SECTION 072110 – CONTINUOUS INSULATED WALL SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Work includes.

   a. Polyisocyanurate Foam-Plastic Board - Insulated Air and Water-Resistive Barrier System: Provide in all exterior wall assemblies with masonry veneer.
   b. Board Faced Insulation and SI-Structural Insulation: Provide in all exterior wall assemblies with stucco and extruded aluminum wall panels.
   c. At the contractor's option, the contractor may use board faced insulation and SI-structural insulation as sheathing behind masonry walls providing the membrane air barriers are added on the face of the fire retardant plywood and the design of the masonry ties are modified to accommodate the different composition of the sheathing assembly.

B. Related Sections:

1. Division 01: Administrative, procedural, and temporary work requirements.
2. Section 042000 "Unit Masonry Assemblies" for brick veneer masonry ties.
3. Section 054000 "Cold-Formed Metal Framing" for metal exterior wall furring and framing assemblies.
4. Section 061600 "Sheathing" for incidental plywood sheathing.
5. Section 072726 "Fluid-Applied Membrane Air Barriers" for vapor-permeable, fluid-applied air barrier applied to fire retardant plywood face of board faced insulation and SI structural insulation.
6. Section 074293 "Extruded Aluminum Wall Panels"
7. Section 092400 "Cement Plastering" for stucco veneers.

1.2 SYSTEM DESCRIPTION

A. Furnish and install an exterior installation that effectively controls thermal, air and water performance and provides continuity of the building envelope enclosure while meeting fire code compliance per NFPA 285 without exterior gypsum wall sheathing. The system shall include the following:

1. Exterior wall insulation secured to the exterior of the metal wall framing assembly.
2. Joint, penetration and gap sealing material for sealing component joints, penetrations through the wall system and gaps between the building envelop enclosure components and wall opening frames.

B. Performance Characteristics:

1. Thermal performance: Exterior wall insulation tested per ASTM C518, shall have a stabilized R-value of 6.5 per inch of thickness with a minimum six month exposure capability to outdoor elements and 15 year thermal warranty.
2. Air barrier performance: When tested in accordance with ASTM E2357, at a test pressure of not less than 6.24 psf, air infiltration shall not exceed 0.04 cfm square foot of fixed wall area. Testing should be conducted at positive and negative sustained wind loading of 12.5 psf for one-hour duration in each direction, pressure cycling of the wall at 2000 cycles in both the positive and negative direction, ending with wind gust loading at 25 psf.
3. Water penetration: When tested in accordance with ASTM E331, no uncontrolled water penetration shall occur at a minimum differential pressure of 6.24 psf for minimum test durations of 2 hrs.
4. Mold resistance: Wall system components shall provide non-food source for fungal growth.

C. All joints, penetrations and gaps of the wall system shall be made watertight and airtight.

D. Fire Resistance:

1. System complies with NFPA 285.
2. Fire-stopping measures, per code, should be included at the floor line in the stud cavity when the wall assembly extends beyond the edge of the floor line.

E. Code Compliance: Exterior wall system and component materials shall comply with the following requirements:

1. Exterior Wall Insulation:

a. Class 1 (< 25 Flame Spread Index and < 450 Smoke Developed Index) classified at max. thickness per ASTM E84 criteria.
b. Fire Performance Evaluation as a component of an NFPA 285 approved wall assembly per the requirement of the International Building Code.

2. System complies with ASTM E2357.
3. System complies with NFPA 285.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM International) (www.astm.org):

1. C203 Test Method for Breaking Load and Flexural Properties of Block-Type Thermal Insulation.
2. C209 Test Methods for Cellulosic Fiber Insulating Board
3. C518 Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
4. C1289 Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
5. D1621 Standard Test Method for Compressive Properties Of Rigid Cellular Plastics.
6. D1622 Standard Test Method for Apparent Density of Rigid Cellular Plastics.
7. D2126 Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.
8. E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
9. E96 Standard Test Method for Water Vapor Transmission of Materials.
10. E331 Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.
11. E2357 Test Method for Determining Air Leakage of Air Barrier Assemblies.

