SECTION 07 95 13.16 - EXTERIOR EXPANSION JOINT COVER ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Exterior expansion joints for:

   a. Wall to roof applications **EJ-32.**
   b. Wall to wall applications **EJ-33.**
   c. Wall to Wall applications **EJ-34.**

B. Related Work:

1. Division 07, Section 07 52 16 "Modified Bituminous Membrane Roofing" for roof expansion joint cover assemblies.
2. Division 07, Section 07 62 00 “Sheet Metal Flashing and Trim” for shop- and field-fabricated sheet metal expansion-joint system, flashing, and other sheet metal items.
3. Division 07, Section 07 72 00 “Roof Accessories” for manufactured and prefabricated metal roof curbs.

1.2 DEFINITIONS

A. Maximum Joint Width: Widest linear gap a joint system tolerates and in which it performs its designed function without damaging its functional capabilities.

B. Minimum Joint Width: Narrowest linear gap a joint system tolerates and in which it performs its designed function without damaging its functional capabilities.

C. Movement Capability: Value obtained from the difference between widest and narrowest widths of a joint.

D. Nominal Joint Width: The width of the linear opening specified in practice and in which the joint system is installed, per UL 2079.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for expansion joint cover assemblies.

B. Shop Drawings: For each expansion joint cover assembly.

1. Include plans, elevations, sections, details, splices, block-out requirement, attachments to other work, and line diagrams showing entire route of each expansion joint.
2. Where expansion joint cover assemblies change planes, provide isometric or clearly detailed drawing depicting how components interconnect and achieve waterproof continuity. Transitions where expansion joints change direction shall be factory mitered and pre-welded transitions unless otherwise specified.

C. Samples: For each exposed expansion joint cover assembly and for each color and texture specified, full width by 6 inches long in size.

1.4 INFORMATIONAL SUBMITTALS

A. Sample Warranties: For special warranties.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Expansion joints which connect to roofing membrane and flashing shall be installed by Installer of roofing membranes.

1.6 WARRANTY

A. Furnish warranties as specified in Section 07 52 16 “Modified Bituminous Membrane Roofing” where expansion joints tie into roofing assemblies/membranes.

PART 2 - PRODUCTS

2.1 ASSEMBLY DESCRIPTION

A. Furnish units in longest practicable lengths to minimize field splicing.

B. Include factory-fabricated closure materials and transition pieces, T-joints, corners, curbs, cross-connections, and other accessories as required to provide continuous expansion joint cover assemblies.

2.2 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Expansion joint cover assemblies shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

B. Expansion Joint Design Criteria:

1. Type of Movement: Thermal.

    a. Nominal Joint Width: As indicated on Drawings.
    b. Minimum Joint Width: As indicated on Drawings.
    c. Maximum Joint Width: As indicated on Drawings.

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint seals, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.3 EXTERIOR EXPANSION JOINT COVERS

A. Insulated flanged bellows-type expansion joints **EJ-32** wall to roof and **EJ-33** wall to wall application Factory-fabricated, continuous, warranted to be waterproof and water tight, joint cover consisting of exposed membrane bellows laminated to flexible, close-cell support foam, and secured along each edge to 3- to 4-inch-wide metal flange.

1. Basis-of Design Product: Subject to compliance with requirements, provide MM System Corporation ERLF-I or a comparable product by one of the following:

    a. Architectural Art Manufacturing; a division of Pittcon Architectural Metals, LLC.
    b. Construction Specialties, Inc.

c. MM System Corporation.
d. Nystrom, Inc.
e. Watson Bowman Acme Corp.
f. Inpro Corporation.

2. Location: Wall to roof and wall to wall applications as indicated on Drawings.
3. Joint Movement Capability: As indicated on Drawings.
4. Bellows: EPDM flexible membrane, nominal minimum 60 mils thick.
5. Flanges: Stainless steel, minimum 0.0188 inch thick.
6. Insulation R-value to match adjacent wall.
7. Configuration: As indicated on Drawings.
8. Corner, Intersection, and Transition Units: Provide factory-fabricated/welded units for corner and joint intersections and horizontal and vertical transitions including those to other building expansion joints.
9. Accessories: Provide adhesives, and other components as recommended by expansion-joint manufacturer for complete installation.
10. Installation: Surface mounted.
11. Exposed Metal:

a. Aluminum: Manufacturer's standard.

2.4 MATERIALS

A. Adhesives: As recommended by roof-expansion-joint manufacturer.

1. Verify adhesives have a VOC content of 70 g/L or less.
2. Verify adhesive complies with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

B. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to withstand design loads.

1. Exposed Fasteners: Gasketed. Use screws with hex washer heads matching color of material being fastened.

C. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces where expansion joint cover assemblies will be installed for installation tolerances and other conditions affecting performance of the Work.

B. Notify Architect where discrepancies occur that will affect proper expansion joint cover assembly installation and performance.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare substrates according to expansion joint cover assembly manufacturer's written instructions.

B. Coordinate and furnish anchorages, setting drawings, and instructions for installing expansion joint cover assemblies. Provide fasteners of metal, type, and size to suit type of construction indicated and to provide for secure attachment of expansion joint cover assemblies.

3.3 INSTALLATION

A. Comply with manufacturer's written instructions for storing, handling, and installing expansion joint cover assemblies and materials unless more stringent requirements are indicated.

B. Anchor expansion joints securely in place, with provisions for required movement.

C. Install expansion joints true to line and elevation; and without warping, jogs in alignment, buckling, or tool marks.

D. Provide for linear thermal expansion of expansion joint materials.

E. Provide uniform profile of bellow type expansion joint throughout its length; do not stretch or squeeze membranes.

F. Install expansion joints to fit substrates and to result in watertight performance and watertight warranted installation.

1. Directional Changes: Install factory-fabricated units at directional changes to provide continuous, uninterrupted, and watertight joints.
2. Splices: Splice roof expansion joints to provide continuous, uninterrupted, waterproof joints, factory welded joints.

G. Terminate exposed ends of expansion joint cover assemblies with field- or factory-fabricated termination devices.

3.4 CONNECTIONS

A. Transition to Roof Expansion Joint Covers: Coordinate installation of exterior wall and roof expansion joint covers with roofing membrane work. Install factory-fabricated units at transition between exterior walls and soffits and roof expansion joint cover assemblies.

3.5 PROTECTION

A. Do not remove protective covering until finish work in adjacent areas is complete. When protective covering is removed, clean exposed surfaces to comply with manufacturer's written instructions.

B. Protect the installation from damage by work of other Sections.

END OF SECTION