SECTION 08 39 19

POINT-OF-USE FLOOD BARRIERS

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\*\* NOTE TO SPECIFIER \*\* Smart Vent Products, Inc.; Point-of-Use Flood Barriers products.
This section is based on the products of Smart Vent Products, Inc., which is located at:
430 Andbro Dr. Unit 1
Pitman, NJ 08071
Tel: 877-441-8368
Email: [request info (info@smartvent.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Smart+Vent+Products,+Inc.&coid=40692&rep=&fax=&message=RE:%20Spec%20Question%20(08392sma):%20%20&mf=)
Web: [www.smartvent.com](http://www.smartvent.com)
 [ [Click Here](http://www.arcat.com/arcatcos/cos40/arc40692.html) ] for additional information.
Smart Vent Products, Inc. and ILC DOVER LP have partnered and developed technology that makes Dry Floodproofing non-residential buildings a safer option. The line of Dry Floodproofing Products is called the Flex-Wall. Through point-of-use storage - eliminating the need for off-site storage and fees, rapid deployment in minutes with minimal manpower and no heavy equipment, scalable designs, and advanced materials constructed with layered Kevlar® structural webbing with a coated fabric water retention layer, Flex-Wall® provides a second to none dry floodproofing option with product variations for any type of infrastructure.
Smart Vent Products + ILC DOVER has a complimentary Plans Review Division where a team of Certified Floodplain Managers and Engineers will customize a floodproofing layout on your plans, run a Flood Zone Determination, check compliance and potential flood insurance rates, and more. Get started today by sending your Flood Zone plans to plans@dryfloodproofing.com.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Point-of-Use Flood Barriers.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
		2. Section 04 05 19.13 - Masonry Control and Expansion Joints.
		3. Section 04 40 00 - Stone Assemblies.
		4. Section 06 10 00 - Rough Carpentry.
		5. Section 07 90 00 - Joint Protection.
		6. Section 08 95 43 - Flood Vents.
		7. Section 10 71 00 - Exterior Protection.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. Aluminum Association - Specification for Aluminum Structures, 7th Edition.
		2. Aluminum Structures - A Guide to Their Specifications and Design.
		3. American Institute of Steel Construction (AISC) Steel Construction Manual, 13th Edition.
		4. ASME Structural Welding Code Section IX.
		5. ASTM A 1008/A36 - Standard Specifications for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength, Low-Alloy, and High-Strength Low-Alloy with Improved Formability.
		6. ASTM A 480 - Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet and Strip,
		7. ASTM A 554 - Standard Specification for Structural Stainless Steel.
		8. ASTM B 117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
		9. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
		10. ASTM B 211 - Standard Specification for Aluminum and Aluminum-Alloy Bar, Rod, and Wire.
		11. AWS D1.2 - Structural Welding Code - Aluminum.
		12. FEMA Bulletin 3-93, 102 Requirements for Certification and Guidelines for Non-Residential Structures.
		13. SEI/ASCE 7-10 - Minimum Design Loads for Buildings and Other Structures.
		14. U.S. Army Corps of Engineers, EP 1165-2-314 - Flood Proofing Regulations, 15 December 1995.
		15. ASCE/SEI 24-14 - Flood Resistant Design and Construction.
		16. American Institute of Steel Construction (AISC) Steel Construction Manual, 13th Edition.
		17. FEMA P-936 - Floodproofing Non-Residential Buildings.
		18. FEMA P-1037 - Reducing Flood Risk to Residential Buildings That Cannot Be Elevated.
	1. DESIGN / PERFORMANCE REQUIREMENTS
		1. Water Leakage: Flood barriers shall be substantially watertight under the design head conditions. Leakage shall not exceed 0.5 U.S. gallon per minute per foot (1.9 l/min per meter) of periphery for the rated head. This value can be substantially reduced with special provisions.
			1. The flood barrier shall meet the structural and leakage requirements at a water level equal to the height of the flood barrier.
	2. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.
		3. Shop Drawings: Dimensioned plans, sections, finishes, connections and anchorage, and a parts list.
		4. Design Data: Submit engineering calculations to verify the barrier's ability to withstand the design water loading and impact loading.
	3. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum 10 years documented experience.
		2. Installer Qualifications: Installer with experience on projects of a similar size and scope with similar installation conditions.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Installers shall be trained and approved by manufacturer.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size or quality warrant such a precaution.

* + 1. Mock-Up: Provide a mock-up of one full-size barrier for evaluation of preparation and installation techniques and leakage testing. Install mock-up in areas designated by Architect.
			1. Test leakage rate must be less than or equal to 0.5 gallons of water per minute per linear foot of sealed perimeter
			2. Do not proceed with remaining work until mock-up testing is completed and mock-up is approved by Architect.
			3. Rebuild mock-up area as required to produce acceptable work.
			4. Accepted mock-up may remain as part of the finished work and set the standard for remaining work.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Deliver and store materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
		2. Store products in clean, dry area indoors until ready for installation. Store materials in accordance with manufacturer's instructions.
		3. Protect materials and finish from damage during handling and installation.
	2. SEQUENCING
		1. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
		2. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

\*\* NOTE TO SPECIFIER \*\* Manufacturer offers extended warranties beyond a standard one year. Contact the manufacturer for additional information.