B. National Fire Protection Association (NFPA) (www.nfpa.org):

1. NFPA 285 Standard Method of Test for the Evaluation of Flammability Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components Using the Intermediate-Scale, Multistory Test Apparatus.

C. Underwriters Laboratories (UL) (www.ul.com):

1. UL 1715 Room Fire Test Standard of Interior Finish Material.

1.4 SUBMITTALS

A. Submit under provisions of Section 013000 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:

1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings: Show fabrication and installation layouts of metal wall panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.

1. Accessories: Include details of all integral panel components and their interface with adjacent materials.
2. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

D. Samples:

1. Submit 12x12 inch sample(s) of exterior wall insulation
2. Submit 3 total sample(s) of each exterior wall insulation’s fasteners/washers and veneer anchors
3. Submit 5 inch long strip sample(s) of flashing
4. Submit 5 inch long strip sample(s) of sealant tape

1.5 QUALITY ASSURANCE:

A. Review field quality control procedures. Manufacturer Qualifications: All primary products specified in this section shall be supplied by a single manufacturer with a minimum ten years' experience.

B. Installer Qualifications: All products listed in this section shall be installed by a single installer with a minimum of five (5) years demonstrated experience in installing products of the same type and scope as specified.

1. Only skilled, trained workmen familiar with the specified exterior wall insulation and the various other components of the wall system shall be used to perform the required work.

C. Certificates of Compliance: Certification from an independent testing laboratory that insulation meets fire hazard classification requirements.

D. Pre-installation Meeting: Prior to commencement of work, review and document methods and procedures related to installation, including the following:

1. Participants: Authorized representatives of the Contractor,
2. Owner, Architect, Applicator, Independent Inspector.
3. Review metal wall framing assemblies for potential interference and conflicts and coordinate layout and support provisions for interfacing work.
4. Review exterior wall insulation methods and procedures related to application including manufacturer’s installation guidelines.
5. Review construction schedule and confirm availability of products, applicator personnel, equipment and facilities.
6. Review governing regulatory requirements, and requirements for insurance and certificates as applicable.
7. Review field quality control procedures.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Follow manufacturer’s recommendations for shipping, unloading, storage and handling to avoid damage to insulation materials and accessories.

B. Store and handle products per manufacturer's written instructions until ready for installation.

C. Store insulation bundles on pallets or other dunnage at least 4 inches above ground level. Dunnage supplied for shipment of the insulation shall not be used in storage of the materials. Bundles placed directly on the ground shall not be used on the project.

D. Insulation materials should be kept free of dirt and other foreign matter.

E. Protect insulation bundles from weather at the project site with additional coverage once off loaded at the site. The wrapping materials used to ship the bundles are not adequate for weather protection at the job site.

1. Wet insulation shall not be installed or sealed within a exterior wall assembly. Installation of wet insulation, tape, flashing or any other components within the wall assembly shall void the manufacturer’s warranty.

1.7 SEQUENCING

A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.

B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.8 PROJECT CONDITIONS

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

1.9 WARRANTY:

A. Submit the following warranties:

1. Exterior wall insulation: Six month exposure and 15 year thermal warranty
2. Tape: Limited Warranty
3. Flashing: Limited Warranty

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Manufacturer: Subject to compliance with requirements, provide products as manufactured by Rmax - Sika Corporation; 13524 Welch Rd.; Dallas, TX.

1. Subject to compliance with specifications, equal products by the following manufacturers will be considered per the requirements of Section 16000 “Product Requirements”:

a. Carlisle Coatings & Waterproofing Inc.
b. Dow Chemical Company (The).
c. Hunter Panels.

B. Accessory items listed below are produced by the basis-of-design product manufacturer. In consideration of one of the other manufacturers listed above, the specified accessory items must also be equal to those specified by the basis-of-design manufacturer.

