67 SF).	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 32 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.00 SF).
TOP INSULATION LAYER	LOOSE-LAID	LOOSE-LAID	LOOSE-LAID

ABOVE DECK COMPONENT ATTACHMENT: AREAS G

ATTACHMENT FOR STEEL DECKS	FIELD OF ROOF	PERIMETERS	CORNERS
COVER BOARD	MECH. ATTACH WITH 12 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 2.67 SF).	MECH. ATTACH WITH 24 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.33 SF).	MECH. ATTACH WITH 32 FASTENERS PER 4' X 8' BOARD (ONE FASTENER PER 1.00 SF).

NOTES:
1.) IF ANY PORTION OF THE BOARD LIES IN PERIMETER OR CORNER ZONE, ENHANCE THE FASTENING OF THE ENTIRE BOARD
2.) VERIFY WITH THE MANUFACTURER ALL ATTACHMENT REQUIREMENTS INCLUDING BUT NOT ARE LIMITED TO FASTENER TYPE, DIAMETER, LENGTH, MATERIALS, SPACINGS, ENGAGEMENT AND EMBEDMENT.

4 ABOVE DECK ATTACHMENTS
SCALE: NONE

WOOD NAILER INFORMATION AND ATTACHMENT:

1.) NAILERS: PRESSURE TREATED SOUTHERN PINE #2 OR BETTER

2.) NAILER ATTACHMENT TO OTHER NAILERS:
2x4 AND 2x6 NAILERS: (1) ROW OF #14x3" STAINLESS STEEL SCREWS SPACED 12" O.C.
2x8 THROUGH 2x12 NAILERS: (2) ROWS OF #14x3" STAINLESS STEEL SCREWS SPACED 12" O.C. OFFSET ROWS 6".
(ALL CASES PENETRATE WOOD SUBSTRATE 1-1/2")

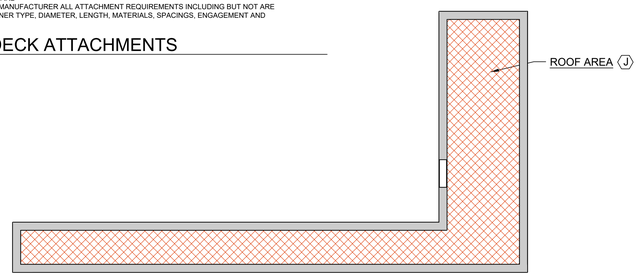
3.) NAILER ATTACHMENT TO STEEL DECK:
2x4 AND 2x6 NAILERS: (1) ROW OF #14x3" STAINLESS STEEL SCREWS SPACED 6" O.C.
2x8 THROUGH 2x12 NAILERS: (2) ROWS OF #14x3" STAINLESS STEEL SCREWS SPACED 8" O.C. OFFSET ROWS 4".
CONTRACTOR TO VERIFY THE EXISTING STEEL DECK THICKNESS IS GREATER THAN OR EQUAL TO 22 GAUGE. CONTACT, BEC FOR ALTERNATE ATTACHMENT TO THE STEEL DECK IF DECK THICKNESS LESS THAN 22 GUAGE. FASTENER LENGTH ADEQUATE TO PENETRATE SUBSTRATE A MINIMUM OF 3/4". VERIFY ITEMS BELOW DECK AS NOT TO CAUSE DAMAGE.

4.) NAILER ATTACHMENT TO CONCRETE FILLED CMU:
2x4 AND 2x6 NAILERS: (1) ROW OF 3/16"Ø TAPCONS WITH A MINIMUM EMBEDMENT OF 1-3/4" SPACED 16" O.C., PROVIDE MINIMUM EDGE DISTANCE OF 3" AND MINIMUM SPACING OF 4"
2x8 THROUGH 2x12 NAILERS: (2) ROWS OF 3/16"Ø TAPCONS WITH A MINIMUM EMBEDMENT OF 1-3/4" SPACED 16" O.C., OFFSET ROWS 8", PROVIDE MINIMUM EDGE DISTANCE OF 3" AND MINIMUM SPACING OF 4"
FASTENERS LENGTH AS REQUIRED TO SECURE THE NAILER AND MEET THE REQUIRED MINIMUM EMBEDMENT.

