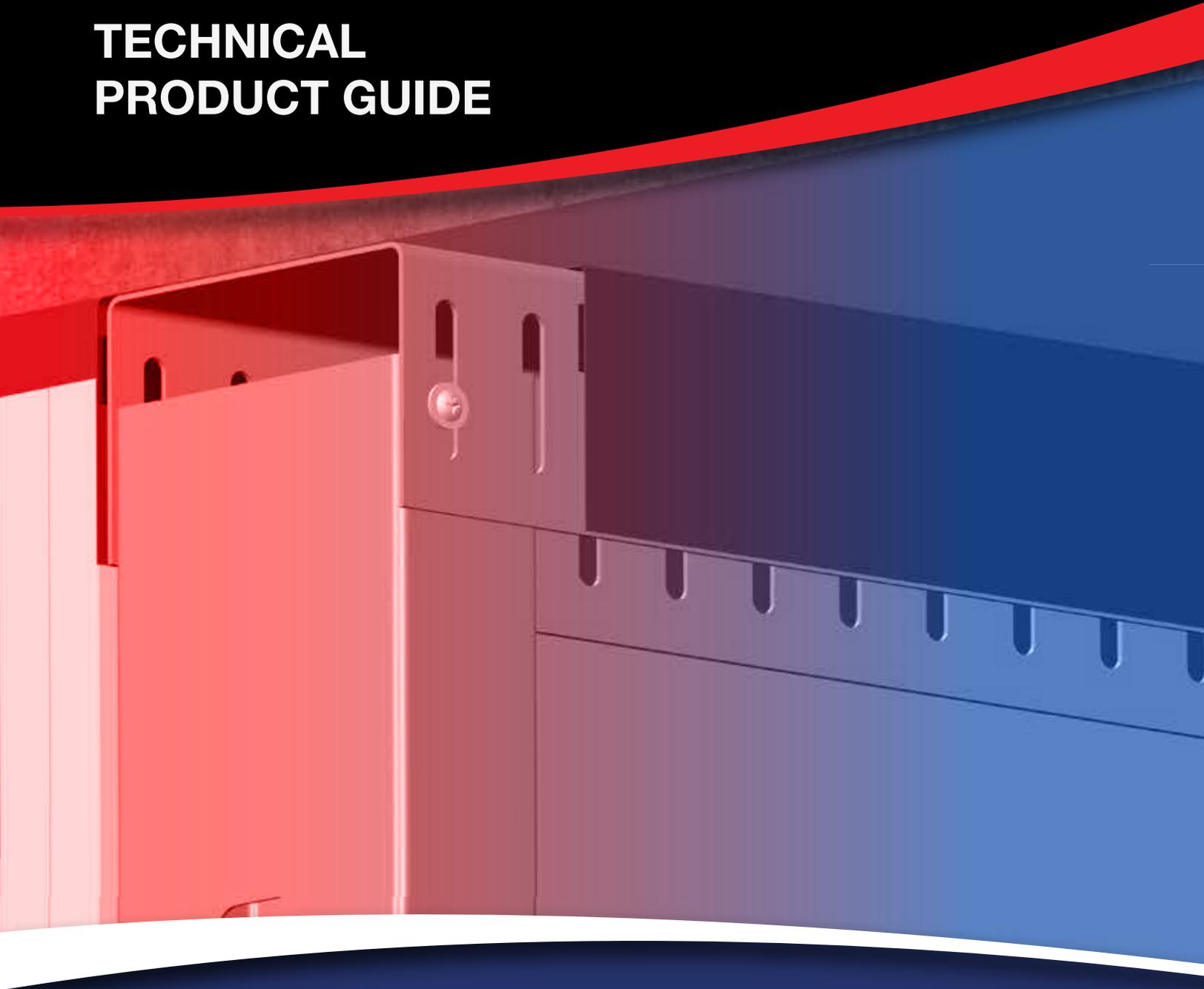




TECHNICAL PRODUCT GUIDE



www.cemcosteel.com

Architect Specified & Contractor Preferred

CONTRACTOR PREFERRED, ARCHITECT SPECIFIED

With above ceiling space at a premium most projects carefully coordinate all the MEP's into a very limited area. With little wasted space it makes it extremely difficult to properly install the fire protection at the head-of-wall and just as difficult to inspect. Therefore many head of wall conditions are not properly fire rated ultimately putting lives at risk. The DDA head-of-wall joint system allows the fire protection to be installed during the framing process before the MEP's are installed while there is still access to the head of wall.

CODE COMPLIANCE

DDA not only meets all current building code deflection requirements but it can also provide fire, smoke and sound protection for drift & lateral movement. DDA is the first of it's kind to provide unencumbered movement in both vertical deflection and lateral drift movement in a joint system that utilizes fire spray over mineral wool on just one side of the wall.

