The D-Flexion Post solves a long-standing problem in a simple, direct way. The problem has been in figuring out how to allow for vertical deflection in a curved wall.

D-Flexion Post is made to work hand in hand with Flex-C Trac, the innovative product that has saved so many framers the headaches that come with framing curved walls.

D-Flexion Post is made of galvanized steel and will allow 4 inches of total vertical movement.

Instructions for building curved deflection walls on back

To build a vertically deflecting curved wall with D-Flexion Post:

First, Form and secure Flex-C Trac in the desired curve.

Second, Insert the D-Flexion Post into a pivot hole of Flex-C Trac. Use as many Posts as needed for the desired lateral strength of the wall.

Third, After confirming your layout, anchor D-Flexion Post to the top deck using the pre-punched holes in the base plate.

Last, install the wall studs.

• Post spacing charts available

SPECIFICATIONS

Base Plate:
• ASTM A653, galvanized steel
• Standard protective coating equal or superior to ASTM A653 coating designation G-40 or A-40
• Dimensions: 3.375” x 5.75”, .060” thick

Post:
• ASTM A307, Grade A, zinc plated steel bolt
• Dimensions: 5” length, .375” diameter

SECTIONAL VIEW

SCALE = 0.25

FLEX-ABILITY CONCEPTS

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PART 1 – GENERAL

1.1 DESCRIPTION
A. Scope of Work
   All interior and exterior load bearing and non load-bearing light gauge steel and
   wood stud deflection assemblies and connections.

1.2 SUMMARY
A. This Section includes the following:
   1. Exterior and Interior non load-bearing wall deflection connections
      and assemblies.
   2. Exterior and Interior load-bearing wall deflection connections and assemblies.

1.3 PERFORMANCE REQUIREMENTS
A. Engineering Responsibility: Engage a fabricator who assumes undivided
   responsibility for engineering deflection connections and assemblies by
   employing a qualified professional engineer to prepare design calculations, shop
   drawings, and other structural data.
B. All Exterior and Interior load-bearing deflection post applications are to be
   engineered by a qualified professional Engineer.

1.4 QUALITY ASSURANCE
A. Installer Qualifications: Engage an experienced installer who has completed
   cold-formed metal framing similar in material, design, and extent to that
   indicated for this project and with a record of successful in-service performance.
B. Standard
   1. Work shall meet the requirements of the following standards:
         Steel Structural Members,” 1986 with 1989 amendments.
         Code – Sheet Steel.”
      c. American Society for Testing Materials (A.S.T.M)
      e. All pertinent Federal, State, and Local codes.
   2. The most stringent requirements shall govern in conflicts between specified
      codes and standards.
   3. Certify that each welder has satisfactorily passed AWS qualification tests for
      welding processes involved and, if pertinent, has undergone recertification
      within the past twelve months
C. Inspection
   1. As directed by Architect, Owner’s testing agency may inspect the maintenance
      of a quality control program including spot checking weldments and welding
      procedures in accordance with AWS standards.
   2. Full responsibility for quality control shall remain with the Contractor.

1.5 DELIVERY, STORAGE, AND HANDLING
A. Protect D-FLEXION POST from corrosion, deformation, and other damage
   during delivery, storage, and handling.
B. Store D-FLEXION POST with waterproof covering, and ventilate to
   avoid condensation.

1.6 SUBMITTALS
A. Structural Calculations
   1. Submit structural calculations prepared by the Professional Engineer of record.
   Calculations shall include, but are not limited to:
      a. Description of design criteria.
      b. Engineering analysis depicting stress and deflection (stiffness) requirements
         for each framing application.
      c. Selection of deflection connection components and accessories.
      d. Verification of attachments to structure and/or adjacent framing components.
B. Drawings
   1. Submit drawings prepared by the manufacturer for approval by the Project
      Architect and Engineer. These drawings should include:
      a. Cross-sections, plans and/or elevations depicting component locations.
      b. Connection details showing screw types and locations weld lengths and
         locations or other related fastener requirements.

PART 2 – PRODUCTS

2.1 AVAILABLE MANUFACTURERS:
A. Manufacturers offering D-FLEXION POST that may be incorporated in
   the project include, and are limited to, the following:
   1. FLEX-ABILITY CONCEPTS 3500 West Reno Avenue, Suite 300
      Oklahoma City, OK 73127 Tel 405.996.5343 Fax 405.996.5353
      www.flexabilityconcepts.com

2.2 MATERIALS
A. Galvanized – Steel bracket base:
   1. Coating Designation: Equal or superior to ASTM A653 G-40 or A-40
   2. Thickness .050 inches
   B. 375 dia. 5" long bolt (post): ASTM A307, and as follows:
      1. Grade: A
      2. Coating: zinc plated

2.3 D-FLEXION POST
A. D-FLEXION POST: Manufacturer’s standard steel deflection post with punched
   fastener holes in depths indicated.

