# Code Compliance Research Report
# CCRR-0609

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**DIVISION: 05 00 00 - METALS**
**Section: 05 40 00 – Cold-Formed Metal Framing**
**DIVISION: 09 00 00 - FINISHES**
**Section: 09 22 16.13 – Non-Structural Metal Stud Framing**

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**REPORT SUBJECT:**
**UMS EQ Stud and UMS EQ Track Cold-Formed Steel Non-Structural Studs and Tracks**

## 1.0 SCOPE OF EVALUATION

**1.1** This Research Report addresses compliance with the following Codes:

- 2020 National Building Code of Canada

NOTE: This report references the most recent Code editions noted. Section numbers in earlier editions may differ.

**1.2** UMS Non-structural EQ Studs and Track comply with the following Sections of the NBC:

- Clause 1.2.1.1. (1)(a), Division A, using the following acceptable solutions from Division B:
- Sentence 9.24.1.2. (1) Material Standard for Non-Structural Steel (AISI S201-12)
- Part 9 Applications, Section 9.24 Sheet Steel Stud Wall Framing

**1.3** UMS Non-structural EQ Studs and Track have been evaluated for the following properties (see Table 1):

- Structural

**1.4** UMS Non-structural EQ Studs and Track have been evaluated for use as interior non-load bearing (non-structural), gypsum board sheathed walls in compliance with NBC Section 9.24.

## 2.0 STATEMENT OF COMPLIANCE

UMS Cold-Formed Steel Non-structural EQ Studs and Track complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.

## 3.0 DESCRIPTION

**3.1** UMS cold-formed, non-structural EQ Studs are “C” shaped member with web embossment (except 41.3 mm web depths) and stiffing lip. UMS Cold-formed, non-structural EQ Tracks are “U” shaped members with web embossment (except 41.3 mm web depths). See Figures 1-5 in this report. The UMS framing members recognized in this report are limited to UMS EQ Studs and UMS EQ Track members found in Table 2.

**3.2** UMS cold-formed, non-structural UMS EQ Studs and UMS EQ Tracks are fabricated from ASTM A1003 steel coils. Grades for UMS EQ Studs and UMS EQ Tracks are found in Table 2. The UMS EQ Studs and UMS EQ Tracks have a protective coating in accordance with AISI S220 conforming to ASTM A653 G40.

**3.3** UMS EQ Studs are available in two design thicknesses with multiple web depths. UMS EQ Tracks are available in two design thicknesses and multiple web depths. UMS EQ Studs and UMS EQ Tracks with a design thickness of 0.4826 mm are available in web widths of 41.3 mm, 63.5 mm, 88.9 mm, 92.1 mm, 102 mm, and 152 mm. See Figures 1-5 for stud and track profiles. See Table 2 for product designations.

**3.4** UMS EQ Studs can be manufactured with factory punchouts. The punchout sizes and shapes vary with the stud web and are in conformance with the maximum size specified in AISI S201. Punchouts are spaced along the centerline of the web, not less than 600 mm on center and located not less than 300 mm from the end of the stud.

## 4.0 PERFORMANCE CHARACTERISTICS

**4.1** Section Properties have been determined in accordance with AISI S220 and provided in Table 3.

**4.2** Non-load bearing (non-structural), non-composite wall heights are determined by the lesser of the limiting conditions which include: deflection, shear strength, web crippling strength, or flexural strength of the stud. The allowable heights for interior, non-load bearing walls are shown in Table 4 and Table 5.

## 5.0 INSTALLATION

**5.1** UMS cold-formed, non-structural UMS EQ Studs and UMS EQ Tracks must be installed in accordance with the manufacture's published installation instruction, the applicable Code and this Research Report. A copy of the manufacturer's instruction must be available on the jobsite during installation.

**5.2** Installation shall be in accordance with the code requirements and references AISI standard therein for cold-formed steel light frame construction, including NBC Section 9.24.

## 6.0 CONDITIONS OF USE

**6.1** Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

**6.2** All designs and calculations shall be prepared by a licensed design professional according to the requirements in the jurisdiction where the project is located.