DDA has no restrictions providing 100% unencumbered movement. DDA has been tested for compliance with Section 713.3 of the 2006 and 2009 IBC and 2007 CBC and is listed with UL Underwriters Laboratories in accordance with:

- UL 2079: Tests for Fire Resistance of Building Joint Systems.
- ASTM E 1966: Standard Test Method of Fire Tests of Firestop Systems.
- ULC S115-M95: Standard Method of Fire Tests of Firestop Systems.
- ICC ESR-2012

SEISMIC REQUIREMENTS

DDA is approved for Class III cycling requirements, 500 cycles at 30 cycles per minute, meeting seismic building codes requirements. The class III movement provides design advantages over mastic reliant systems which are currently limited to class II (wind sway) capabilities of 500 cycles at 10 cycles per minute.

AIR LEAKAGE RATING

Air leakage tests conducted for compliance with Section 713.6 of the 2006 IBC and 2007 CBC are witnessed by UL on conditions using DDA as the joint treatment established L-Ratings of less than 1 CFM per lineal foot. Any rating below 1 CFM is also considered the best possible L-Rating.

TECHNICAL ASSISTANCE

For technical questions and assistance please call **1.800.775.2362** or email **dpilz@cemcosteel.com** or visit our website **cemcosteel.com**

DDA

US Patent #8,595,999 B1 (Deflection Drift Angle) is a composite steel angle with intumescent tape factory applied to the inside leg of the steel angle. The DDA is a fire-rated accessory that when combined with slotted or deep leg track will offer 2" unencumbered movement at the head-of-wall joint in accordance with UL-2079 "Test for Fire Resistance of Building Joint Systems". The 2-1/2" outside leg marked for proper identification. The section is fabricated from minimum 0.018-inch thick hot-dipped **red** galvanized steel complying with ASTM A653 having minimum G-40 coating.

BENEFITS:

- The DDA provides a universal fit for any wall width, gauge, height, radius, pitched, shaft wall or standard wall
- Easy installation; DDA is tapped in to place over the leg of the track, the 3/4" leg is friction fit between the overhead structure and the web of the header track
- There is no need for mechanical fasteners the DDA's friction fit provides fire and smoke protection during both vertical and lateral drift movement
- The DDA comes in 10' lengths with 10 per box up to 2" unencumbered movement with positive stud attachment DDA butt joints are over lapped
- When fire spray is required RectorSeal brand fire sprays are required on **ONLY ONE SIDE** of the wall
- Over 20 separate UL reports in accordance to UL2079 "Test for Fire Resistance of Building Joints"
- Maintains best possible LRating (smoke rating) and NO loss of STC sound ratings at headofwall joint
- Uses up to 75% less fire spray with the majority of the joint systems requiring no fire spray at all
- DDA and RectorSeal brand fire spray offer an industry best sustainable-life warranty
- DDA and Rectorseal brand fire sprays and sealants are 100% made in in the USA
- All Engineering Judgements utilizing fire spray or fire sealant are provided by RectorSeal
- For complete list of all UL joint system visit cemcosteel.com

Sound Benefits:

Whether the protection you need is Fire, Smoke, or Sound, DDA will help you achieve your requirements. Sound tests were performed at Western Electro-Acoustic Laboratory in Southern California to prove that the DDA will maintain maximum STC ratings without secondary acoustic sealant applications. In fact several sound tests were conducted both with a 1/2" to 3/4" open joint at the head-of-wall and with a sealed head-of-wall joint on the same wall assembly. Both open and closed joints rendered the exact same STC rating proving that nosound is lost through the open head of wall joint.

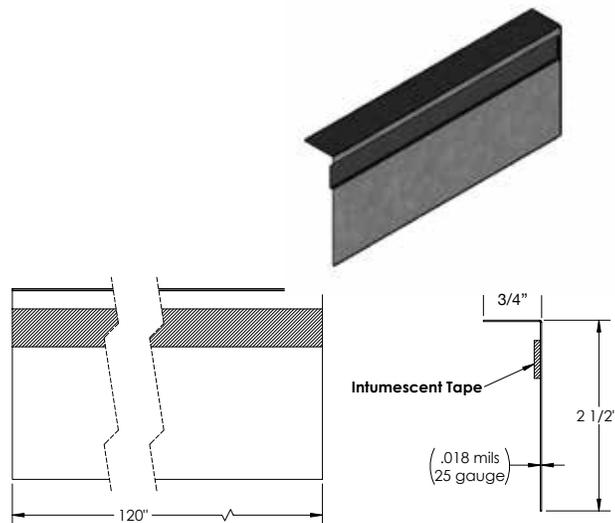
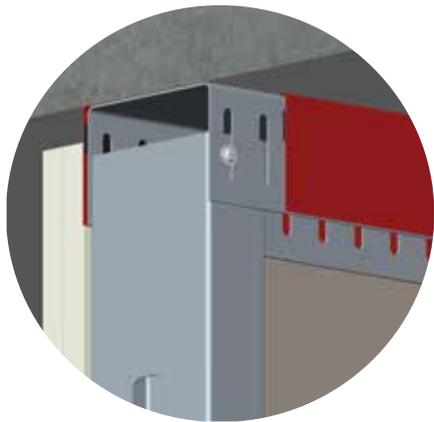
Unlike fire or acoustic sealants that will crack and split with minimal movement the DDA will provide protection for the most extreme real life conditions and allow your head-of-wall joint to freely move both lateral and vertically without ever compromising the sound (STC) rating.