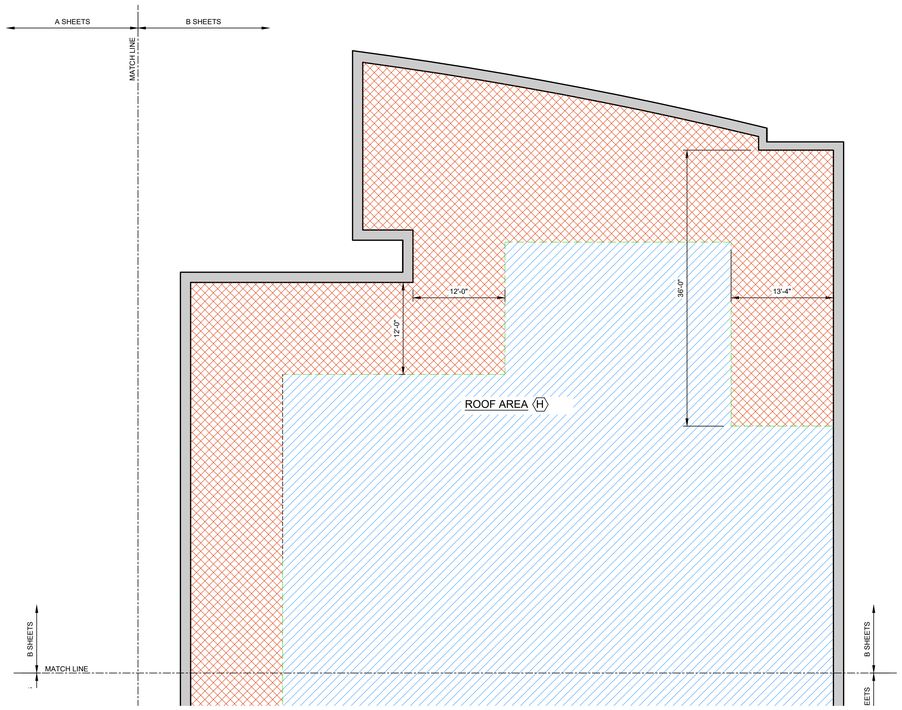
5.) PLYWOOD ATTACHMENT TO CONCRETE FILLED CMU OR CONCRETE PARAPET WALLS:
3/4" PLYWOOD: (1) 3/16"Ø TAPCONS WITH A MINIMUM EMBEDMENT OF 1" SPACED 12" O.C. EACH WAY.
FASTENERS LENGTH AS REQUIRED TO SECURE PLYWOOD AND MEET THE REQUIRED MINIMUM EMBEDMENT.

INSULATION NOTES:

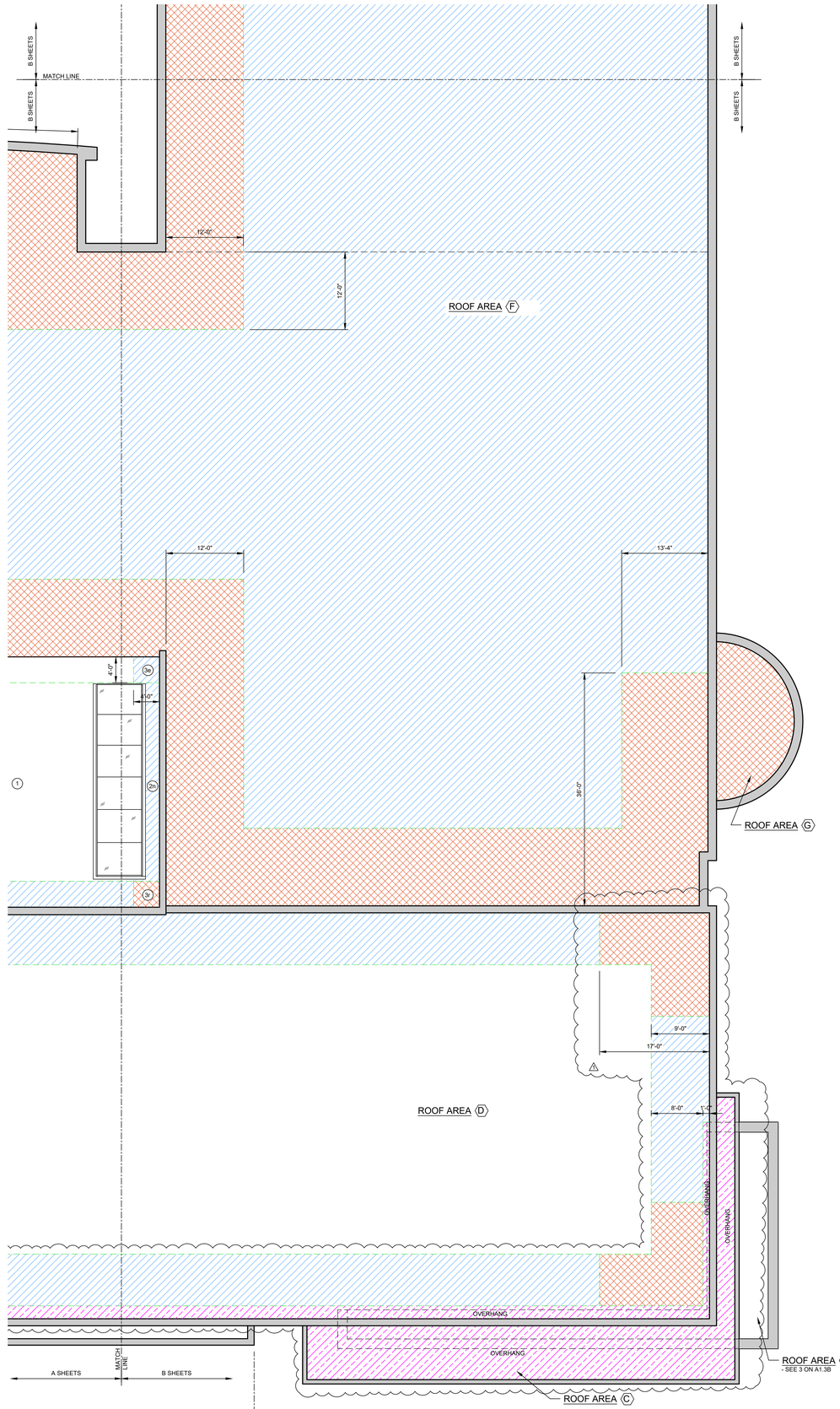
1. IT'S THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE FINAL INSULATION LAYOUTS FROM THE SUPPLIER, CONFIRM ALL REQUIRED MEASUREMENTS, EXISTING CONDITIONS, SLOPES, PENETRATIONS, MINIMUM R-VALUE(S) AND ENSURE ALL FINAL DETAILS COMPLY WITH THE MANUFACTURER'S WARRANTY STANDARDS.
2. NO ALTERATIONS TO THE TAPERED INSULATION PLANS ARE PERMITTED WITHOUT FIRST NOTIFICATION, DISCUSSIONS AND APPROVAL FOR THE PROPOSED ALTERATIONS FROM THE DESIGNER AND OWNER'S REPRESENTATIVE.
3. LENGTH TO WIDTH RATIO OF SADDLES AND CRICKETS TO BE NO MORE THAN 3:1.
4. INSTALL SADDLES ON UPSLOPE SIDE OF ALL CURBS AND PENETRATIONS WHICH ARE 2 FEET OR MORE.
5. STAGGER ALL INSULATION JOINTS.
6. EVERY EFFORT HAS BEEN MADE TO VERIFY FIELD CONDITIONS. ADJUST INSULATION THICKNESS AS NEEDED BASED ON FIELD CONDITIONS TO MAXIMIZE R-VALUES AND SLOPES WHILE MAINTAINING CRITICAL CLEARANCES.



3 WIND LOADING - AREA J
SCALE: 1/8" = 1'-0"



2 WIND LOADING - AREA H
SCALE: 1/8" = 1'-0"



1 WIND LOADING - AREAS C, D (EAST), F (EAST), G, J
SCALE: 1/8" = 1'-0"

Indianapolis Office:
8888 Keystone Crossing
Suite 1300
Indianapolis, IN 46240
Phone: 463-230-8116

Detroit, MI
Chicago, IL
Kansas City, MO
Tiburon, CA
St. Louis, MO
Indianapolis, IN
Kansas City, MO
Minneapolis, MN
HQ: Waukesha, WI

Building Envelope Consultants, Ltd.
Design • Inspect • TEST

DATE:	NOTES:
8/28/2025	75% CD REVIEW SET
11/20/2025	95% CD REVIEW SET
1/9/2026	BID SET
1/23/2026	ADDENDUM #2 ⚠2

PROJECT NO.: N/A
INITIALS: JS/TL

IN130 INLOW HALL-REPLACE ROOF PHASE 2 (20240666)
INDIANA UNIVERSITY - INDIANAPOLIS
530 W. NEW YORK STREET
INDIANAPOLIS, IN 46202