**6.3** Jobsite manufacturing of studs or tracks is outside the scope of this report.

**6.4** The minimum base steel thickness of the section delivered to the jobsite shall be a minimum of 95% of the design thickness.

**6.5** UMS cold-formed, non-structural UMS EQ Studs and Track are limited to a transverse load of not more than 0.50 kPa; a superimposed axial load, exclusive of sheathing materials, not more than 1.46 kN/m; or a superimposed vertical load of not more than 0.89 kN.

**6.6** The UMS EQ Studs and UMS EQ Tracks are manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.

## 7.0 SUPPORTING EVIDENCE

**7.1** Manufacturer's drawings and installation instructions.

**7.2** Report of engineering and evaluation analysis in accordance with AISI S201-12, North American Standard for Cold-Formed Steel Framing – Product Data 2012 Edition and AISI S220-11, North American Standard for Cold-Formed Steel Nonstructural Framing.

**7.3** Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

## 8.0 IDENTIFICATION

The cold-formed steel framing members described in this Research Report are identified with labeling at a maximum of 96 inches, which includes the following information:

**8.1** Manufacturer's name, logo, or other positive identification

**8.2** Framing member designation, uncoated metal thickness, yield strength and designation "NS".

**8.3** Intertek designation and Code Compliance Research Report number (Intertek CCRR-0609)

**8.4** Bundles of like members shall be identified with manufacturer's name, length of product, quantity of product, uncoated metal thickness, yield strength, galvanization coating, and Intertek identification mark and Code Compliance Research Report number as shown:


**9.0 OTHER CODES**

This section is not applicable.

**10.0CODE COMPLIANCE RESEARCH REPORT USE**

**10.1** Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

**10.2** Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

**10.3** Reference to the https://bpdirectory.intertek.com is recommended to ascertain the current version and status of this report.

**TABLE 1 – CODE REFERENCED STANDARDS**

| PROPERTIES | APPLICABLE CODE SECTIONS |
|---|---|
| | 2020 NBC |
| Structural | 9.24 |

**TABLE 2 – MEMBER DESIGNATIONS**

| Member Designation | Design Thickness mm (in) | Minimum Base Steel Thickness mm (in) | Web Depth mm (in) | Flange Width mm (in) | Return Lip mm (in) | Yield Strength Mpa (ksi) |
|---|---|---|---|---|---|---|
| 162S125-18 | 0.483 (0.019) | 0.4597 (0.0181) | 41.27 (1.625) | 31.7 (1.25) | 4.762 (0.1875) | 480 (70) |
| 250S125-18 | 0.483 (0.019) | 0.4597 (0.0181) | 63.50 (2.5) | 31.7 (1.25) | 4.762 (0.1875) | 480 (70) |
| 362S125-18 | 0.483 (0.019) | 0.4597 (0.0181) | 92.07 (3.625) | 31.7 (1.25) | 4.762 (0.1875) | 480 (70) |
| 400S125-18 | 0.483 (0.019) | 0.4597 (0.0181) | 101.60 (4) | 31.7 (1.25) | 4.762 (0.1875) | 480 (70) |
| 600S125-18 | 0.483 (0.019) | 0.4597 (0.0181) | 152.40 (6) | 31.7 (1.25) | 4.762 (0.1875) | 480 (70) |
| 162T125-18 | 0.483 (0.019) | 0.4597 (0.0181) | 41.27 (1.625) | 31.7 (1.25) | N.A. | 340 (50) |
| 250T125-18 | 0.483 (0.019) | 0.4597 (0.0181) | 63.50 (2.5) | 31.7 (1.25) | N.A. | 340 (50) |
| 362T125-18 | 0.483 (0.019) | 0.4597 (0.0181) | 92.07 (3.625) | 31.7 (1.25) | N.A. | 340 (50) |
| 400T125-18 | 0.483 (0.019) | 0.4597 (0.0181) | 101.60 (4) | 31.7 (1.25) | N.A. | 340 (50) |
| 600T125-18 | 0.483 (0.019) | 0.4597 (0.0181) | 152.40 (6) | 31.7 (1.25) | N.A. | 340 (50) |