CEMCO - Head of the class in head-of-wall design continues to lead the way in unencumbered Head-of-Wall fire protection by combining the best of intumescent/steel based products with the Life-Safety security of Rectorseal fire spray

DDA

US Patent #8,595,999



The standard Deflection Drift Angle (DDA) is a red 3/4"X2-1/2" steel/intumescent angle that will provide up to 2" unencumbered movement on the following UL reports:

HW-D-0514 Perpendicular to Flutes (Spray Fireproofing Fill)

HW-D-0577 – Standard Wall Perpendicular to Fluted Deck

HW-D-0524 – Standard Wall, Parallel & Under Fluted Deck Configurations A & B

HW-D-0582 – Standard Wall, Parallel to Beam Assembly Under Fluted Deck

HW-D-0580 – Standard Chase Wall to Fluted Deck (DDA)

HW-D-0579 – Standard Wall Off Centered Under Beam

HW-D-0652 – Standard Wall Cantilevered Under Beam

HW-D-0579 – Standard Wall Directly Under Beam/Slab Bypass at I-Beam

HW-D-0596 – Standard Wall at Concrete Stairwell Slab Bypass

HW-D-0620 – Standard Wall Parallel to Fluted Deck/Directly Under Flute Configurations A & B

HW-D-0583 – Standard Wall Fluted Deck Perpendicular to I-Beam Penetration

HW-D-0584 – Shaft Wall Perpendicular to Under Fluted Deck (DDA)

HW-D-0524 – Shaft Wall Offset and Parallel to Under Fluted Deck Configurations A & B

HW-D-0622 – Shaft Wall Under Beam

HW-D-0653 – Shaft Wall Cantilever Under Beam

HW-D-0621 – Shaft Wall Concrete Slab Bypass

HW-D-0563 – Shaft Wall Parallel to Beam at Fluted Deck

HW-D-0623 – Shaft Wall at Fluted Deck I-Beam Penetration

HW-D-0576 – Concrete Deck

HW-D-0585 – Shaft Wall at Concrete Deck

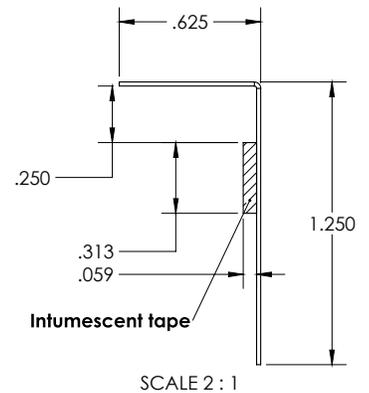
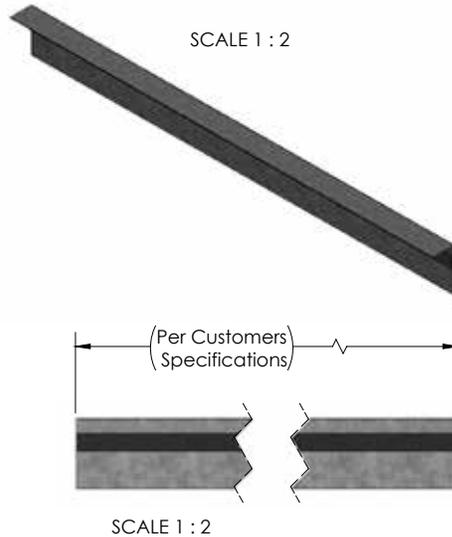
HW-D-0581 – Chase Wall at Concrete Deck



CEMCO DDA-1 provides 1" unencumbered movement and may be installed before or after framing studs are installed. The DDA-1 is installed on both sides of standard walls that utilize slotted track and on one of shaft wall assemblies that utilize J-Runner track.

