

SECTION 07241 - EXTERIOR INSULATION AND FINISH SYSTEMS - CLASS PB

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
  - 1. Exterior insulation and finish system (EIFS) with drainage applied over the following:
    - a. Gypsum sheathing.
- B. Related Sections include the following:
  - 1. Division 5 Section "Cold-Formed Metal Framing" for metal framing.
  - 2. Division 7 Section "Joint Sealants" for sealing joints in EIFS with elastomeric joint sealants.
  - 3. Division 9 Section "Gypsum Sheathing" for gypsum sheathing.

1.3 DEFINITIONS

- A. EIFS: Exterior insulation and finish system(s).
- B. Class PB EIFS: A "nonload bearing, exterior wall cladding system that consists of an insulation board attached either adhesively, mechanically, or both to the substrate; an integrally reinforced base coat; and a textured protective finish coat," as defined by ASTM C 1397.

1.4 PERFORMANCE REQUIREMENTS

- A. EIFS Performance: Comply with the following:
  - 1. Bond Integrity: Free from bond failure within EIFS components or between system and supporting wall construction, resulting from exposure to fire, wind loads, weather, or other in-service conditions.
  - 2. Weather tightness: Resistant to water penetration from exterior into EIFS and assemblies behind it or through them into interior of building that results in deterioration of thermal-insulating effectiveness or other degradation of EIFS and assemblies behind it, including substrates, supporting wall construction, and interior finish.
- B. Class PB EIFS: Provide EIFS having physical properties and structural performance that comply with the following when tested per methods referenced:

1. Abrasion Resistance: Sample consisting of 1-inch-thick EIFS mounted on 1/2-inch-thick gypsum board; cured for a minimum of 28 days; and showing no cracking, checking, or loss of film integrity after exposure to 528 quarts of sand when tested per ASTM D 968, Method A.
2. Accelerated Weathering Characteristics: Sample of size suitable for test equipment and consisting of 1-inch-thick EIFS mounted on 1/2-inch-thick gypsum board; cured for 28 days; and showing no cracking, checking, crazing, erosion, rusting, blistering, peeling, or delamination after testing for 2000 hours when viewed under 5 times magnification per ASTM G 23, Method 1.
3. Absorption-Freeze Resistance: No visible deleterious effects and negligible weight loss after 60 cycles per EIMA 101.01.
4. Mildew Resistance of Finish Coat: Sample applied to 2-by-2-inch clean glass substrate, cured for 28 days, and showing no growth when tested per ASTM D 3273.
5. Salt-Spray Resistance: Sample consisting of 1-inch-thick EIFS mounted on 1/2-inch-thick gypsum board; cured for 28 days; and showing no cracking, checking, crazing, erosion, rusting, blistering, peeling, or delamination after testing for 300 hours per ASTM B 117.
6. Tensile Adhesion: No failure in the adhesive, base coat, or finish coat. Minimum 5-psi tensile strength before and after freeze-thaw and accelerated weathering tests per EIMA 101.03.
7. Water Penetration: Sample consisting of 1-inch-thick EIFS mounted on 1/2-inch thick gypsum board, cured for 28 days, and showing no water penetration into the plane of the base coat to expanded polystyrene board interface of the test specimen after 15 minutes at 6.24 lbf/sq. ft. of air pressure difference or 20 percent of positive design wind pressure, whichever is greater, across the specimen during a test period when tested per EIMA 101.02.
8. Water Resistance: Sample consisting of 1-inch-thick EIFS mounted on 1/2-inch-thick gypsum board; cured for 28 days; and showing no cracking, checking, crazing, erosion, rusting, blistering, peeling, or delamination after testing for 14 days per ASTM D 2247.
9. Impact Resistance: Sample consisting of 1-inch-thick EIFS when constructed, conditioned, and tested per EIMA 101.86; and meeting or exceeding the following impact classification and range:
  - a. Standard Impact Resistance: 25 to 49 inch-lb.
  - b. High Impact Resistance: 90 to 150 inch-lb.
  - c. Ultra-High Impact Resistance: More than 150 inch-lb.
10. Positive and Negative Wind-Load Performance: Sample assembly, 48 by 48 inches in size, consisting of studs, sheathing, and 1-inch-thick EIFS; and showing capability to withstand wind loads indicated when tested per ASTM E 330.
11. Drainage: 3 samples capable of draining water, and having an average minimum true drainage efficiency of 90 percent when tested per EIMA 200.2.