**Note:**

1. See Figures 1 - 5 for UMS EQ Stud and Track Drawings.

## TABLE 3 – UMS EQ STUD AND UMS EQ TRACKS SECTION PROPERTIES

| Member | | | | Gross Properties | | | | | | | Effective Properties | | | | | | Torsional Prop | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Design Thickness mm (in) | Minimum Base Steel Thickness mm (in) | $F_y$ MPa (ksi) | Area mm^2 (in^2) | Weight N/m (lb/ft) | $I_x$ mm^4 (in^4) | $S_x$ mm^3 (in^3) | $R_x$ mm (in) | $I_y$ mm^4 (in^4) | Ry mm (in) | $I_x$ mm^4 (in^4) | $S_x$ mm^3 (in^3) | $M_a$ N-m (in-k) | $M_{ad}$ in-k (in-k) | $Va_g$ kN (lb) | $Va_{net}$ kN (lb) | J x 1000 mm^4 (in^4) | $C_w$ mm^6 (in^6) | $X_s$ mm (in) | $R_{os}$ mm (in) | $\beta_{tf}$ |
| 162S125-18 | 0.482 (0.019) | 0.459 (0.0181) | 482 (70) | 52.9 (0.082) | 4.02 (0.276) | 15816 (0.038) | 868 (0.053) | 17.4 (0.686) | 6659 (0.016) | 11.2 (0.443) | 14151 (0.034) | 639 (0.039) | 97.6 (0.864) | 77.9 (0.69) | 1.17 (264) | 0.667 (150) | 4079 (0.0098) | 2148286 (0.008) | 27.6 (1.09) | 15.9 (0.628) | 1.4 |
| 250S125-18 | 0.482 (0.019) | 0.459 (0.0181) | 482 (70) | 63.2 (0.098) | 4.90 (0.336) | 42039 (0.101) | 1327 (0.081) | 25.6 (1.01) | 7492 (0.018) | 10.9 (0.432) | 41623 (0.1) | 1294 (0.079) | 213.5 (1.89) | 190.9 (1.69) | 1.28 (290) | 1.272 (286) | 4994 (0.012) | 5907789 (0.022) | 22.0 (0.8686) | 14.6 (0.578) | 1.4 |
| 362S125-18 | 0.482 (0.019) | 0.459 (0.0181) | 482 (70) | 77.4 (0.12) | 5.95 (0.408) | 99063 (0.238) | 2146 (0.131) | 35.8 (1.41) | 8324 (0.02) | 10.4 (0.413) | 99063 (0.238) | 2146 (0.131) | 329.9 (2.92) | 297.1 (2.63) | 1.85 (418) | 1.859 (418) | 5827 (0.014) | 13426793 (0.05) | 19.0 (0.75) | 12.7 (0.5) | 1.65 |
| 400S125-18 | 0.482 (0.019) | 0.459 (0.0181) | 482 (70) | 81.9 (0.127) | 6.30 (0.432) | 124869 (0.3) | 2458 (0.15) | 39.1 (1.54) | 8740 (0.021) | 10.3 (0.407) | 124869 (0.3) | 2458 (0.15) | 369.4 (3.27) | 325.3 (2.88) | 1.78 (402) | 1.788 (402) | 6409 (0.0154) | 16917759 (0.063) | 18.2 (0.719) | 12.2 (0.483) | 1.96 |
| 600S125-18 | 0.482 (0.019) | 0.459 (0.0181) | 482 (70) | 105.8 (0.164) | 8.05 (0.552) | 325909 (0.783) | 4277 (0.261) | 55.3 (2.18) | 9157 (0.022) | 9.3 (0.369) | 325909 (0.783) | 4293 (0.262) | 499.3 (4.42) | 460.9 (4.08) | 1.81 (409) | 1.819 (409) | 8324 (0.02) | 50753278 (0.189) | 15.4 (0.6084) | 10.5 (0.417) | 2.36 |
| 162T125-18 | 0.482 (0.019) | 0.459 (0.0181) | 344 (50) | 50.3 (0.078) | 3.85 (0.264) | 16649 (0.04) | 753 (0.046) | 17.8 (0.702) | 4162 (0.01) | 10.2 (0.404) | 10405 (0.025) | 376 (0.023) | 57.7 (0.511) | - (-) | 2.99 (674) | - (-) | 3746 (0.009) | 1611215 (0.006) | 21.6 (0.8528) | 12.0 (0.474) | 1.2 |
| 250T125-18 | 0.482 (0.019) | 0.459 (0.0181) | 344 (50) | 61.2 (0.095) | 4.72 (0.324) | 41206 (0.099) | 1278 (0.078) | 25.9 (1.02) | 5827 (0.014) | 9.9 (0.39) | 31217 (0.075) | 835 (0.051) | 99.9 (0.885) | - (-) | 2.99 (674) | - (-) | 4578 (0.011) | 4565109 (0.017) | 18.6 (0.7351) | 11.9 (0.472) | 1.32 |
| 362T125-18 | 0.482 (0.019) | 0.459 (0.0181) | 344 (50) | 74.8 (0.116) | 5.76 (0.395) | 96565 (0.232) | 2064 (0.126) | 35.8 (1.41) | 6659 (0.016) | 9.3 (0.369) | 81165 (0.195) | 1589 (0.097) | 146.8 (1.3) | - (-) | 2.99 (674) | - (-) | 5411 (0.013) | 10472898 (0.039) | 16.0 (0.6301) | 10.6 (0.418) | 1.59 |
| 400T125-18 | 0.482 (0.019) | 0.459 (0.0181) | 344 (50) | 79.3 (0.123) | 6.10 (0.418) | 121123 (0.291) | 2359 (0.144) | 39.1 (1.54) | 6659 (0.016) | 9.1 (0.362) | 102809 (0.247) | 1851 (0.113) | 266.6 (2.36) | - (-) | 1.88 (423) | - (-) | 5827 (0.014) | 13158257 (0.049) | 15.2 (0.6021) | 11.3 (0.446) | 1.69 |
| 600T125-18 | 0.482 (0.019) | 0.459 (0.0181) | 344 (50) | 103.8 (0.161) | 7.98 (0.547) | 320081 (0.769) | 4162 (0.254) | 55.6 (2.19) | 7075 (0.017) | 8.3 (0.327) | 300935 (0.723) | 3801 (0.232) | 253.0 (2.24) | - (-) | 2.96 (666) | - (-) | 7908 (0.019) | 32761375 (0.122) | 12.3 (0.4859) | 8.5 (0.336) | 2.26 |