DDA-1

US Patent #8,595,999



DDA-1 is a RED or BLACK 5/8"X1-1/4" steel/intumescent angle that will provide 1" unencumbered movement for standard walls and shaft walls as listed on the following UL reports:

HW-D-0515 – Concrete Slab

HW-D-0518 – Perpendicular to Fluted Deck

HW-D-0524 – Parallel to Flute (FAS Strap)

HW-D-0550 – Gypsum Wallboard Ceiling

HW-D-0551 – Centered Under Beam

HW-D-0553 – Chase Wall at Pan Deck

HW-D-0554 – Chase Wall at Concrete Slab

HW-D-0573 – Perpendicular I-Beam Penetration

HW-D-0620 – Parallel to Flute directly Under Flute

HW-D-0652 – Cantilever Fireproofing Under Beam

HW-D-0557 – Concrete with Shaft-Wall

HW-D-0525 – Perpendicular to Flute Shaft Wall

HW-D-0623 – Beam Penetration at Shaft Wall

HW-D-0622 – Shaft Wall under I-Beam

HW-D-0653 – Shaft Wall Cantilever Under Beam

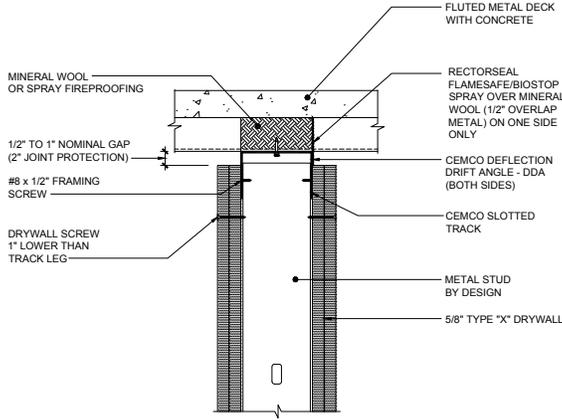
HW-D-0556 – Parallel to Beam

All DDA-1 details and UL reports can be found at cemcosteel.com/steel-framing/head-wall/fas-track-1000-and-dda

