Load Bearing Wall Members

SigmaStud® Web Reinforcement

SigmaStud® Punchouts

Each SigmaStud contains punchouts which are 1.5" wide and 4" tall, spaced every 24" o.c. vertically. The first punchout begins 12" o.c. from the end of the stud.

Custom punchout spacing is available upon request. Some restrictions apply.

Reinforcing Non-Standard Holes in SigmaStud®

Any larger holes cut into SigmaStud® require a review by the engineer, as load capacity is based on the existence of standard punchout sizes. With the realization that additional holes do manage to appear in studs, TSN provides the SigmaStud (SG) Web RFT to provide reinforcement of a hole or holes added to the stud web during construction, when holes larger than the standard knockout are introduced into the web of the member. Use of the SG Web RFT ensures that the load capacity of the stud is not compromised when these types of oversized holes are present.

- No loss of stud strength when using the SigmaStud Web RFT with up to a 3" hole.
- Each SigmaStud Web RFT contains 12 pre-drilled guide holes in the center section and 12 in the outside flanges, 6 per side, to ensure proper placement of the (24) #12 self-drilling self-tapping screws required.
- All modifications to SigmaStud must be reviewed by a structural engineer).
- Contact TSN's Project Management Team at (888) 474-4876 for more recommendations.
- Non standard holes may not exceed half of stud depth.

3" Maximum Hole Diameter
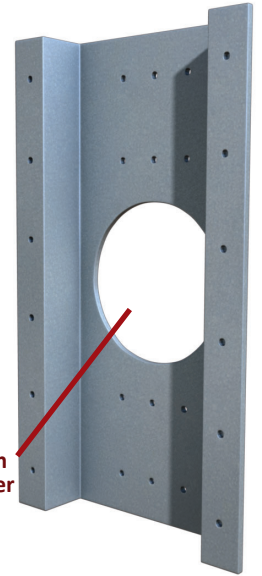
Nomenclature

SigmaStud® Web RFT is available in 54 or 97 mil thicknesses, and is designed for use with 550 & greater sized SigmaStud.

Designate: *SG Web RFT-54 or SG Web RFT-97*

* Use SG Web RFT-54 for SigmaStud 54mil and lower. Use SG Web RFT-97 for SigmaStud 68mil and higher.

Material Properties:

ASTM A1003/A1003M or ASTM A653/A653M, G-60 (Z180) minimum hot-dipped galvanized coating; or equivalent. Grade 50 (340), 50ksi (340 MPa) minimum yield strength, 65ksi (450 MPa) minimum tensile strength.


SigmaStud®: Important Design Considerations

Wall In-Line Framing

Building loads must transfer from the vertical element above (e.g. SigmaStud® wall) to the horizontal element (e.g. Floor System), and to the vertical bearing element below (e.g. SigmaStud wall). To achieve this load transfer, the wall framing must align vertically.
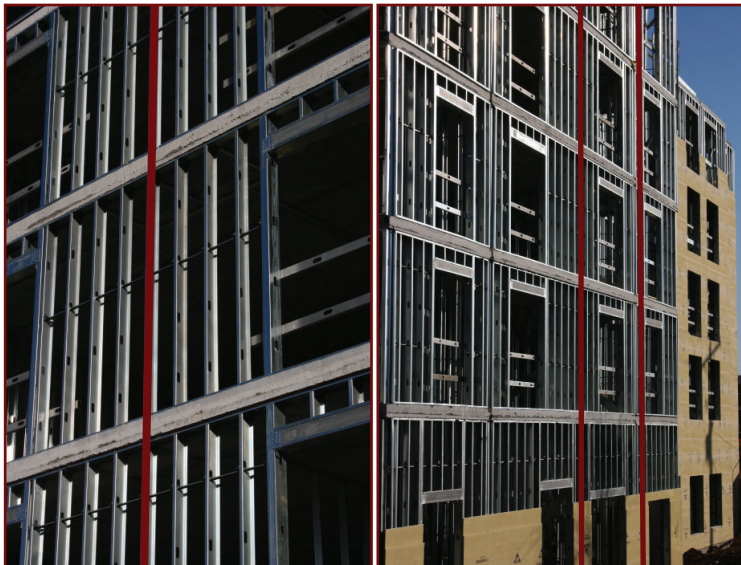
Example of framing aligned vertically. The red lines trace the axial load vertically from the roof to the foundation.
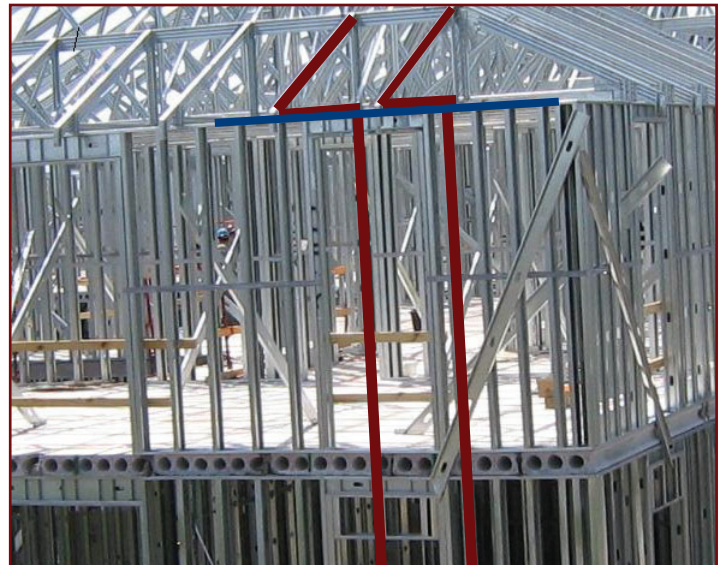
Trusses bearing on the studs, which are aligned vertically to the foundation (red lines). When truss spacing differs from stud spacing, a distribution lintel is required to transfer the load from the truss to the studs below (blue line).