2.4 D-FLEXION POST ACCESSORIES
A. Fabricate D-FLEXION POST accessories of the same material and finish used
   for D-FLEXION POST with minimum yield strength of 35,000 psi.
B. Provide accessories of manufacturer’s standard thickness and configuration,
   unless otherwise indicated.

2.5 FASTENERS
A. Mechanical Fasteners: Corrosion-resistant coated, self-drilling, self-threading
   steel screws.
B. Welded Electrodes: Comply with AWS standards.

2.6 MISCELLANEOUS MATERIALS
A. Galvanizing Repair Paint, SSPC-Paint 20 of DOD-P-21038, with dry film
   containing a minimum of 94 percent zinc dust by weight.

2.7 FABRICATION
A. Fabricate D-FLEXION POST connections and accessories plumb, square, true
   to line, true to radius, and with connections securely fastened, according to
   manufacturer’s recommendations and the requirements of this Section.
   1. Fabricate assemblies in jig templates or free form scribed radiiuses in
      conjunction with FLEX-C Trac framing.
   2. Fasten D-FLEXION POST by welding or screw fastening, as standard with
      manufacturer. Wire tying of D-FLEXION POST members is not permitted.
      a. Comply with AWS requirements and procedures for welding, appearance
         and quality of welds, and methods used in correcting welding work.
   3. Fasten other materials to D-FLEXION POST by welding, bolting or screw
      fastening, according to manufacturer’s recommendations.
B. Reinforce, stiffen, and brace framing assemblies to withstand handling, delivery,
   and erection stresses. Lift fabricated assemblies to prevent damage or distortion.
C. Fabrication Tolerances: Fabricate assemblies as required.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL
A. D-FLEXION POST connections may be shop or field fabricated for installation
   connections.
B. Install D-FLEXION POST and accessories plumb, square, true to line, true to
   radius, and with connections securely fastened, according to manufacturer’s
   recommendations and the requirements of this Section.
   1. Do not cut D-FLEXION POST base plate or threaded steel post.
   2. Fasten D-FLEXION POST members by welding or screw fastening, as standard
      with fabricator. Wire tying of D-FLEXION POST members is not permitted.
      a. Comply with AWS requirements and procedures for welding, appearance
         and quality of welds, and methods used in correcting welding work.
   B. Fasten other materials to D-FLEXION POST manufacturer’s instructions with
      attachments at each fastener location in the base plate.
C. Install D-FLEXION POST in intervals specified by Project Architect or Engineer.
D. Provide temporary bracing and leave in place until framing is permanently
   stabilized.
E. Do not bridge building expansion and control joints with D-FLEXION POSTS.
   Independently frame both sides of joints.

3.2 REPAIRS AND PROTECTION
A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on
   fabricated and installed D-FLEXION POSTS with galvanizing repair paint
   according to ASTM A 780 and the manufacturer’s instructions.
B. Touchup painting: Wire brush, clean, and paint scarred areas, welds, and rust
   spots on fabricated and installed prime-painted, D-FLEXION POSTS.
   1. Touchup painted surfaces with same type of shop paint used on
      adjacent surfaces.
C. Provide final protection and maintain conditions in a manner acceptable to
   manufacturer and installer to ensure that D-FLEXION POSTS are without damage
   or deterioration at the time of Substantial Completion.

Instructions for Building Curved Deflection Walls

1. Form Flex-C Trac into the desired curve and secure the shape by
   hammerlocking or screwing through the side holes as recommended.
2. Form a corresponding curve by inverting the original and making them,
   back to back, to match precisely.
3. Fasten the bottom Flex-C Trac curve to the floor in the desired location.
4. Plumb up to the surface where you want to fasten the upper curved
   Flex-C Trac.
5. Insert a D-Flexion Post through a pivot hole in the curve you have made
   for the top of the wall. Insert as many as you need for the desired strength
   of the wall.
6. Place a nut or bolt on the end of the D-Flexion Post a few turns.
7. Lift the top curve of Flex-C Trac (with inserted Posts) tight up to the desired
   plum marks on the ceiling. (This normally requires more than one person)
8. Turn the rectangular plate of the D-Flexion Post so that the anchoring holes
   are visible and accessible.
9. Anchor to top deck or surface using your preferred method. (Screws,
   powder actuated fasteners, etc. are acceptable.)
10. When you have secured the Posts, the Flex-C Trac will hang on the
    D-Flexion Post while you install the studs. (After you have completed the
    installation of the wall studs, the nuts may be removed or left on, as they are
    primarily to aid in installation.)

Note: If you desire 1” deflection (2’ vertical) cut the studs at least one inch
shorter than the top deck. Standard D-Flexion Post will accommodate up
by 2’ vertical movement (4‘ 1/2” total vertical movement).