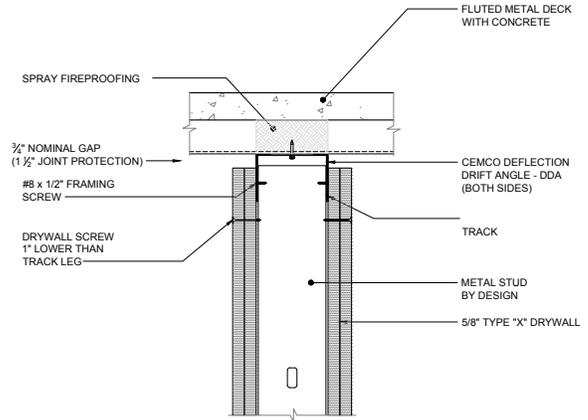
DDA (DEFLECTION DRIFT ANGLE) FOR FLUTED PAN DECK APPLICATIONS



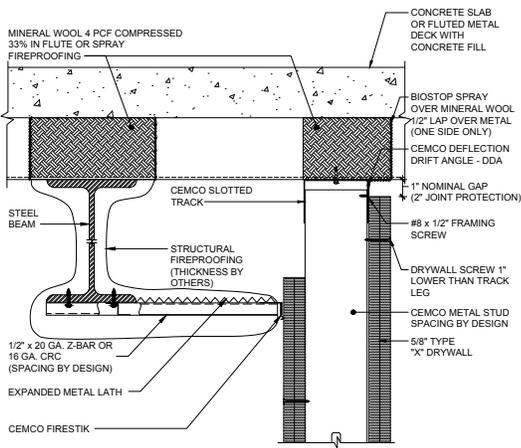
HW-D-0577



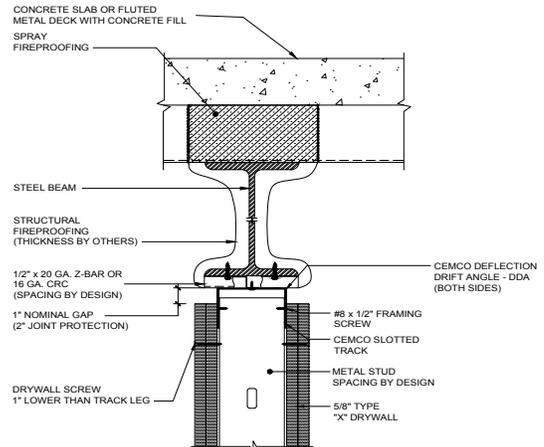
HW-D-0514



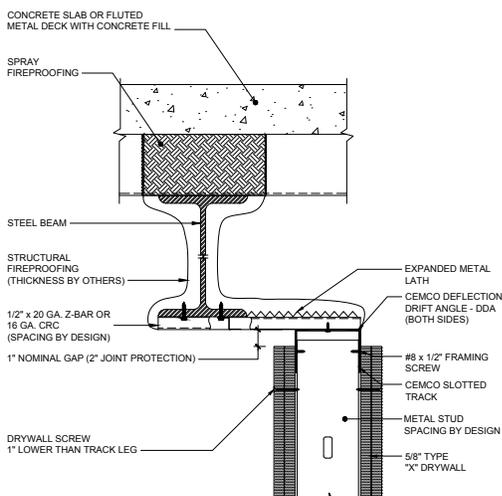
HW-D-0582



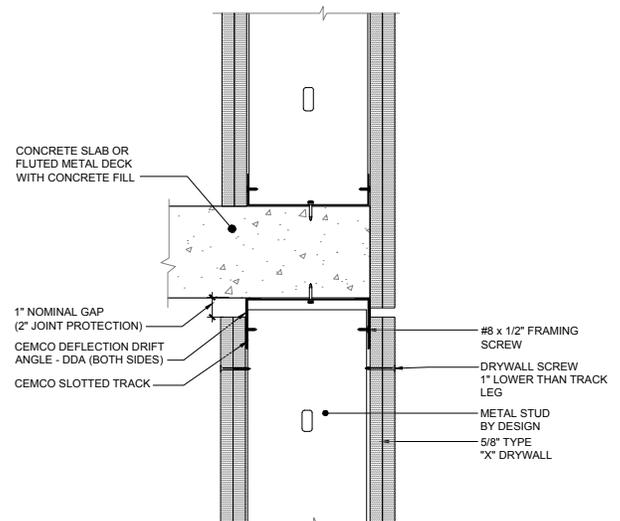
HW-D-0579



HW-D-0652



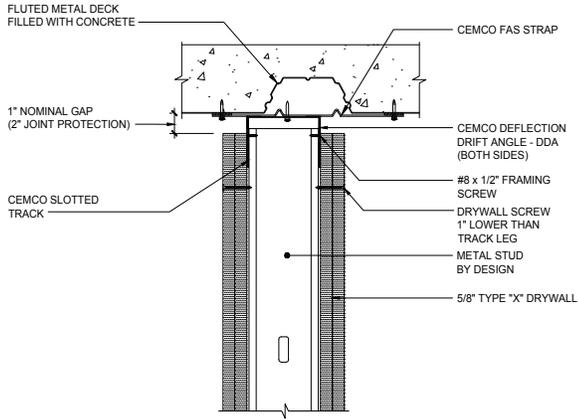
HW-D-0596



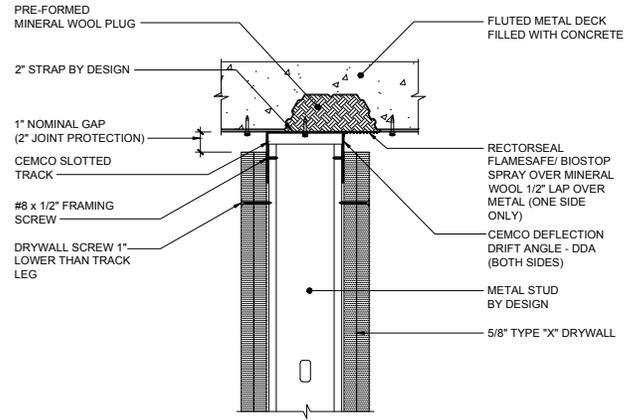
DDA (DEFLECTION DRIFT ANGLE) FOR FLUTED PAN DECK APPLICATIONS



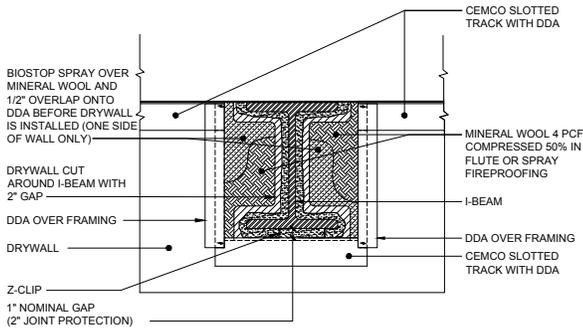
HW-D-0524-A



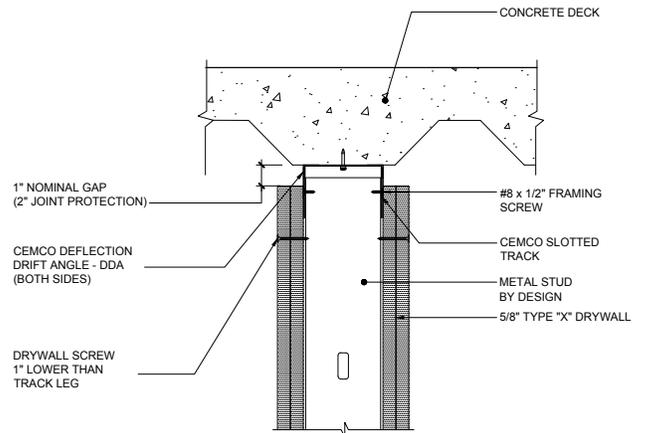
HW-D-0524-B



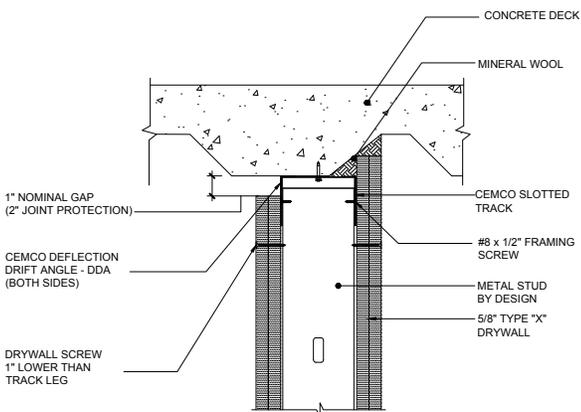
HW-D-0583



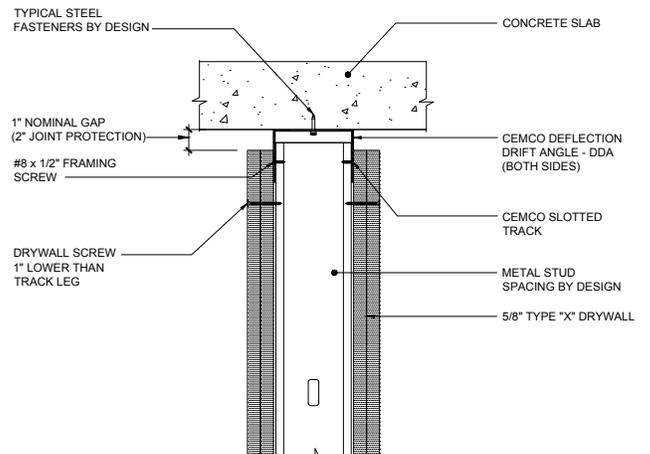
HW-D-0620-A