SHEET TITLE:
WIND LOADING INFORMATION - AREAS C, D (EAST), F (EAST), G, H, J

SHEET NUMBER:
A1.3B

SECTION 07 22 24

ROOF INSULATION AND RE-COVER BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. Installation of replacement roof insulation at areas determined to contain wet/damaged existing roof insulation, additional overlying insulation, and re-cover board over existing roof systems.

B. **NOTE:** The scope of replacement insulation to be included in the base bid. No moisture testing was performed. Assume area of wet/damaged insulation is 10% of the roof area. Final contract costs to be adjusted based on actual field conditions, approvals and unit costs indicated on the bid form.

1.2 RELATED SECTIONS

A. Section 013300 – Submittal Procedures

B. Section 016000 – Product Requirements

C. Section 024104 – Selective Roof Removal and Preparation for Re-cover

D. Section 030150 – Concrete Roof Deck Repair

E. Section 053123 – Steel Roof Deck Repair and Replacement

F. Section 072215 - Underlayment for Roof Replacement

G. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other documents.

1.3 REFERENCES

A. Reference standards of the following sources are applicable to products and procedures specified in Part 2 - Products and Part 3 – Execution of this Section:
   1. American Society for Testing and Materials (ASTM)
      a. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board
      b. ASTM C1177 - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
      c. ASTM C1278 - Standard Specification for Fiber-Reinforced Gypsum Panel

1.4 SUBMITTALS

A. Prior to the start of work, submit the following to the Owner for approval:
   1. Product submittals required within Section 013300.

B. Refer to Section 013300 for procedural requirements related to the submittal process.

1.5 QUALITY ASSURANCE PROCEDURES

A. Applicator Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive a manufacturer's warranty. Company shall have a minimum of 10 years documented experience certified by roofing system manufacturer.

B. Single Source Responsibility: Roofing system materials and components shall be supplied and warranted by roofing system manufacturer for specified roofing system and shall be in compliance with specified regulatory requirements.

C. Examine the technical specifications and drawings. Verify all dimensions, detail conditions, roof plan notes and existing site conditions that may affect the work. Verification of existing dimensions and site conditions is the responsibility of the Contractor. No additional compensation will be considered for failure to verify existing dimensions, detail conditions, roof plan note callouts, and existing site conditions.

D. Upon examination, if conflicts between the technical specifications and drawings, and those of federal, state or local regulatory agencies, the product manufacturer, industry roofing standards, or Owner-mandated requirements are discovered, notify the Owner immediately for resolution.

E. During work, if conditions are discovered which do not allow for continuation of the work per the technical specifications and drawings, notify the Owner immediately for resolution.

1.6 DELIVERY, STORAGE AND HANDLING

A. Refer to Section 016000 for transport, handling, storage and product requirements.

B. Deliver materials in manufacturer's original containers, dry, undamaged, seals and labels intact.

C. Store materials in weather weather-protected environment, clear of ground and moisture. Cover insulation, roofing materials, and other moisture-sensitive products with a canvas tarp. Protect foam insulation from direct sunlight exposure.

D. Protect adjacent materials and surfaces against damage from roofing work. Do not store materials on previously completed roofing.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Do not perform work during inclement weather. Refer to product manufacturer for outdoor temperature requirements for installation of materials. Do not install materials at times when the outdoor temperature does not fall within the minimum/maximum temperature requirements of the manufacturer.

B. Cold weather precautions:
1. Store products that may be negatively affected by exposure to cold weather, such as primers, adhesives, sealants and cements, in a heated location. Refer to the roofing manufacturer and NRCA requirements and recommendations for additional cold weather application recommendations and restrictions.

C. Safety Data Sheets (SDSs) of all specified products shall remain on site for the duration of this project.

PART 2 – PRODUCTS

2.1 REPLACEMENT AND OVERLYING ROOF INSULATION

A. Polyisocyanurate roof insulation; ASTM C1289, Type II, Class 1, Grade 2 (20 psi); Density (2 pounds per cubic foot), HCFC-Free and Zero Ozone Depletion Potential (ODP); product type acceptable to the roofing membrane manufacturer.
   1. Thickness:
      a. For replacement insulation: To match existing roof system thickness with a maximum insulation board thickness of 2 inches.
      b. For overlying roof insulation: One layer of 2-inch thick insulation.
   2. Long Term Thermal Resistance (LTTR) Value: 5.6 minimum per inch.
   3. Board Size: 4-feet by 8-feet.