C. Single Source: Provide insulation and accessories from the same manufacturer.

2.2 POLYISOCYANURATE FOAM-PLASTIC BOARD - INSULATED AIR AND WATER-RESISTIVE BARRIER SYSTEM

A. Insulated Air and Water-Resistive Barrier System: Complete single-source continuous insulation system including tapes and flashings. providing air and water-resistive barrier. Tested in accordance with ASTM E2357 and ICC-ES AC71 Acceptance Criteria for Foam Plastic Sheathing Panels Used As Water-Resistive Barriers and listed as an Air Barrier Association of America (ABAA) Evaluated Boardstock Air Barrier Assembly. The system incorporates polyisocyanurate foam insulation board, joint tapes, flashing tapes, liquid sealant, and flashing materials, by one manufacturer. Acceptable for inclusion in exterior wall assemblies when tested in accordance with NFPA 285 with or without exterior gypsum sheathing.

1. System substitutions not be permitted, except when the system substitution includes all components and materials, that have been tested by the manufacturer as a total system. Submission of documentation substantiating testing and compliance shall be required.
2. Exterior Usage in NFPA 285 Wall Assemblies:

a. System and all components to be installed within the system shall be acceptable for inclusion in NFPA 285 exterior wall assemblies, including those that do not include exterior gypsum sheathing.

B. System Insulation Board Component: ECOMAXci FR Air Barrier from Rmax.

1. Aluminum-Faced, Polyisocyanurate-Foam Insulating Sheathing: ASTM C1289, Type I, Class 1 or Class 2, rigid, cellular, polyisocyanurate thermal insulation, bonded to glass fiber reinforced aluminum facers on both sides. Heavy embossed 12 mil facer with aluminum reflective surface on exposed side.
2. Flame Spread Index and Smoke Contribution per ASTM E84:

a. Flame: 25 or less.
b. Smoke: 450 or less.

3. Water Vapor Permeability per ASTM E96 desiccant method: 0.03 perm or less.
4. Air Permeability per ASTM E2178: 0.004 cfm per sq ft or less.
5. Compressive Strength per ASTM D1621: 25 psi.
6. R-Value per ASTM C518: R-6.5 minimum at thickness of 1 inch and R-13.1 minimum at thickness of 2 inches.

7. Required Insulation Thickness and R-value: As indicated on the Drawings.

C. System Fastening Components:

1. General - Fasteners for Fastening Polyisocyanurate Wall Insulation to Light Gauge Metal Wall Framing:

a. Steel drill screws, in type and length recommended by insulating sheathing manufacturer for thickness of insulating sheathing to be attached, with organic - polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B117. Fasteners in contact with fire- retardant-treated wood shall be of suitable material or provided with coating suitable for such use.
b. Provide washers or plates if recommended by insulating sheathing manufacturer. Washers shall be compatible with screw fasteners.

2. Fasteners for Fastening Polyisocyanurate Wall Insulation to metal stud framed wall surfaces:

a. Self-drilling ceramic coated screw.

1) Product: Rodenhouse Grip-Deck screws.

3. Washers: Self-sealing for use with Self-drilling screws:

a. Self-sealing 2 inches diameter polymer washer, UV stabilized, tested, and approved to provide air and water-resistive seal, in combination with compatible self-drilling screw.

1) Product: Rodenhouse Thermal-Grip ci prong washer.

4. Washers: Self-sealing for use with barrel style brick ties:

a. Self-sealing 2 inches diameter UV stabilized polymer washer tested and approved to provide air and water-resistive seal, barrel-style brick ties.

1) Product: Rodenhouse Thermal-Grip brick tie washer.

D. System Joint Sealants, Joint Tapes, and Flashing Materials:

1. General - Joint Treatment and Flashing Components:

a. Material Standards:

1) AAMA 711: For self-adhered flashing and joint materials.
2) AAMA 714: For liquid applied flashing and joint materials.

b. Components for use at static joints, joining adjacent aluminum-faced insulation panels include liquid flashing, adhered joint tape, and adhered flashing and transition tape.
c. Components for use at static joints, joining aluminum-faced insulation and adjacent elements, including window and wall openings and items penetrating the insulation include: liquid flashing and adhered flashing and transition tape.
d. Components for use at dynamic joints at aluminum-faced insulation of up to 3/4 inch in width, shall be restricted to the use of flashing and transition tape, or materials and devices specifically designed to allow for dynamic movement.
e. Components for use at dynamic joints at aluminum-faced insulation over 3/4 inch in width, shall be restricted to the use of materials and devices specifically designed for such joint widths.

