PRODUCT CODE: **SJ2-454-G90**
PUBLICATION DATE: **JULY 2019**

SUBMITTAL SHEET

Studco 4” Wide with 2” Flange 50ksi G90 Structural Joist (54mils)

PRODUCT INFORMATION

Description	**Studco 4” Wide with 2” Flange 50ksi G90 Structural Joist (54mils)**
Code	**SJ2-454-G90**
Category	**Studco Structural Joist 2” Flange**

GEOMETRIC PROPERTIES

Web Depth (in)	**4”**
Flange Width (b)	**2”**
Stiffening Lip	**5/8”**
Weight (lb/ft)	**1.70**
Punchout Width	**1-1/2”**
Punchout Height	**2-1/4”**
Gauge	**16 GA**
Design Thickness	**0.0566**
Thickness - Mils	**54**
Yield Strength FY (KSI)	**50**
Coating	**G90**

GROSS SECTION PROPERTIES

Cross Section Area **A**	**0.500 in.2**
Moment of inertia **Ixx**	**1.292 in.4**
Section modulus **Sxx**	**0.646 in.3**
Radius of gyration **Rxx**	**1.608 in.**
Moment of inertia **Iyy**	**0.287 in.4**
Radius of gyration **Ryy**	**0.758 in.**

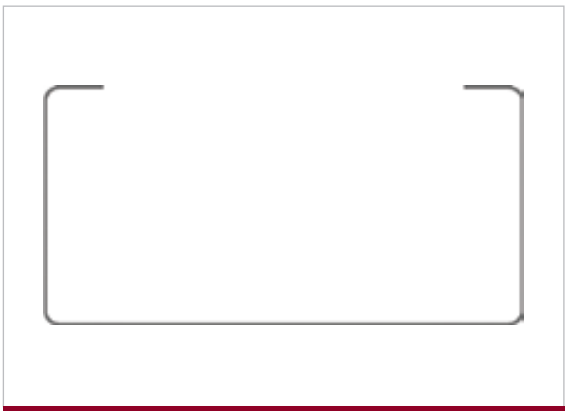
EFFECTIVE SECTION PROPERTIES

Moment of inertia for deflection **Ixx**	**1.292 in4**
Section modulus **Sxx**	**0.549 in3**
Allowable bending moment **Ma-L**	**16.43 in.-k**
Allowable moment based on distortional buckling **Ma-D**	**17.31 in-k**
Critical value of rotational stiffness **KfC**	**0.00**
Allowable strong axis shear away from punchouts **Vag**	**3372.00 lbs**
Allowable strong axis shear at punchouts **VaNet**	**1223 lbs**
Effective moment of inertia **Iyy**	**- in.4**
Effective Section modulus **Syy**	**- in.6**
Allowable moment at yield **Ma-yy**	**- in.**
Allowable weak axis shear **Vay**	**- lbs.**

TORSION PROPERTIES

St Venant torsion constant **J1000**	**0.534 in.4**
Warping constant **Cw**	**1.083 in.6**
Distance from shear center to neutral axis **Xo**	**-1.662 in.**
Distance from shear center to mid-plane of web **m**	**0.993 in.**
Polar radius of gyration **Ro**	**2.433 in.**
Beta **β**	**0.534 β**
Max. unbraced length **Lu**	**42.900 in.**

SJ2-454-G90



SJ2-454-G90 PROFILE

SUSTAINABILITY & LEED

LEED credit MR 2.1 (1 point)
LEED credit MR 2.2 (1 point)
LEED credit MR 4.1 (1 point)
LEED credit MR 4.2 (1 point)
LEED credit MR 5.1 (1 point)
LEED credit MR 5.2 (1 point)
ISO14001:2015 certified company
Total recycled content 32.7%
(Content: post consumer 25.5%, pre consumer 6.8%)

Suitable for UL Assemblies U419, U465 & U411,

ASTM INFORMATION

All products manufactured by STUDCO BUILDING SYSTEMS are certified to meet or exceed all applicable American Society for Testing & Materials standards as listed below. STUDCO BUILDING SYSTEMS is also accredited to ISO9001- an internationally recognized standard.

Material Specifications (ASTM)

• All STUDCO Structural framing members conform to A1003 - A1003 is the Standard specification for steel sheet, Carbon, Metallic- and Nonmetallic - Coated for Cold Formed Framing Members Coating Specification (ASTM) .

• All STUDCO Structural framing members conform to C955 - C955 Standard specification for load-bearing (transverse and axial) steel studs, runners (tracks), and bracing or bridging for screw application of gypsum panel products and metal plaster bases.

Product Specifications (ASTM)

• All STUDCO Structural framing members conform to C955 - C955 Standard specification for load-bearing (transverse and axial) steel studs, runners (tracks), and bracing or bridging for screw application of gypsum panel products and metal plaster bases.

All Structural products have a G-60 minimum weight conforming to ASTM Specification A1003 or have a protective coating with the industry standard requirements of ASTM C645. A G90 Coating is available upon request.

All Structural Studs Conform to U420 Standards for Fire Rated Assemblies.

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