* 1. WARRANTY
		1. Provide with manufacturer' \_\_ year extended warranty.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Smart Vent Products, Inc., which is located at: 430 Andbro Dr. Unit 1; Pitman, NJ 08071; Tel: 877-441-8368; Email: [request info (info@smartvent.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Smart+Vent+Products,+Inc.&coid=40692&rep=&fax=&message=RE:%20Spec%20Question%20(08392sma):%20%20&mf=); Web: [www.smartvent.com](http://www.smartvent.com)

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Edit the following paragraphs as required and applicable to project requirements. Select the type and the model required and delete those not required..

* 1. FLOOD BARRIERS
		1. General: All material for fabric, stiffeners, hardware, gaskets, opening and closure mechanisms, and embedded frame pieces shall be selected and supplied by the manufacturer based on the submitted design calculations to meet the design loads and performance criteria. In addition to these requirements, the barriers shall have a 75-year service life. All components that will need to be replaced within this life span shall be identified and a replacement procedure submitted for review and approval.
			1. Designed to be stored at the point-of-use for rapid deployment.
			2. Small volume container with tamper proof cover.
			3. System adapts to uneven ground and seals to existing building facades.

\*\* NOTE TO SPECIFIER \*\* The ILC Dover Side Deployed Flex-Wall® is an economical and reliable system for dry flood protection. Its compact nature facilitates its ability to be stored at the point of use so rapid deployment and retraction are possible. It is simple to operate and can be deployed in a few minutes by one or two people. The system is scalable for water loading up to 12 feet, and associated floating debris impact loads.
The Side Deployed Flex-Wall® is deployed by extending the flexible wall from its container, pulling it across the opening to be protected, bolting it to a pre-installed receiver, and positioning the ground interface skirt. The fabric wall is easily removable for cleaning or maintenance as necessary. Delete if not required

* + 1. Side Deployed Flex-Wall: As manufactured by ILC DOVER LP.
			1. Materials:

\*\* NOTE TO SPECIFIER \*\* First paragraph below is standard for metal components. Stainless steel is optional. Delete material not required.

* + - * 1. Metal Components: A36 steel with painted or powder coated finish to meet ASTM B 117.
				2. Metal Components: Stainless steel.
				3. Load Carrying Layer: High strength Kevlar and polyester textile webbings.
				4. Water Retention Layer: PVC coated Polyester.

\*\* NOTE TO SPECIFIER \*\* Select mounting option(s) required. Delete mounting options not required.

* + - 1. Mounting: External.
			2. Mounting: Internal.
			3. Mounting: Embedded.

\*\* NOTE TO SPECIFIER \*\* Fill in size and color requirements below or use schedule at end of this Section. Delete size and color paragraphs if included in schedule.

* + - 1. Opening Size: \_\_\_\_.
			2. Metal Finish Color: \_\_\_\_.
			3. Water Retention Layer Color: \_\_\_\_ (standard is black).
			4. Design Load Factor: Minimum 2:1 factor of safety based on material yield.

\*\* NOTE TO SPECIFIER \*\* The ILC Dover Vertically Deployed Flex-Wall® is an economical and reliable system for dry flood protection. Its compact nature facilitates its ability to be stored at the point of use so rapid deployment and retraction are possible. It is simple to operate and can be deployed in a few minutes by one or two people. The system is scalable for water loading up to 10 feet, and associated floating debris impact loads.
The Vertically Deployed Flex-Wall® is deployed by removing the trench container cover, installing the support posts into their holders, and then lifting the fabric wall into hooks on the posts. Smaller walls are easily deployed by a single person. The fabric wall is easily removable for cleaning or maintenance as necessary. Delete if not required.

* + 1. Vertically Deployed Flex-Wall: As manufactured by ILC DOVER LP.I
			1. Materials:
				1. Metal Components: Aluminum.
				2. Load Carrying Layer: High strength Kevlar and polyester textile webbings.
				3. Water Retention Layer: PVC coated Polyester.

\*\* NOTE TO SPECIFIER \*\* Select mounting option(s) required. Delete mounting options not required.

* + - 1. Mounting: External.
			2. Mounting: Internal.
			3. Mounting: Embedded.

\*\* NOTE TO SPECIFIER \*\* Fill in size and color requirements below or use schedule at end of this Section. Delete size and color paragraphs if included in schedule.

* + - 1. Height: \_\_\_\_.
			2. Length: \_\_\_\_.
			3. Metal Finish Color: \_\_\_\_.
			4. Water Retention Layer Color: (black is standard).
			5. Design Load Factor: Minimum 2:1 factor of safety based on material yield.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. Verify vent locations are ready to receive work, and dimensions are as indicated on shop drawings or as instructed by manufacturers.
		3. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Review and coordinate setting drawings, templates, and related items that are to be embedded in concrete and masonry.
		3. Verify that no obstructions exist that will interfere with the proper operation of the vents.
		4. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions.
		2. Install vents plumb, level, square, true to line and rigid.
		3. Separate incompatible materials to prevent galvanic corrosion.
	4. FIELD QUALITY CONTROL
		1. Verify proper deployment and retraction after product installation.
	5. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.
	6. SCHEDULES

\*\* NOTE TO SPECIFIER \*\* Retain Paragraph below if required to suit project requirements. Identify products by name on the Drawings or use this paragraph to define the location of each type of material to be used. The following are some examples of schedule references. Edit as required to suit project or delete and identify products on the Drawings.

* + 1. :

END OF SECTION