C. Water-/Weather-Resistive-Barrier Coating: With physical properties that comply with the following when tested on substrate per methods referenced:

1. Tensile Adhesion: No failure in bond when 5 samples of water-/weather-resistive coating are applied to substrate and tested at a minimum 15-psi flat wise tensile strength per ASTM C 297.
2. Absorption-Freeze Resistance: No visible deleterious effects and negligible weight loss after 60 cycles per EIMA 101.01.
3. Water Penetration: 3 samples each sized not less than 4 by 8 feet; consisting of coating applied to substrate including a minimum of 2 vertical joints and 1 horizontal joint within sheathing substrate, each joint not less than 0.125 inch wide; and tested sequentially as follows:
  - a. Passing 10 cycles at 80 percent positive design load (design load is defined as ultimate load with a safety factor of 3.0 imposed) as the maximum test load when tested in accordance with ASTM E 1233, Procedure A.
  - b. No water penetration on the plane of the exterior-facing side of substrate after 75 minutes at 6.24 lbf/sq. ft. of air-pressure difference or 20 percent of positive design wind pressure, whichever is greater, across the specimen during a test period when tested per ASTM E 331.

4. Water Resistance: 3 samples, each sized not less than 4 by 6 inches and consisting of coating applied to substrate, showing no cracking, checking, crazing, erosion, blistering, peeling, or delamination after testing for 14 days per ASTM D 2247.
5. Water Vapor Transmission: Three samples prepared by applying the coating, at recommended thickness, to a nonadhesive surface and removing cured coating film. Average thickness is determined from material density, area, and weight and samples are tested per ASTM E 96 after conditioning at 75 plus or minus 5 deg F (24 plus or minus 3 deg C) and 50 percent relative humidity for 40 hours before testing, with results meeting or exceeding grade requirements in Table 14-1-A of UBC Standard 14-1.

## 1.5 SUBMITTALS

- A. Product Data: For each type and component of EIFS indicated.
- B. Shop Drawings: For EIFS. Include plans, elevations, sections, details of components, details of penetration and termination, flashing details, joint locations and configurations, fastening and anchorage details including mechanical fasteners, and connections and attachments to other work.
- C. Samples for Initial Selection: For each type of finish-coat color and texture indicated.
  1. Include similar Samples of joint sealants and exposed accessories involving color selection.
- D. Samples for Verification: 24-inch-square panels for each type of finish-coat color and texture indicated, prepared using same tools and techniques intended for actual work including an aesthetic reveal, a typical control joint filled with sealant of color selected.
  1. Include sealants and exposed accessory samples to verify color selected.
- E. Manufacturer Certificates: Signed by manufacturers certifying that EIFS and joint sealants comply with requirements.
- F. Qualification Data: For Installer and testing agency.
- G. Material Test Reports: For each water-/weather-resistive barrier, insulation, reinforcing mesh, joint sealant, and coating.
- H. Material Certificates: For each insulation and joint sealant, signed by manufacturers or a third-party agency approved by EIFS manufacturer.
- I. Compatibility and Adhesion Test Reports: For joint sealants from sealant manufacturer indicating the following:
  1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
  2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- J. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for EIFS.
- K. Research/Evaluation Reports: For water-/weather-resistive barrier, insulation and EIFS.
- L. Maintenance Data: For EIFS to include in maintenance manuals.

