**3-PART CSI MASTERFORMAT SPECIFICATION**

**SECTION 07 9100**

**preformed joint seals**

Rev 02/24

1. General

	* + 1. SUMMARY
				1. Section includes:

Preformed, foam joint seals.

* + - 1. Related Requirements:
				1. Section 079200 "Joint Sealants" for liquid sealants applied over preformed seals in dual seal systems.
			2. COORDINATION
				1. Coordinate sizes and locations of expansion joint cover assemblies with joint widths and assumed movement.
			3. action SUBMITTALS
				1. Comply with Division 01 requirements.
				2. Product Data: Manufacturer's specifications and technical data edited specifically for proposed system, including specific requirements indicated.

Detailed specification of construction and fabrication.

* + - * 1. Shop Drawings: Indicate joint device profile, dimensions, location in the work, affected adjacent construction, anchorage devices, and location of splices.
				2. Sample material is required at time of submittal.
			1. informational submittals
				1. Sustainable Design Submittals:

Building Product Disclosure Requirements: To encourage the use of building products that are working to minimize their environmental and health impacts, provide the following information when available:

Material Ingredients Documentation demonstrating the chemical inventory of the product.

* + - 1. closeout submittals
				1. Manufacturer's Installation Instructions and Operation & Maintenance: Indicate installation, operation and maintenance requirements and rough-in dimensions.
				2. Provide manufacturer’s written warranty.
			2. QUALITY ASSURANCE
				1. The General Contractor will conduct a pre-construction meeting with all parties and trades involved in the treatment of work at and around expansion joints including, but not limited to, concrete, mechanical, electrical, HVAC, landscaping, masonry, curtain wall, waterproofing, fire-stopping, caulking, flooring and other finish trade subcontractors. All superintendents and foremen with responsibility for oversight and setting of the gap must attend this meeting. The General Contractor is responsible to coordinate and schedule all trades and ensure that all subcontractors understand their responsibilities in relation to expansion joints and that their work cannot impede anticipated structural movement at the expansion joints or compromise the achievement of water tightness or life safety at expansion joints in any way.
				2. All products must be certified by an independent laboratory test report to be free in composition of any waxes or wax compounds using FTIR and DSC testing.
			3. DELIVERY, STORAGE AND HANDLING
				1. Comply with Division 01 requirements.
				2. Packing and Shipping: Deliver products in original unopened packaging with legible manufacturer's identification.
				3. Store per manufacturer’s instructions.

Store in dry area out of direct sunlight.

1. products

	* + 1. MANUFACTURER / SUPPLIER
				1. Nystrom

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* + - 1. PREFORMED, FOAM JOINT SEALS
				1. Seismic pre-compressed vertical foam system seal designed for use in vertical, high movement joints. Expanding foam, watertight, wax and asphalt free, non-invasive anchoring compression seal.

Basis-of-Design Product: Nystrom Model SES

Design Criteria:

Exposed Sight Line: Joint width.

Nominal Joint Width: Required joint width at mean temperature.

Minimum Joint Width: ½ inch

Maximum Joint Width: 10 inches (sizes from ¼ to 1/14-inch increments)

Material: Foam sealant with Silicone bellows.

Attachment Method: Precompressed.

Joint sizes under 4” adhered with pressure sensitive adhesive (1) sidewall and bead of accessory silicone. (1) sidewall

Joint sizes at and over 4”: 2-part epoxy on both sidewalls.

* + - * 1. Seismic pre-compressed vertical seal designed for use in horizontal, high movement joints. Expanding foam, watertight, wax and asphalt free, non-invasive anchoring compression seal.

Basis-of-Design Product: Nystrom Model HES

Design Criteria:

Exposed Sight Line: Joint width.

Nominal Joint Width: Required joint width at mean temperature.

Minimum Joint Width: ½ inch

Maximum Joint Width: 10 inches (sizes from ¼ to 1/14-inch increments)

Material: Silicone bellows with foam sealant.

Attachment Method: Precompressed, 2-part epoxy on both sidewalls

* + - * 1. Seismic pre-compressed parking deck foam system. Watertight, wax and asphalt free, non-invasive anchoring compression seal.

Basis-of-Design Product: Nystrom Model PDM.

Design Criteria:

Exposed Sight Line: Joint width.

Nominal Joint Width: Required joint width at mean temperature.

Minimum Joint Width: ½ inch

Maximum Joint Width: 4 inches (additional sizes available in ¼ inch increments from 1 to 4 inches. Joints 3” and larger will use cover plates)

Material: Silicone bellows with foam sealant.

Attachment Method: Precompressed, 2-part epoxy on both sidewalls

Load Capacity: Vehicular Traffic in parking structures

* + - * 1. Seismic pre-compressed highway foam system. Watertight, wax and asphalt free, non-invasive anchoring compression seal.

Basis-of-Design Product: Nystrom Model DOT.

Design Criteria:

Exposed Sight Line: Joint width.

Nominal Joint Width: Required joint width at mean temperature.

Minimum Joint Width: ½ inch

Maximum Joint Width: 3 inches (additional sizes available in ¼ inch increments from 1 to 3 inches.)

Material: Silicone bellows with foam sealant.

Attachment Method: Self-compression with silicone sealant and 2-part epoxy.

Load Capacity: High movement, vehicle and traffic loads

* + - * 1. 1-, 2-, or 3- Hour Rated Seismic Pre-Compressed Vertical Foam System Recessed Application.

Basis-of-Design Product: Nystrom Model FES1, FES2, FES3

Design Criteria:

Exposed Sight Line: Joint width.