HW-D-0620-B



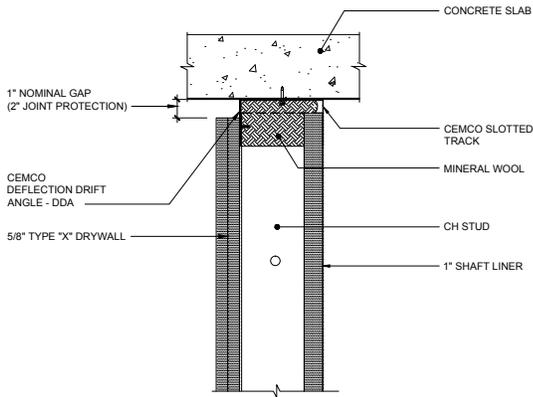
HW-D-0576



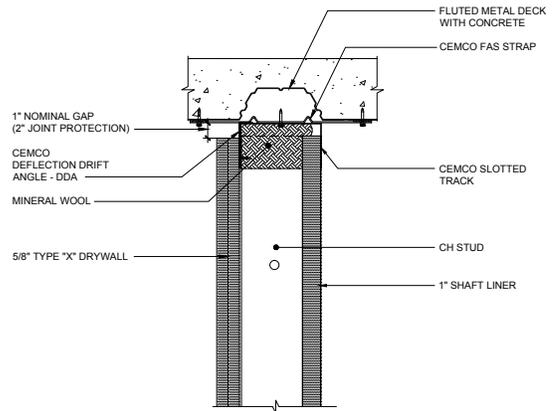
DDA: SHAFT WALL ASSEMBLIES:

No longer are shaft wall assemblies the most difficult head-of-wall condition to protect from dynamic fire ratings. The DDA can be used with standard J-Runner track or slotted track for joints that require greater movement. The DDA provides the most economical solution for shaft wall assemblies with dynamic movement as the DDA is installed only on the finish side of wall. There is NO fire sealant required above the shaft liner. The majority of the UL head-of-wall joint systems do not require any fire spray and the DDA allows the shaft wall to be built from one side as intended

