# SPECIFICATION Division 07900

DHCP-Series System [Dual Hinge Cover Plate]

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## PART 1 - GENERAL

### 1.01 Work Included

A. The work shall consist of furnishing and installing expansion joints in accordance with the details shown on the plans and the requirements of the specifications. The covers are proprietary designs utilizing preformed metal components and anchors.

B. Related Work

- Cast-in-place concrete

- Miscellaneous and ornamental metals

- Flashing and sheet metal

### 1.02 Submittals

A. Template Drawings - Submit typical expansion joint cross-section(s) indicating pertinent dimensioning, general construction, component connections, and anchorage methods.

### 1.03 Product Delivery, Storage and Handling

A. Deliver products in each manufacturer's original, intact, labeled containers and store under cover in a dry location until installed. Store off the ground, protect from weather and construction activities.

### 1.04 Acceptable Manufacturer

A. All joint covers shall be as designed and manufactured by EMS, Inc., 13311 Main Road, Akron, New York 14001.

B. Alternate manufacturers and their products will be considered, provided they meet the design concept and are produced of materials that are equal to or superior to those called for in the base product specification.

C. Any proposed alternate systems must be submitted and receive approval 7 days prior to the bid. All post bid submittals will not be considered. This submission shall be in accordance with MATERIALS AND SUBSTITUTIONS.

Any manufacturer wishing to submit for prior approval must provide the following:

1. A working 6" sample of the proposed system with a letter describing how system is considered superior to the specified system.

2. A project proposal drawing that illustrates the recommended alternate system installed in the vertical construction that is specific to the project. Typical catalog cut sections will not be considered.

3. Any substitution products not adhering to all specification requirements within will not be considered.

### 1.05 Quality Assurance

A. Manufacturer: Shall have a minimum ten (5) years' experience specializing in the design and manufacture of Architectural Expansion Control Systems.

## PART 2 - PRODUCT

### 2.01 General

A. Provide expansion joint cover system that meets the specified movement requirements and is capable of accommodating vehicular and pedestrian traffic.

B. System shall consist of surface mounted convex shaped aluminum cover with mechanically attached rubber nosing pads. System shall be capable of accommodating vertical offsets in opposing concrete decks and lateral shear movement through its independent flexible hinge design. The underside of seismic safety cover plate shall incorporate high density rubber strips that provide impact resistance and sound damping.

C. Provide DHCP-Series Dual Hinge Cover Plate as manufactured by EMS, Inc. and as indicated on the drawings.

D. The model and size selected must comply with and accommodate the required amount of expansion, contracting, vertical displacement and lateral shear throughout the full movement cycle.

### 2.02 Components and Materials

A. Aluminum Cover Plate – extruded from aluminum alloy 6005-T5 with slip-resistant raised pattern surface. Top surface shall provide slip-resistant raised ribbed pattern profile finish and encapsulated slip-resistant rubber strips. Underside of plate shall have continuous encapsulated integral high density rubber damper that provides impact resistance and sound dampening.

B. Aluminum Wall Plates – extruded from aluminum alloy 6005-T5

C. Rubber Nosing Pads – high-density elastoprene rubber pads with ADA compliant taper that conforms to the concrete deck profile

D. Accessories – Provide 3/8-inch drop in anchor system spaced at 12 inches on center. Stagger anchors between the two anchor cavities per the manufacturer's instructions.

E. Fire Barrier Assembly - Designed for indicated or required dynamic structural movement without material degradation or fatigue. Tested in maximum joint width conditions with a field splice as a component of the expansion joint cover in accordance with ASTM E-119 at full rated period by a nationally recognized testing and inspecting organization.

F. Flexible Gutter System (FG-Series) – As manufactured by EMS, Inc. Supply underslab mounted continuous fabric reinforced 60-mil neoprene rubber gutter sealing system that meets the specified movement requirements. Provide flexible downspout drain tube assemblies as required.

**2.03 Fabrication**

A. Aluminum/Rubber Cover – shall be shipped in standard 10 ft lengths and shall be cut to length at jobsite where required. All profiles shall be miter cut in the field to conform to directional changes unless otherwise contracted with expansion joint manufacturer.

B. Rubber Expansion Gaskets – shall be used in middle of every drive lane for vehicular rated application or at wall/column terminations for pedestrian applications.

C. Wall Mount (slab-to-wall condition) – aluminum extrusions with rotation flange shall be shipped in standard 10 ft. lengths and shall be cut to length on jobsite where required.

D. Rubber Gutter (if required) – shall be shipped in the longest practical continuous length in manufacturer's standard shipping carton.

E. Fire Barriers (if required) – Ship manufacturer's standard assembly for the required hourly rating with ends prepared for field splicing. Assemblies shall be miter cut in the field to accommodate changes in direction.

**2.04 Finishes**

A. Aluminum Cover – top surface of aluminum base frame and hinge plate shall have slip-resistant raised ribbed pattern profile and standard mill finish. Rubber Nosing Pads shall be black in color.

## PART 3 - EXECUTION

**3.01 Installation**

A. Any concrete edge or area adjacent to the expansion joint opening in need of repair shall utilize structural concrete repair materials.

B. Expansion Joint System under the Rubber Safety Cover – The contractor shall provide properly formed concrete expansion joint openings constructed to the exact dimensions and elevations shown on manufacturer's standard system drawings or as shown on the contract drawings. Any edge or area in need or repair shall utilize structural concrete repair materials that provide a solid and square expansion joint opening. Deviations from these dimensions will not be allowed without written consent.

C. Surface areas two feet on each side of the expansion joint opening shall be finish graded perpendicular to the joint opening creating flush slag-to-slab transition. Elevations on each side shall be identical.

D. Install rubber safety cover system in strict accordance with the manufacturer's typical details and instructions along with the advice of their qualified representative. Refer to Manufacturer's Installation Guide for detailed step-by-step installation instructions.

## 3.02 Clean and Inspect

A. Protect the system and its components during construction. Heavy construction vehicles will not be permitted to cross the expansion joint. Subsequent damage to the DHCP-Series system will be repaired at the contractor's expense. After work is complete, clean exposed surfaced with a suitable cleaner that will not ham or attack the finish.

**END OF SECTION**