## 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An installer who is certified in writing by EIFS manufacturer as qualified to install manufacturer's system using trained workers.
- B. Source Limitations: Obtain EIFS through one source from a single EIFS manufacturer and from sources approved by EIFS manufacturer as compatible with system components.
- C. Fire-Test-Response Characteristics: Provide EIFS and system components with the following fire-test-response characteristics as determined by testing identical EIFS and system components per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify products with appropriate markings of applicable testing and inspecting agency.
  - 1. Fire-Resistance Characteristics: Provide materials and construction tested for fire resistance per ASTM E 119.
  - 2. Full-Scale, Multistory Fire Test: Tested mockup, representative of completed multistory wall assembly of which EIFS is a part, complies with UBC Standard 26-4 or UBC Standard 26-9 for test method and required fire-test-response characteristics of exterior non-load-bearing wall panel assemblies containing foam-plastic insulation.
    - a. Provide 2 panels, 72 by 120 inches, consisting of protective finish coat and 4-inch-thick insulation applied to 1/2-inch-thick gypsum board; cured for 28 days; with protective finish coat removed to leave surface of insulation exposed on 1 panel in an area 4 inches high by 24 inches wide and centered 24 inches above bottom edge of panel.
  - 3. Radiant Heat Exposure: No ignition of EIFS when tested according to NFPA 268.
  - 4. Radiant Heat Exposure, Unrestricted Installation: Tolerable level of incident radiant heat energy of at least 12.5 kW/sq. m when tested according to the BOCA Code.
  - 5. Surface-Burning Characteristics: Provide insulation board, adhesives, base coats, and finish coats with flame-spread index of 25 or less and smoke-developed index of 450 or less, per ASTM E 84.
- D. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution and set quality standards for fabrication and installation.
  - 1. Approval of mockups is also for other material and construction qualities specifically approved by Architect in writing.
  - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless such deviations are specifically approved by Architect in writing.
- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original, unopened packages with manufacturers' labels intact and clearly identifying products.
- B. Store materials inside and under cover; keep them dry and protected from weather, direct sunlight, surface contamination, aging, corrosion, damaging temperatures, construction traffic, and other causes.
  - 1. Stack insulation board flat and off the ground.

2. Protect plastic insulation against ignition at all times. Do not deliver plastic insulating materials to Project site before installation time.
3. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

## 1.8 PROJECT CONDITIONS

- A. Weather Limitations: Maintain ambient temperatures above 40 deg F for a minimum of 24 hours before, during, and after adhesives or coatings are applied. Do not apply EIFS adhesives or coatings during rainfall. Proceed with installation only when existing and forecasted weather conditions and ambient outdoor air and substrate temperatures permit EIFS to be applied, dried, and cured according to manufacturers' written instructions and warranty requirements.

## 1.9 COORDINATION

- A. Coordinate installation of EIFS with related Work specified in other Sections to ensure that wall assemblies, including sheathing, water-/weather-resistive barrier, flashing, trim, joint sealants, windows, and doors, are protected against damage from the effects of weather, age, corrosion, moisture, and other causes. Do not allow water to penetrate behind flashing and water-/weather-resistive barrier behind EIFS with drainage.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  1. Class PB EIFS with Drainage:
    - a. Bonsal, W. R. Co.
    - b. Dryvit Systems, Inc.
    - c. Sonneborn, Div. of ChemRex, Inc.; SKW-MBT Construction Chemicals.
    - d. Sto Corp.
    - e. USG Corp.
- B. Basis-of-Design Product: The design for EIFS with drainage is based on Outsulation Plus system as manufacturer Dryvit Systems, Inc.

### 2.2 MATERIALS

- A. Compatibility: Provide substrates, water-/weather-resistive barriers, adhesive, fasteners, board insulation, reinforcing meshes, base- and finish-coat systems, sealants, and accessories that are compatible with one another and approved for use by EIFS manufacturer for Project.
- B. Colors, Textures, and Patterns of Finish Coat: As selected by Architect from manufacturer's full range.
- C. Water-/Weather-Resistive Barrier: Provide the following:

1. Water-/Weather-Resistive-Barrier Coating: EIFS manufacturer's standard formulation and accessories designed for indicated use, compatible with substrate, and complying with performance requirements indicated.
  - a. Sheathing Joint Compound and Tape: Type recommended by EIFS manufacturer for sealing joints between and penetrations through sheathing.
  