2.2 ROOF RE-COVER BOARD

A. Type: High-Density (HD) polyisocyanurate; ASTM C1289, Type II; minimum 109 psi compressive strength.

B. Thickness: 1/2-inch.

C. Board Size: 4-feet by 4-feet, unless otherwise recommended by the roofing membrane or cover board manufacturer.

2.3 CRICKET AND SADDLE INSULATION

A. Tapered polyisocyanurate roof insulation as necessary to achieve slopes and dimensions indicated in Article 3.3 and on the drawings, and as necessary to allow for proper drainage to existing drainage accessories; ASTM C1289, Type II, Class 1; Minimum 20 psi, Density (2 pounds per cubic foot); HCFC-Free and Zero Ozone Depletion Potential (ODP); product type acceptable to the roofing manufacturer.

2.4 INSULATION FASTENERS AND PLATES

A. For mechanical attachment of polyisocyanurate insulation and/or recover board (where specified): Fluorocarbon coated or galvanized self-drilling screw and plate system; product type acceptable to the roofing manufacturer. Fastener length as necessary to penetrate through cover board/insulation layer(s), and underlying existing roof system or replacement insulation. At steel deck areas, fasteners shall be of sufficient length to penetrate through the top steel deck flute a minimum of 3/4-inch, but no greater than 1-inch.
   1. Minimum insulation plate diameter: 3-inches.
   2. Minimum fastener size: No. 14.

2.5 ADHESIVE

A. Where specified, for adhering cover board, and bottom, intermediate, and top layer(s) of insulation, tapered insulation systems, and tapered insulation used in saddle and cricket construction where indicated in PART 3 of this Section: Two-component, low-rise, low VOCs, polyurethane foam adhesive; product acceptable to the roofing manufacturer and is capable of meeting the specified wind uplift requirements.

PART 3 - EXECUTION

3.1 GENERAL

A. Ensure that the substrate has been prepared as necessary, and is ready and acceptable to receive replacement insulation, overlying insulation, and re-cover board. Refer to Section 024104 for material removals and general work and substrate preparation requirements.

3.2 INSULATION AND RECOVER BOARD INSTALLATION

A. Closely butt the insulation boards and re-cover boards.

B. Stagger board joints by the maximum dimensions possible.

C. Neatly cut insulation and re-cover boards to fit around all penetrations through the roof deck. At locations where less than a full-sized sheet of insulation or recover board is required, use the largest size practical to fill in the area. Do not install numerous small sections of cover board or insulation at these locations.

D. Fill gaps between boards, and between boards and walls, curbs, blocking, and equipment with additional insulation material.

E. Protect all insulation and re-cover board from weather and standing water at all times. Do not install more insulation and recover board than can be completely covered with the roofing membrane on the same day.

F. Install temporary water cut-offs at the edges of insulation at the end of each workday.

G. Prior to installing the insulation, inspect the underside of the roof deck to determine if objects, such as sprinklers, lights, conduits, fans, or gas lines are attached to the deck. Exercise caution to ensure that insulation fasteners do not penetrate these objects.

H. Mechanical attachment of replacement and overlying polyisocyanurate insulation:
   1. Mechanical attachment: Fasteners shall penetrate into the deck, penetrating a minimum of 3/4-inch and a maximum of 1-inch into the top flute of the existing steel deck. Do not penetrate the bottom flute of the steel deck, or use fasteners that have the potential to extend beyond the bottom flute of the steel deck. Refer to the roofing manufacturer for instructions related to fastening pattern requirements.
   2. Fastening rates: Fasten insulation as necessary to hold in place until installation of overlying recover board is completed.

