SECTION 079500
EXPANSION CONTROL

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Interior expansion control systems.
2. Fire barrier systems
3. Exterior wall expansion control systems.
4. Parking and open-air structure expansion control systems.

B. Related Requirements:

1. Section 077129 "Manufactured Roof Expansion Joints" for factory-fabricated roof expansion control.
3. Section 079200 "Joint Sealants" for liquid-applied joint sealants and for elastomeric sealants without metal frames.

1.2 ACTION SUBMITTALS

A. Product Schedule: Prepared by or under the supervision of the supplier. Include the following information in tabular form:

1. Manufacturer and model number for each expansion control system.
2. Expansion control system location cross-referenced to Drawings.
3. Nominal joint width.
5. Classification as thermal or seismic.
   a. Product Test Reports: For each fire barrier provided as part of an expansion control system, for tests performed by a qualified testing agency.

1.3 WARRANTY

A. Provide a five year Joint and Several Warranty for Parking Joints.
PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

A. General: Provide expansion control systems of design, basic profile, materials, and operation indicated. Provide units with capability to accommodate variations in adjacent surfaces.

1. Furnish units in longest practicable lengths to minimize field splicing. Install with hairline mitered corners where expansion control systems change direction or abut other materials.
2. Include factory-fabricated closure materials and transition pieces, T-joints, corners, curbs, cross-connections, and other accessories as required to provide continuous expansion control systems.

2.2 PERFORMANCE REQUIREMENTS

A. Fire-Resistance Ratings: Where indicated, provide expansion control systems with fire barriers identical to those of systems tested for fire resistance per UL 2079 or ASTM E-1966 at Underwriter’s Laboratories or Intertek.

B. Seismic Performance: Expansion control systems shall withstand the effects of earthquake motions and will remain in place without separation of any parts when subjected to the seismic forces. The system will be fully operational after the seismic event.

C. Pyroflex Fire Barrier products manufactured by MM Systems Corporation Pendergrass, GA 800.241.3460 shall be the only materials approved for use in Cleveland Clinic facilities.

D. Employ only firms that have been factory certified in fire barrier installation by the manufacturer or firms that have been approved by FM Global according to FM Global 4991, "Approval of Firestop Contractors," or been evaluated by Underwriters Laboratories and found to comply with its "Qualified Firestop Contractor Program Requirements."

2.3 INTERIOR EXPANSION CONTROL SYSTEMS

A. Basis of Design: MM Systems Corporation Atlanta, GA 800.241.3460

B. Source Limitations: Obtain expansion control systems from single source from single manufacturer.
1. Floor-to-Floor: __________________________
   a. Design Criteria: Joint Width: Minimum / Nominal / Maximum
2. Floor-to-Wall: __________________________
   a. Design Criteria: Joint Width: Minimum / Nominal / Maximum
3. Wall-to-Wall: __________________________
   a. Design Criteria: Joint Width: Minimum / Nominal / Maximum
4. Wall-to-Ceiling: __________________________
   a. Design Criteria: Joint Width: Minimum / Nominal / Maximum
5. Ceiling-to-Ceiling: __________________________
   a. Design Criteria: Joint Width: Minimum / Nominal / Maximum
2.4 EXTERIOR WALL EXPANSION CONTROL SYSTEMS

A. Basis of Design: MM Systems Corporation Atlanta, GA 800.241.3460
   1. Wall-to-Wall:________________________
      a. Design Criteria: Joint Width: Minimum / Nominal / Maximum
   2. Wall Corner Wall-to-Wall:________________________
      a. Design Criteria: Joint Width: Minimum / Nominal / Maximum

2.5 PARKING AND OPEN-AIR STRUCTURE EXPANSION CONTROL SYSTEMS

A. Basis of Design: MM Systems Corporation Atlanta, GA 800.241.3460
   1. Slab-to-Slab:________________________
      a. Design Criteria: Joint Width: Minimum / Nominal / Maximum
   2. Slab-to-Wall Wall-to-Wall:________________________
      a. Design Criteria: Joint Width: Minimum / Nominal / Maximum

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces where expansion control systems will be installed for installation tolerances and other conditions affecting performance of work.
   1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare substrates according to expansion control system manufacturer's written instructions.

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

C. Cast-In Frames: Coordinate and furnish frames to be cast into concrete.

3.3 INSTALLATION

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

B. Metal Frames: Perform cutting, drilling, and fitting required to install expansion control systems.
   1. Install in true alignment and proper relationship to joints and adjoining finished surfaces measured from established lines and levels.
2. Adjust for differences between actual structural gap and nominal design gap due to ambient temperature at time of installation. Notify Architect where discrepancies occur that will affect proper expansion control system installation and performance.

3. Cut and fit ends to accommodate thermal expansion and contraction of metal without buckling of frames.

4. Repair or grout blockout as required for continuous frame support using nonmetallic, shrinkage-resistant grout.

5. Install frames in continuous contact with adjacent surfaces.

6. Locate anchors at interval recommended by manufacturer, but not less than 3 inches from each end and not more than 24 inches o.c.

C. Seals in Metal Frames: Install elastomeric seals and membranes in frames to comply with manufacturer's written instructions. Install with minimum number of end joints.

1. Provide in continuous lengths for straight sections.

2. Seal transitions according to manufacturer's written instructions. Vulcanize or heat-weld field-spliced joints as recommended by manufacturer.

3. Installation: Mechanically lock seals into frames or adhere to frames with adhesive or pressure-sensitive tape as recommended by manufacturer.

D. Foam Seals: Install with adhesive recommended by manufacturer.

E. Terminate exposed ends of expansion control systems with field- or factory-fabricated termination devices.

F. Fire-Resistance-Rated Assemblies: Coordinate installation of expansion control system materials and associated work so complete assemblies comply with assembly performance requirements.

1. Fire Barriers: Install fire barriers to provide continuous, uninterrupted fire resistance throughout length of joint, including transitions and field splices.

3.4 PROTECTION

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

B. Protect the installation from damage by work of other Sections. Where necessary due to heavy construction traffic, remove and properly store cover plates or seals and install temporary protection over expansion control systems. Reinstall cover plates or seals prior to Substantial Completion of the Work.

END OF SECTION 079500