- D. Primer/Sealer: EIFS manufacturer's standard substrate conditioner designed to seal substrates from moisture penetration and to improve the bond between substrate of type indicated and adhesive used for application of insulation.
  
- E. Flexible-Membrane Flashing: Cold-applied, fully self-adhering, self-healing, rubberized-asphalt and polyethylene-film composite sheet or tape and primer; EIFS manufacturer's standard or product recommended in writing by EIFS manufacturer.
  
- F. Drainage Mat: Three-dimensional, nonwoven, entangled filament, nylon or plastic mat designed to drain incidental moisture by gravity; EIFS manufacturer's standard or product recommended in writing by EIFS manufacturer.
  
- G. Adhesive for Application of Insulation: EIFS manufacturer's standard formulation designed for indicated use, compatible with substrate, and complying with one of the following requirements:
  1. Job-mixed formulation of Portland cement complying with ASTM C 150, Type I, and polymer-based adhesive specified for base coat.
  2. Factory-blended dry formulation of Portland cement, dry polymer admixture, and fillers specified for base coat.
  3. Factory-mixed noncementitious formulation designed for adhesive attachment of insulation to substrates of type indicated, as recommended by EIFS manufacturers.
  
- H. Molded, Rigid Cellular Polystyrene Board Insulation: Comply with EIFS manufacturer's requirements, ASTM C 578 for Type I, and EIMA's "EIMA Guideline Specification for Expanded Polystyrene (EPS) Insulation Board" for more stringent requirements for material performance and qualities of insulation, including dimensions and permissible variations, and the following:
  1. Aging: Before cutting and shipping, age insulation in block form by air drying for not less than six weeks or by another method approved by EIMA that produces equivalent results.
  2. Flame-Spread and Smoke-Developed Indexes: 25 and 450 or less, respectively, per ASTM E 84.
  3. Dimensions: Provide insulation boards not more than 24 by 48 inches and in thickness indicated but not more than 4 inches thick or less than thickness allowed by ASTM C 1397.
  
- I. Reinforcing Mesh: Balanced, alkali-resistant, open-weave glass-fiber mesh treated for compatibility with other EIFS materials, made from continuous multiend strands with retained mesh tensile strength of not less than 120 lbf/in. per EIMA 105.01, complying with ASTM D 578 and the following requirements for minimum weight:
  1. Standard-Impact Reinforcing Mesh: Not less than 4.0 oz./sq. yd.
  2. Heavy-Duty Reinforcing Mesh: Not less than 20 oz./sq. yd.
  3. Strip Reinforcing Mesh: Not less than 3.75 oz./sq. yd.
  4. Detail Reinforcing Mesh: Not less than 4.0 oz./sq. yd.
  5. Corner Reinforcing Mesh: Not less than 7.2 oz./sq. yd.
  
- J. Base-Coat Materials: EIFS manufacturer's standard mixture complying with one of the following requirements for material composition and method of combining materials:

1. Job-mixed formulation of Portland cement complying with ASTM C 150, Type I, white or natural color; and manufacturer's standard polymer-emulsion adhesive designed for use indicated.
  2. Job-combined formulation of manufacturer's standard polymer-emulsion adhesive and manufacturer's standard dry mix containing Portland cement.
  3. Factory-blended dry formulation of Portland cement, dry polymer admixture, and inert fillers to which only water is added at Project site.
  4. Factory-mixed noncementitious formulation of polymer-emulsion adhesive and inert fillers that is ready to use without adding other materials.
- K. Waterproof Adhesive/Base-Coat Materials: EIFS manufacturer's standard waterproof mixture complying with one of the following requirements for material composition and method of combining materials:
1. Job-mixed formulation of Portland cement complying with ASTM C 150, Type I, white or natural color; and manufacturer's standard polymer-emulsion adhesive designed for use indicated.
  2. Job-combined formulation of manufacturer's standard polymer-emulsion adhesive and manufacturer's standard dry mix containing Portland cement.
- L. Finish-Coat Materials: EIFS manufacturer's standard acrylic-based coating complying with the following requirements for material composition and method of combining materials:
1. Factory-mixed formulation of polymer-emulsion binder, colorfast mineral pigments, sound stone particles, and fillers.
- M. Water: Potable.
- N. Trim Accessories: Type as designated or required to suit conditions indicated and to comply with EIFS manufacturer's written requirements; manufactured from UV-stabilized PVC; and complying with ASTM D 1784, manufacturer's standard Cell Class for use intended, and ASTM C 1063.
1. Casing Bead: Prefabricated one-piece type for attachment behind insulation, of depth required to suit thickness of coating and insulation, with face leg perforated for bonding to coating and back leg.
  2. Drip Screed/Track: Prefabricated one-piece type for attachment behind insulation with face leg extended to form a drip, of depth required to suit thickness of coating and insulation, with face leg perforated for bonding to coating and back leg.
  3. Weep Screed/Track: Prefabricated one-piece type for attachment behind insulation with perforated face leg extended to form a drip and weep holes in track bottom, of depth required to suit thickness of coating and insulation, with face leg perforated for bonding to coating and back leg; designed to drain incidental moisture that gets into wall construction to the exterior at terminations of EIFS with drainage.
  4. Expansion Joint: Prefabricated one-piece V profile; designed to relieve stress of movement.
  5. Window Sill Flashing: Prefabricated type for both flashing and sloping sill over framing beneath windows; with end and back dams; designed to direct water to exterior.

## 2.3 ELASTOMERIC SEALANTS

- A. Elastomeric Sealant Products: Provide EIFS manufacturer's listed and recommended chemically curing, elastomeric sealant that is compatible with joint fillers, joint substrates, and other related materials, and complies with requirements for products and testing indicated in EIMA's "EIMA Guide for Use of Sealants with Exterior Insulation and Finish Systems, Class PB" and with requirements in Division 7 Section "Joint Sealants" for products corresponding to description indicated below:
1. Low-modulus, multicomponent, nonsag urethane sealant.

- B. Preformed Foam Sealant Products: Provide sealant compatible with adjacent materials and complying with requirements in Division 7 Section "Joint Sealants."
- C. Sealant Color: As selected by Architect from manufacturer's full range.

## 2.4 MIXING

- A. General: Comply with EIFS manufacturer's requirements for combining and mixing materials. Do not introduce admixtures, water, or other materials except as recommended by EIFS manufacturer. Mix materials in clean containers. Use materials within time period specified by EIFS manufacturer or discard.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of EIFS.
- B. Examine roof edges, wall framing, flashings, openings, substrates, and junctures at other construction for suitable conditions where EIFS will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Protect contiguous work from moisture deterioration and soiling caused by application of EIFS. Provide temporary covering and other protection needed to prevent spattering of exterior finish coats on other work.
- B. Protect EIFS, substrates, and wall construction behind them from inclement weather during installation. Prevent penetration of moisture behind drainage plane of EIFS and deterioration of substrates.
- C. Prepare and clean substrates to comply with EIFS manufacturer's written requirements to obtain optimum bond between substrate and adhesive for insulation.
- D. Primer/Sealer: Apply over gypsum sheathing substrates to protect substrates from degradation and where required by EIFS manufacturer for improving adhesion of insulation to substrate.
- E. Water-/Weather-Resistive-Barrier Coating: Apply over substrates to protect substrates from degradation and to provide water-/weather-resistive barrier.
  - 1. Tape and seal joints, exposed edges, terminations, and inside and outside corners of sheathing, unless otherwise indicated by EIFS manufacturer's written instructions.
- F. Flexible-Membrane Flashing: Install over weather-resistive barrier, applied and lapped to shed water; seal at openings, penetrations, terminations, and where indicated by EIFS manufacturer's written instructions to protect wall assembly from degradation. Prime substrates, if required, and install flashing to comply with EIFS manufacturer's written instructions and details.