I. Mechanical attachment of re-cover board (Areas A, B, C and J):
   1. Mechanical attachment: Fasteners shall embed into the concrete deck a minimum of 1-inch. Refer to the roofing manufacturer for information and instructions related to installation fastening pattern requirements.
   2. Fastening rates:
      a. Field of roof: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 24 fasteners per 4’ X 8’ insulation board or 32 square feet (One fastener per 1.33 square feet).
      b. At perimeters: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 24 fasteners per 4’ X 8’ insulation board or 32 square feet (One fastener per 1.33 square feet).

c. At corners: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 36 fasteners per 4' X 8' insulation board or 32 square feet (One fastener per 0.89 square feet).

d. Roof Area C overhang only: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 54 fasteners per 4' X 8' insulation board or 32 square feet (One fastener per 0.59 square feet).

J. Mechanical attachment of re-cover board (Area E):

1. Mechanical attachment: Fasteners shall penetrate into the deck, penetrating a minimum of 3/4-inch and a maximum of 1-inch into the top flute of the existing steel deck. Do not penetrate the bottom flute of the steel deck, or use fasteners that have the potential to extend beyond the bottom flute of the steel deck. Refer to the roofing manufacturer for instructions related to fastening pattern requirements.
2. Fastening rates:
   a. Field of roof: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 24 fasteners per 4' X 8' insulation board or 32 square feet (One fastener per 1.33 square feet).
   b. At perimeters: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 24 fasteners per 4' X 8' insulation board or 32 square feet (One fastener per 1.33 square feet).
   c. At corners: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 32 fasteners per 4' X 8' insulation board or 32 square feet (One fastener per 1.00 square feet).

K. Mechanical attachment of re-cover board (Areas D, F and H):

1. Mechanical attachment: Fasteners shall penetrate into the deck, penetrating a minimum of 3/4-inch and a maximum of 1-inch into the top flute of the existing steel deck. Do not penetrate the bottom flute of the steel deck, or use fasteners that have the potential to extend beyond the bottom flute of the steel deck. Refer to the roofing manufacturer for instructions related to fastening pattern requirements.
2. Fastening rates:
   a. Field of roof: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 12 fasteners per 4' X 8' insulation board or 32 square feet (One fastener per 2.67 square feet).
   b. At perimeters: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 24 fasteners per 4' X 8' insulation board or 32 square feet (One fastener per 1.33 square feet).
   c. At corners and overhangs in roof area D: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 32 fasteners per 4' X 8' insulation board or 32 square feet (One fastener per 1.00 square feet).

L. Mechanical attachment of re-cover board (Area G):

1. Mechanical attachment: Fasteners shall penetrate into the deck, penetrating a minimum of 3/4-inch and a maximum of 1-inch into the top flute of the existing steel deck. Do not penetrate the bottom flute of the steel deck, or use fasteners that have the potential to extend beyond the bottom flute of the steel deck. Refer to the roofing manufacturer for instructions related to fastening pattern requirements.
2. Fastening rates:
   a. Field of roof: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 12 fasteners per 4' X 8' insulation board or 32 square feet (One fastener per 2.67 square feet).
   b. At perimeters: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 24 fasteners per 4' X 8' insulation board or 32 square feet (One fastener per 1.33 square feet).
   c. At corners: Mechanically-fasten through re-cover board, underlying insulation layer(s) and underlying existing roof system to remain in place, and into the underlying structural deck with specified insulation plates and fasteners. Secure at a rate of 32 fasteners per 4' X 8' insulation board or 32 square feet (One fastener per 1.00 square feet).

3.2 INSULATION SADDLE AND CRICKET INSTALLATION

A. Where indicated on the Project Drawings, install insulation saddles and crickets to provide positive drainage to drainage accessories. Unless otherwise indicated on the Project Drawings, the width and finished slope of saddles shall be:
   1. If the finished roof slope of the project roof area is 1/8-inch per foot, the finished slope of saddles shall be 1/4-inch per foot, and the length-to-width ratio of saddles shall be 2:1.
   2. If the finished roof slope of the project roof area is 1/4-inch per foot, the finished slope of saddles shall be 1/2-inch per foot, and the length-to-width ratio of saddles shall be 3:1.
   3. If the finished roof slope of the project roof area is 1/2-inch per foot, the finished slope of saddles shall be 1-inch per foot, and the length-to-width ratio of saddles shall be 4:1.

B. Adjust saddle and cricket dimensions, if necessary, to accommodate actual field conditions. Prior to saddle/cricket modifications, notify the Owner of proposed modifications for approval.

C. Adhere saddles and crickets using the specified adhesive.

D. Provide insulation crickets behind all roof curbs greater than 24-inches in width.

END OF SECTION