2. Liquid Flashing for Stationary Joint Treatment of Foil Faced Polyisocyanurate Insulation:

a. Product: Rmax R-SEAL 2000 LF sealant or comparable product.

1) One-component flexible flashing and water-resistive barrier sealant.
2) ASTM C920, Type S, Grade NS, Class 12.5, use NT, G, A, O, M.
3) Application Temperature Range: 40 to 104 degrees F.
4) Service Range: -40 to 170 degrees F.
5) Curing Rate:

a) Skin Formation Time: 60 to 90 minutes.
b) Cure Depth: 0.16 inch in 24 hours.

3. Joint Sealant Tape for Stationary Joint Treatment of Foil Faced Polyisocyanurate Insulation:
    a. Product: Rmax R-SEAL 3000 tape or comparable product.
        1) Dead soft aluminum foil coated with acrylic pressure-sensitive adhesive.
        2) Width: 4 inches.
        3) Width: 5 inches or use where coverage is necessary.
4. Flashing and Transition Tape for Joints Subject to Movement and Openings at Foil Faced Polyisocyanurate Insulation, and transition to other building materials.
    a. Product: Rmax R-SEAL 6000 tape or comparable product.
        1) Polyethylene membrane with butyl rubber adhesive.
        2) Width 9 and 12 inches.

2.3 BOARD FACED INSULATION AND SI-STRUCTURAL INSULATION

A. Fire-Retardant-Treated Nail Base Insulating Sheathing, Consisting of Aluminum-Faced, Polyisocyanurate-Foam Insulating Sheathing bonded to Fire-Retardant-Treated Plywood: ASTM C1289, Type V with Type I, Class 1 or Class 2, rigid, cellular, polyisocyanurate thermal insulation.

1. Basis of Design: Rmax; ECOMAXci FR Ply.
2. Flame Spread Index and Smoke Contribution per ASTM E84:
    a. Flame: 25 or less.
    b. Smoke: 450 or less.
3. Water Vapor Permeability per ASTM E96 desiccant method: 0.03 perm or less.
4. Air Permeability per ASTM E2178: 0.004 cfm per sq ft or less.
5. Compressive Strength per ASTM D1621:
    a. 20 psi.
6. R-Value of insulation component per ASTM C518: R-6.0 minimum at thickness of 1 inch and R-13.1 minimum at thickness of 2 inches.
7. Required Insulation Thickness and R-value: As indicated on the Drawings.
8. Exterior Usage in NFPA 285 Wall Assemblies:
    a. Acceptable for inclusion in NFPA 285 exterior wall assemblies, including those that do not include exterior gypsum sheathing.
9. Fire-Retardant-Treated Plywood Thickness:
    a. Fire-Retardant-Treated Plywood, Exposure 1: 3/4 inch.

2.4 ACCESSORIES

A. Insulation Fastener Components:

1. General - Fasteners for Fastening Polyisocyanurate Wall Insulation to Wood Framing Components, Light Gauge Metal Wall Framing Components and Wood and Metal Roof Decks:
    a. Steel drill screws, in type and length recommended by insulating sheathing manufacturer for thickness of insulating sheathing to be attached, with organic - polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B117. Fasteners in contact with fire- retardant-treated wood shall be of suitable material or provided with coating suitable for such use.
    b. Provide washers or plates if recommended by insulating sheathing manufacturer. Washers shall be compatible with screw fasteners.
2. Fasteners for Fastening Polyisocyanurate Wall Insulation to metal stud framed wall surfaces:
    a. Self-drilling ceramic coated screw.
        1) Product: Rodenhouse Grip-Deck screws or comparable products.