### 3.3 EIFS INSTALLATION

- A. General: Comply with ASTM C 1397 and EIFS manufacturer's written instructions for installation of EIFS as applicable to each type of substrate indicated.
- B. Trim: Apply trim accessories at perimeter of EIFS, at expansion joints, at window sills, and elsewhere as indicated, according to EIFS manufacturer's written instructions. Coordinate with installation of insulation.
  - 1. Drip Screed/Track: Use at bottom edges of EIFS, unless otherwise indicated.
  - 2. Weep Screed/Track: Use at bottom termination edges, at window and door heads, and at floor line expansion joints of EIFS with drainage, unless otherwise indicated.
  - 3. Window Sill Flashing: Use at windows, unless otherwise indicated.
  - 4. Expansion Joint: Use where indicated on Drawings.
  - 5. Casing Bead: Use at other locations.
- C. Drainage Mat: Apply wrinkle free, continuously, with edges and adhesively secured over water-/weather-resistive barrier according to manufacturer's written instructions.
- D. Board Insulation: Adhesively attach insulation to substrate in compliance with ASTM C 1397, EIFS manufacturer's written requirements, and the following:
  - 1. Apply adhesive to insulation by notched-trowel method in a manner that results in coating the entire surface of drainage mat with adhesive once insulation is adhered to drainage mat.
  - 2. Press and slide insulation into place. Apply pressure over the entire surface of insulation to accomplish uniform contact, high initial grab, and overall level surface.
  - 3. Apply insulation over drainage mat and dry substrates in courses with long edges of boards oriented horizontally.
  - 4. Begin first course of insulation from a level base line and work upward.
  - 5. Begin first course of insulation from screed/track and work upward. Work from perimeter casing beads toward interior of panels if possible.
  - 6. Stagger vertical joints of insulation boards in successive courses to produce running bond pattern. Locate joints so no piece of insulation is less than 12 inches wide or 6 inches high. Offset joints not less than 6 inches from corners of window and door openings and not less than 4 inches from aesthetic reveals.
    - a. Adhesive Attachment: Offset joints of insulation not less than 6 inches from horizontal and 4 inches from vertical joints in sheathing.
  - 7. Interlock ends at internal and external corners.
  - 8. Abut insulation tightly at joints within and between each course to produce flush, continuously even surfaces without gaps or raised edges between boards. If gaps greater than 1/16 inch occur, fill with insulation cut to fit gaps exactly; insert insulation without using adhesive or other material.
  - 9. Cut insulation to fit openings, corners, and projections precisely and to produce edges and shapes complying with details indicated.
  - 10. Rasp or sand flush entire surface of insulation to remove irregularities projecting more than 1/32 inch from surface of insulation and to remove yellowed areas due to sun exposure; do not create depressions deeper than 1/16 inch.
  - 11. Cut aesthetic reveals in outside face of insulation with high-speed router and bit configured to produce grooves, rabbets, and other features that comply with profiles and locations indicated. Do not reduce insulation thickness at aesthetic reveals to less than 3/4 inch.
  - 12. Interrupt insulation for expansion joints where indicated.
  - 13. Form joints for sealant application by leaving gaps between adjoining insulation edges and between insulation edges and dissimilar adjoining surfaces. Make gaps wide enough to produce joint widths indicated after encapsulating joint substrates with base coat and reinforcing mesh.