Nominal Joint Width: Required joint width at mean temperature.

Joint Widths:

1 hour: 1/2-inch min to 4-inch max.

2 hour and 3 hour: ½ inch min to 6 inches max.

Note all sizes available in ¼ inch increments.

Material: Silicone bellows with foam sealant.

Attachment Method: Precompressed, 2-part epoxy on both sidewalls

Standard: Meets UL-2079, ASTM E 119, E 119, E1399, E90 and C 518

* + - * 1. 1-, 2-, or 3--Hour Rated Seismic Pre-Compressed Horizontal Foam System Recessed Application.

Basis-of-Design Product: Nystrom Model FHES1, FHES2, FHES3**.**

Design Criteria:

Exposed Sight Line: Joint width.

Nominal Joint Width: Required joint width at mean temperature.

Joint Widths:

2 hours: 1/2-inch min to 5-inch max.

1 hour and 3 hour: ½ inch min to 4 inches max.

Note all sizes available in ¼ inch increments from ½ inch and higher.

Material: Silicone bellows with foam sealant.

Attachment Method: Precompressed, 2-part epoxy on both sidewalls

Standard: Meets UL-2079, ASTM E1966, E119, E1399, E90 and C518

Attachment Method: Self-compression with silicone sealant and 2-part epoxy.

* + - * 1. Uncoated Non-Precompressed Closed Cell Foam System Recessed Application. Expanding foam, watertight, wax and asphalt free, non-invasive anchoring compression seal.

Basis-of-Design Product: Nystrom Model ESU

Design Criteria:

Exposed Sight Line: Joint width.

Nominal Joint Width: Required joint width at mean temperature.

Minimum Joint Width: ½ inch

Maximum Joint Width:10 inches. Note sizes available in ¼ inch increments starting at ½ inch.

Material: Closed cell foam core

Attachment Method: Uncompressed (aka compressible closed cell), 2-part epoxy on both sidewalls.

* + - * 1. Traffic Coated Non-Precompressed Closed Cell Foam System. Expanding foam, watertight, wax and asphalt free, non-invasive anchoring compression seal.

Basis-of-Design Product: Nystrom Model ESH

Design Criteria:

Exposed Sight Line: Joint width.

Nominal Joint Width: Required joint width at mean temperature.

Minimum Joint Width: ½ inch

Maximum Joint Width:4 inches. Note sizes available in ¼ inch increments starting at ½ inch. 4-inch size will have a plate.

Material: Closed cell foam with traffic grade sealant facer.

Attachment Method: Uncompressed (aka Compressible Closed Cell) 2-part epoxy on both side walls

Load Capacity: Light Vehicular Traffic.

Pressure: System can accommodate up to 10 feet of hydrostatic pressure

* + - * 1. Coated Non-Precompressed Closed Cell Foam System. Recessed Application. Expanding foam, watertight, wax and asphalt free, non-invasive anchoring compression seal.

Basis-of-Design Product: Nystrom Model ESV

Design Criteria:

Exposed Sight Line: Joint width.

Nominal Joint Width: Required joint width at mean temperature.

Minimum Joint Width: ½ inch

Maximum Joint Width:10 inches. Note sizes available in ¼ inch increments starting at ½ inch.

Material: Low density closed cell foam with silicone.

Attachment Method: Uncompressed (AKA Compressible Closed Cell)

1. Joint sizes under 6:” gunable adhesive on both sidewalls
2. Joint sizes at or over 6”, 2-part epoxy on both sidewalls

Pressure: System can accommodate up to 10 feet of hydrostatic pressure

* + - * 1. Acoustic Vertical Foam System Recessed Application.

Basis-of-Design Product: Nystrom Model QTT

Design Criteria:

Exposed Sight Line: Joint width.

Nominal Joint Width: Required joint width at mean temperature.

Minimum Joint Width: 1 inch

Maximum Joint Width:6 inches. Note sizes available in ¼ inch increments.

Attachment Method: Uncompressed (AKA Compressible Open Cell)

Joint sizes under 4” adhered with pressure sensitive adhesive (1) sidewall and bead of accessory silicone (1) sidewall.

Joint sizes at and over 4” a 2-part epoxy on both sidewalls

* + - 1. FABRICATION
				1. System must be supplied pre-compressed to less than the joint size, packaged and shrink-wrapped lengths (sticks).
				2. Directional changes and terminations into horizontal plane surfaces to be provided by factory manufactured univaersal-90-degree single units containing minimum 12-inch-long leg and 6-inch-long leg or custom leg on each side of the direction change or through field fabrication in strict accordance with installation instructions.
1. execution

	* + 1. EXAMINATION
2. Preparation of the Work Area
3. The contractor shall provide a properly formed and prepared expansion joint openings constructed to the exact dimensions and elevations shown on manufacturer’s standard system drawings or as shown on the contract drawings. Deviations from these dimensions will not be allowed without the written consent of the engineer of record.

1. The contractor shall clean the joint opening of all contaminants immediately prior to installation of expansion joint system. Repair spelled, irregular or unsound joint surfaces using accepted industry practices for repair of the substrates in question. Remove protruding roughness to ensure joint sides are smooth. Ensure that there is sufficient depth to receive the full depth of the size of the System being installed plus at least 1/4-inch (6mm) for the application of corner beads. Refer to Manufacturers Installation Guide for detailed step-by-step instructions. All installation guides are found at Nystrom.com
2. No drilling, or screwing, or fasteners of any type are permitted to anchor the sealant system into the substrate.

END OF SECTION