3. Nailboard Fasteners: Engineered for attaching nail base wall and roof panels to wood and metal framing and structural decks.
    a. Large-diameter, low profile pancake head, case hardened and tempered carbon steel, epoxy e-coat to comply with governing standards for use with treated wood including fire-retardant-treated wood.
        1) Product: TurFast; Nailboard Fasteners or comparable product.
    b. Thread Style and Point:
        1) SIPTP: Thread-point for wood and timber applications.
        2) SIPLD: Light-duty. Drill point for light gauge metal framing, corrugated steel deck, and wood applications.
        3) SIPHD: Heavy-duty. Drill point for thick steel member applications.
4. Washers: Self-sealing for use with Self-drilling screws:
    a. Self-sealing 2 inches diameter polymer washer, UV stabilized, tested, and approved to provide air and water-resistive seal, in combination with compatible self-drilling screw.
        1) Product: Rodenhouse Thermal-Grip ci prong washer or comparable product.
5. Washers: Self-sealing for use with barrel style brick ties:
    a. Self-sealing 2 inches diameter UV stabilized polymer washer tested and approved to provide air and water-resistive seal, barrel-style brick ties.
        1) Product: Rodenhouse Thermal-Grip brick tie washer or comparable product.
6. Washers: Perforated washers for use with self-drilling screws:
    a. Perforated face washers 1.75 inch diameter polymer washer, with additives for extended UV exposure for use in combination with compatible self- drilling screw.
        1) Product: Rodenhouse Plasti-Grip ci prong washer or comparable product.

B. Insulation Joint and Flashing Components:
1. General - Joint Treatment and Flashing Components:
    a. Material Standards:
        1) AAMA 711: For self-adhered flashing and joint materials.
        2) AAMA 714: For liquid applied flashing and joint materials.
    b. Components for use at static joints, joining adjacent aluminum-faced insulation panels include liquid flashing, adhered joint tape, and adhered flashing and transition tape.
    c. Components for use at static joints, joining aluminum-faced insulation and adjacent elements, including window and wall openings and items penetrating the insulation include: liquid flashing and adhered flashing and transition tape.
    d. Components for use at dynamic joints at aluminum-faced insulation of up to 3/4 inch in width, shall be restricted to the use of flashing and transition tape, or materials and devices specifically designed to allow for dynamic movement.
    e. Components for use at dynamic joints over 3/4 inch in width, shall be restricted to the use of materials and devices specifically designed for such joint widths.
2. Liquid Flashing for Stationary Joint Treatment of Foil Faced Polyisocyanurate Insulation:
    a. Product: Rmax R-SEAL 2000 LF sealant or comparable product.
        1) One-component flexible flashing and water-resistive barrier sealant.
        2) ASTM C920, Type S, Grade NS, Class 12.5, use NT, G, A, O, M.
        3) Application Temperature Range: 40 to 104 degrees F.
        4) Service Range: -40 to 170 degrees F.
        5) Curing Rate:
            a) Skin Formation Time: 60 to 90 minutes.

b) Cure Depth: 0.16 inch in 24 hours.

3. Joint Sealant Tape for Stationary Joint Treatment of Foil Faced Polyisocyanurate Insulation:

a. Product: Rmax R-SEAL 3000 tape or comparable product.

1) Dead soft aluminum foil coated with acrylic pressure-sensitive adhesive.
2) Width: 4 inches.
3) Width: 5 inches for use where coverage is necessary.

4. Flashing and Transition Tape for Joints Subject to Movement and Openings at Foil Faced Polyisocyanurate Insulation, and transition to other building materials.

a. Product: Rmax R-SEAL 6000 tape or comparable product.

1) Polyethylene membrane with butyl rubber adhesive.
2) Width 9 and 12 inches.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Confirm that all building structural steel members have been erected. Exterior wall stud framing finished surfaces shall be clean and free of irregularities that will affect the placement or performance of the insulated wall system, including, but not limited to dirt, debris, miscellaneous fasteners or warped, defective or otherwise damaged framing.

B. Confirm that the metal exterior wall steel stud framing bottom track sitting on the floor and the top track attached to the ceiling have been sealed per standard building practices to prevent air leakage at these locations.

C. Verify that metal wall studs, opening framing, bridging, bracing and other framing support members and anchorage have been installed within thermal wall system alignment tolerances and requirements.

3.2 PREPARATION

A. Do not proceed with installation until unsatisfactory conditions have been corrected.

B. Installation of the insulative wall system constitutes acceptance of existing conditions and responsibility for satisfactory performance.