14. After installing insulation and before applying field-applied reinforcing mesh, fully wrap board edges. Cover edges of board and extend encapsulating mesh not less than 2-1/2 inches over front and back face, unless otherwise indicated on Drawings.
  15. Treat exposed edges of insulation as follows:
    - a. Except for edges forming substrates of sealant joints, encapsulate with base coat, reinforcing mesh, and finish coat.
    - b. Encapsulate edges forming substrates of sealant joints within EIFS or between EIFS and other work with base coat and reinforcing mesh.
    - c. At edges trimmed by accessories, extend base coat, reinforcing mesh, and finish coat over face leg of accessories.
  16. Coordinate installation of flashing and insulation to produce wall assembly that does not allow water to penetrate behind flashing and water-/weather-resistive barrier.
- E. Expansion Joints: Install at locations indicated, where required by EIFS manufacturer, and as follows:
1. Where expansion joints are indicated in substrates behind EIFS.
  2. Where EIFS adjoin dissimilar substrates, materials, and construction.
  3. Where wall height changes.
- F. Base Coat: Apply to exposed surfaces of insulation in minimum thickness recommended in writing by EIFS manufacturer, but not less than 1/16-inch dry-coat thickness.
- G. Reinforcing Mesh: Embed type indicated below in wet base coat to produce wrinkle-free installation with mesh continuous at corners and overlapped not less than 2-1/2 inches or otherwise treated at joints to comply with ASTM C 1397 and EIFS manufacturer's written requirements. Do not lap reinforcing mesh within 8 inches of corners. Completely embed mesh, applying additional base-coat material if necessary, so reinforcing-mesh color and pattern are not visible.
1. Standard-impact reinforcing mesh, unless otherwise indicated.
  2. Heavy-duty reinforcing mesh from grade to 8'-0" height.
- H. Additional Reinforcing Mesh: Apply strip reinforcing mesh around openings extending 4 inches beyond perimeter. Apply additional 9-by-12-inch strip reinforcing mesh diagonally at corners of openings (re-entrant corners). Apply 8-inch-wide strip reinforcing mesh at both inside and outside corners unless base layer of mesh is lapped not less than 4 inches on each side of corners.
1. At aesthetic reveals, apply strip reinforcing mesh not less than 8 inches wide.
  2. Embed strip reinforcing mesh in base coat before applying first layer of reinforcing mesh.
- I. Shapes: Fully embed reinforcing mesh in base coat.
- J. Finish Coat: Apply over dry base coat, maintaining a wet edge at all times for uniform appearance, in thickness required by EIFS manufacturer to produce a uniform finish of color and texture matching approved sample and free of cold joints, shadow lines, and texture variations.

### 3.4 INSTALLATION OF JOINT SEALANTS

- A. Prepare joints and apply sealants, of type and at locations indicated, to comply with applicable requirements in Division 7 Section "Joint Sealants" and in EIMA's "EIMA Guide for Use of Sealants with Exterior Insulation and Finish Systems, Class PB."

1. Clean surfaces to receive sealants to comply with indicated requirements and EIFS manufacturer's written instructions.
2. Apply primer recommended in writing by sealant manufacturer for surfaces to be sealed.
3. Install sealant backing to control depth and configuration of sealant joint and to prevent sealant from adhering to back of joint.
4. Apply masking tape to protect areas adjacent to sealant joints. Remove tape immediately after tooling joints, without disturbing joint seal.
5. Apply joint sealants after base coat has cured but before applying finish coat.
6. Install double sealant / backer rod at all joints as indicated.

### 3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Remove and replace EIFS where test results indicate that EIFS do not comply with specified requirements.
- C. Additional testing and inspecting, at Contractor's expense, shall be performed to determine compliance of replaced or additional work with specified requirements.

### 3.6 CLEANING AND PROTECTION

- A. Remove temporary covering and protection of other work. Promptly remove coating materials from window and door frames and other surfaces outside areas indicated to receive EIFS coatings.
- B. Provide final protection and maintain conditions, in a manner acceptable to Installer and EIFS manufacturer that ensure that EIFS are without damage or deterioration at time of Substantial Completion.

END OF SECTION 07241