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Structural Expansion Joints and Joint Sealants by EMSEAL

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Founded 1959. In North America since 1979.



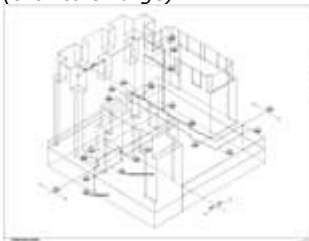
27-year member: Sealant Waterproofing and Restoration Institute. [What is SWRI?](#)

Think, Design, Detail, Specify, Construct, Fabricate and Install in 3D.

This simple guideline for successful expansion joint treatment starts with the designer and is picked up by the GC, subs and manufacturer.

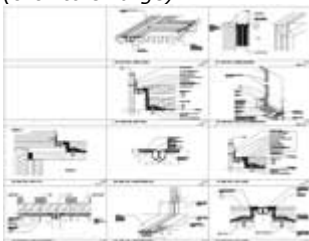
The following images are taken from the plans of one of the many A/E firms who have discovered that the adoption of this approach can profoundly affect the delivery of a watertight, hassle-reduced project to their clients

(click to enlarge)



A simple isometric of structural expansion joints on a project can reveal the EJ's impact on every aspect of the building. This affords the design team the opportunity to simplify the project or relocate the joints or impacted elements.

(click to enlarge)



References on the isometric to cross-section and axonometrics on a details page show the designers' intent for changes in plane and direction and treatment of materials at transitions

The EMSEAL Approach to Successful Expansion Joint Treatment-- Collaborative, 3-D Design, Detailing, Construction, Fabrication, Installation

It's not just about products.

While EMSEAL prides itself on having high-quality, innovative and durable materials for use in sealing and bridging small and large, building component and structural joints in foundations, decks, walls, and floors, the company's track record of successfully completed projects is equally attributable to its approach to expansion joint treatment:

Anybody can make an expansion joint appear watertight in cross-section. However, **joints leak at changes in plane, direction and where dissimilar joint materials meet.**

Successful projects with expansion joints that don't leak are characterized by a **collaborative commitment** by the A/E team, the general contractor, the joint manufacturer, and the waterproofing sub-contractor to **think, design, detail, specify, construct, fabricate, and install three-dimensional solutions.**

The process begins at design with the visualization by the A/E team and the joint manufacturer of expansion joint **locations, layout and impact on all other adjacent materials and spaces.**

This visualization is aided by the use of simple **isometric line sketches of joint layouts** which reveal conditions that could be designed-out, simplified, or for which details must be developed. The A/E then **supplements the usual cross-sections with axonometric details** of conditions involving changes in plane, direction and between dissimilar materials.

To these conditions, the expansion **joint manufacturer must furnish [axonometric CAD details](#)** showing their materials adaptation to these conditions. The manufacturer's application of their material to the designed conditions should be **warrantable as watertight at all agreed upon changes in plane, direction, and intersection between various joint materials.** The final isometric layout(s) and all cross-section and axonometric details then become part of the bid documents and working drawings.

Before and during construction the [general contractors' role](#) is to **elevate the place the expansion joints typically occupy in the sequencing path.** ALL trades must be held accountable for their work in relation to expansion joints. The joints, for example, must be protected from construction traffic damage and cannot become a place to accumulate construction tolerances.

The expansion joint subcontractor must commit to taking **field measurements from which the manufacturer can fabricate and furnish factory-welded, warranted assemblies** to install into the relevant joint locations.

This collaborative approach is **not just theory.** It is a practice that has resulted in the successful execution of watertight expansion joints on new and retrofit projects on

between systems. This allows the sub to include for these transitions in his estimate and reduces time-consuming RFI's and the costs of change-orders.

For PDF's of the above drawings, click these links:

[Iso3DEJLayout \(.pdf\)](#)

[Axons&Sections \(.pdf\)](#)

[Return to Knowledge-Base Index](#)

structures of every type. From the **National Naval Medical Center** in Bethesda, to the enormous, newly constructed mixed-use development—[Atlantic Station](#) in Atlanta, to the retrofit of [FedEx Field Washington Redskins Stadium](#), and the newly constructed [Citizens Bank Philadelphia Phillies Ballpark](#), owners, A/E's, general contactors, EMSEAL, and a select group of like-minded waterproofing sub-contractors are proving this approach possible and practical.

If this collaborative and disciplined approach is not adopted as the basic philosophy on any project of any scope, whether a stadium, hospital, school, government building or airport, it can be expected that leaks at expansion joints will constitute a high percentage of post tenancy headaches.

We invite you to make EMSEAL your partner in success on your expansion joint project:

1-800-526-8365 or techinfo@emseal.com

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Expansion joints and joint sealants by EMSEAL

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