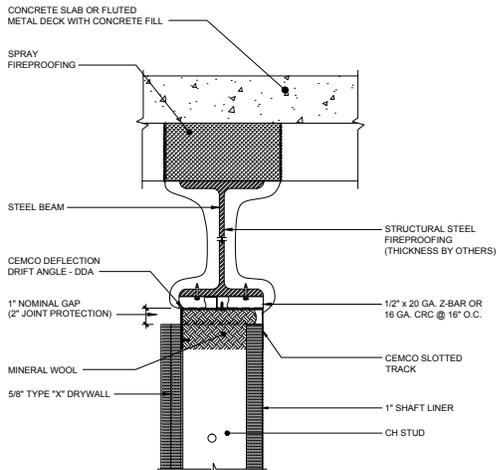
HW-D-0585



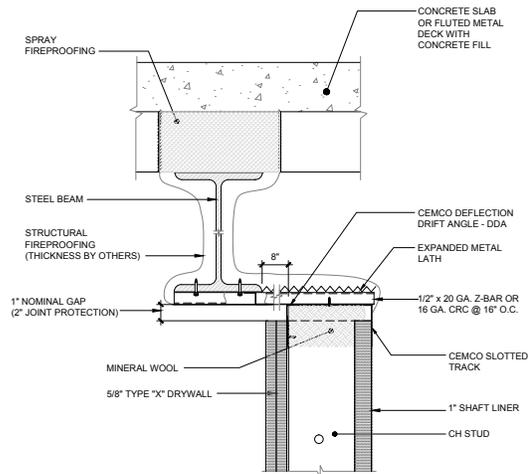
HW-D-0524



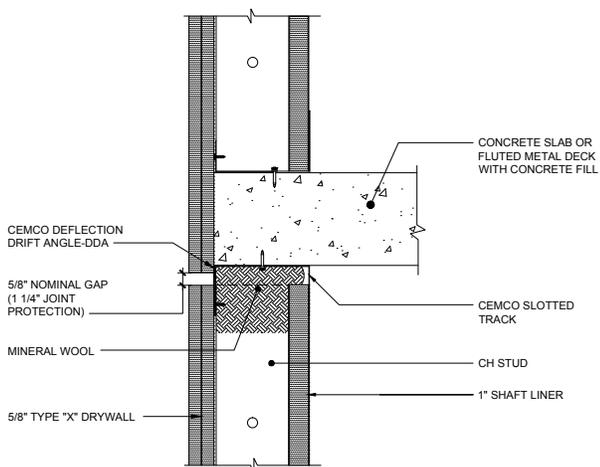
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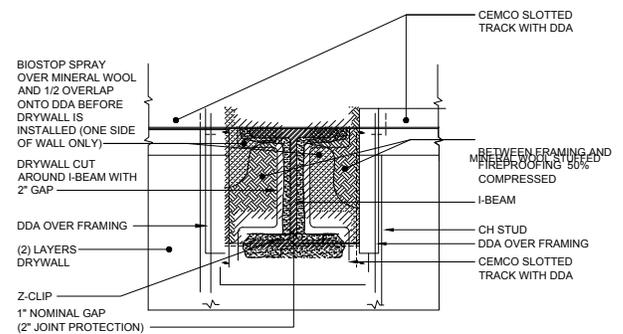
HW-D-0653



HW-D-0621



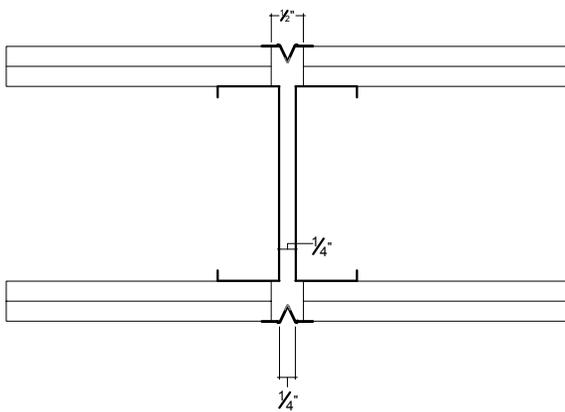
HW-D-0623



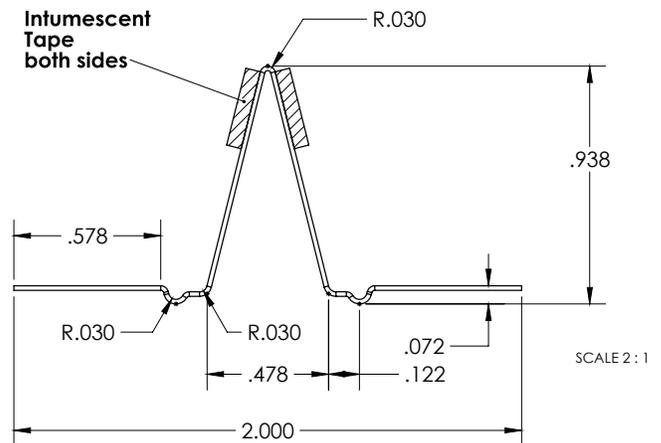
FAS-093X

CEMCO's FAS-093X Fire Rated control joint is a composite control joint with intumescent tape factory applied to the back side of the control joint. The FAS-093X has been tested according to UL-2079 "Test For Fire Resistance of Building Joint Systems" and is used to relieve stresses of expansion and contraction of drywall interior partitions or ceilings running in a horizontal or vertical direction. The opening is protected by an orange plastic tape to indicate the fire rating this tape is removed after joint compound has been applied and the finish is completed. The section is fabricated from hot-dipped galvanized steel complying with ASTM A653, and ASTM A1003 Grade 33 Type H for 33 Ksi yield strength steel 13 mil thickness.