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

D. Do not be proceed with installation during adverse weather conditions or when adverse conditions are anticipated.

E. Do not install wall system components on walls when water of any type is present. Do not apply any wall system component that is damp or wet.

F. If insulation boards get wet, ensure they are fully air dried before installing, sealing or covering.

G. Verify that all surfaces to receive flashing, sealant tape and sealant are free of frost, oil, grease, oxidation, dirt, loose paint, loose scale, or other deleterious materials that would impair bond.

H. Verify that items required to penetrate the thermal wall system are placed and penetrations gaps and cracks are properly sealed before installation is complete.

I. At no point between working days should the work be left partially taped. All taping and flashing of a started section shall be completed and all exposed foam edges shall be sealed before the work day ends.

3.3 WALL SYSTEM INSTALLATION

A. Install insulative wall system in accordance with manufacturer's recommendations. Properly installed exterior wall insulation will completely cover all exposed steel framing members without gaps, voids, or compressions, and it will also act as the exterior air and water barrier material.

1. Starting at an end wall condition, where possible, the insulation boards should be placed on the wall with the long dimension horizontal and level to the floor/slab. The insulation boards should be oriented with the manufacturer's label facing the exterior side of the building.
2. Each row of insulation should be staggered a minimum of one stud spacing to the row below. All boards must be tightly abutted together.
3. Each insulation board shall be secured with a fastening pattern of 12 inches o.c. along the edge of each exterior wall facade and at the perimeter of each board where backed by framing. The pattern shall be 16 inch o.c. in the field along framing.
4. Plates/washers should never break the foil facing of the boards. Do not counter sink plates/washers.
5. One fastener can be used to bridge a maximum of three adjacent board joints.
6. The bottom edge of the lowest row of boards along each wall facade should be placed a minimum of 1 inch below finished floor where possible or as noted on the architectural plans. The top edge of the highest row of boards along each wall facade should be placed at the top of the parapet or stud framing.
7. At changes in wall directions (corners) the boards should snugly fit in an overlap.
8. 4 inch wide joint tape shall be used to seal all joints of adjacent insulation boards, as well as cover all insulation fasteners. It can also be used to repair minor damages to the foil facer of the board.
9. Any damages to the foam core and major damages to the foil facing that occur during installation must be replaced by fully cutting out the damaged area. The removed piece should be large enough to span entire stud spacing to ensure new joints are backed by framing. A new piece of insulation board can be cut to fill the open area. This new piece shall be fastened and sealed similar to other insulation boards as outlined in this document.
10. All surfaces to which the sealant tape and flashing are to be applied should be free of moisture, oils, dust, dirt and other debris that could inhibit adhesion. Clean surfaces with a dry cloth as necessary.
11. Center tape along joint and fastener locations. Maintain a minimum 3/4 inch radial coverage beyond plastic washers. Do not allow the tape to form voids or buckle as it is applied.
12. Apply tape in a shingle like fashion, working from bottom of the section up. In other words, first apply tape to the bottom horizontal joint, then both vertical joints and finally the top horizontal joint. A minimum of 2 inch overlap is required when connecting ends of tape segments.
13. 9 inch or 12 inch wide flashing and transition strip must be used to seal at corners, ceiling and floor transitions, windows, doors and other through wall penetrations.
14. Use standard flashing practices. Flashing should always be installed in a shingle-like fashion, starting with the bottom and working up.
15. Flashing and transition strip shall be used at board terminations including but not limited to: building foundations, slabs, shelf protrusions, roofing membranes or blocking, to seal the end joints where butyl rubber tape is compatible.
16. When installing the exterior veneer, care should be taken to minimize the damage to the insulation, tape, and flashing so as not to break the water and air seal provided by the insulative wall system. Any damages beyond anchor penetrations must be repaired.
17. The insulative wall system is non-structural and must not be used to support any exterior cover materials.
18. Exterior anchor penetrations such as brick ties must be sealed using the manufacturer's recommended sealant.
19. For all other veneer penetrations, consult manufacturer's installation instructions for more details on how to maintain water and air barriers.

END OF SECTION 072110