- NO Drywall Rips Required
- NO Fire Sealant Required
- NO Mineral Wool Required



WW-D-0172



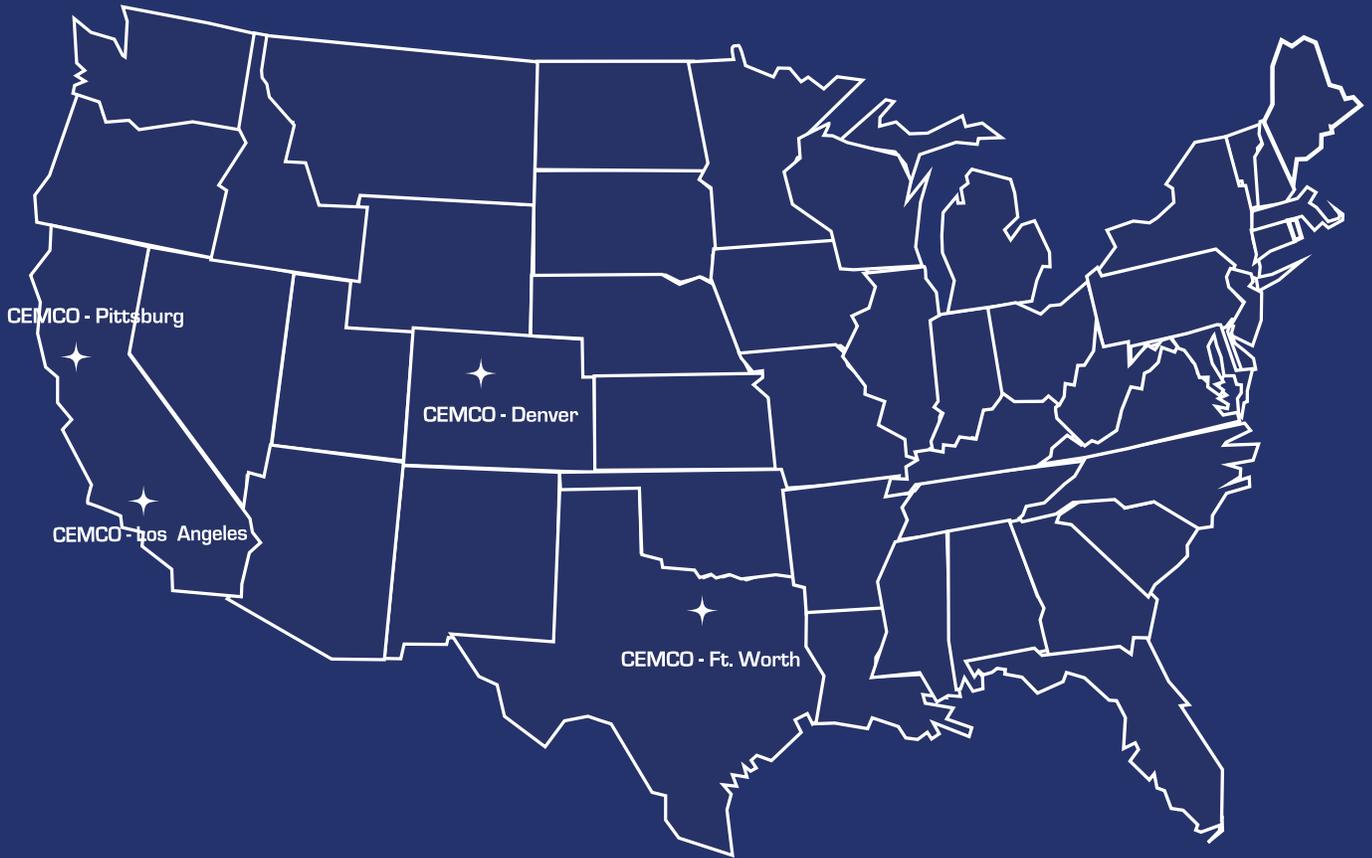
US Patent 8,671,632

DDA ENVIRONMENTAL BENEFITS AND LEED CONTRIBUTION



Deflection Drift Angle (DDA) represents an environmental advancement for interior partition construction. Its resilient intumescent layer of Blaze Seal makes it a one-piece solution to acoustical and fire resistive head assemblies. DDA's partition head assembly eliminates most bridging, elastomeric sealants, mineral wool, and the need to cut drywall to fit the flutes of decking. DDA reduces scraps and waste and often does not require any sealant to be applied to the head of wall joint. Resources are saved, and indoor air quality is improved.

DDA contributes to a number of LEED credits in the 2009 New Construction, Core and Shell, Commercial Interiors, and Schools rating systems. For more LEED information visit our website cemcosteel.com



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