Notes:
1 - Section properties were determined in accordance with AISI S100, North American Specification for Design of Cold Formed Steel Structural Members.
2 - Tabulated gross properties including torsional properties are based on full-unreduced cross section of the studs, away from punchouts.
3 - For deflection calculations, use the effective moment of inertia.
4 - Distortional buckling strength is based on a k-phi = 0
5 - Where web-height to thickness ratio exceeds 200, web stiffeners are required at all support points and concentrated loads

## TABLE 4 – UMS EQ STUDS AND UMS EQ TRACKS ALLOWALBE LIMITING HEIGHTS: INTERIOR NON-STRUCTRUAL, NON-COMPOSITE FULLY BRACED

| Member | Spacing, O.C. | $F_y$ | 0.24kPa (5 psf) | | | 0.36kPa (7.5 psf) | | | 0.5kPa (10 psf) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L/120 | L/240 | L/360 | L/120 | L/240 | L/360 | L/120 | L/240 | L/360 |
| 162S125-18 | 300 mm (12 in) | 482 MPa (70 ksi) | 2.89 m (9' 6") | 2.31 m (7' 7") | 2 m (6' 7") | 2.54 m (8' 4") | 2 m (6' 7") | 1.75 m (5' 9") | 2.31 m (7' 7") | 1.82 m (6' 0") | 1.6 m (5' 3") |
| | 400 mm (16 in) | | 2.64 m (8' 8") | 2.08 m (6' 10") | 1.82 m (6' 0") | 2.31 m (7' 7") | 1.82 m (6' 0") | 1.6 m (5' 3") | 1.87 m (6' 2") | 1.65 m (5' 5") | 1.44 m (4' 9") |
| | 600 mm (24 in) | | 2.31 m (7' 7") | 1.82 m (6' 0") | 1.6 m (5' 3") | 1.67 m (5' 6") | 1.6 m (5' 3") | 1.21 m (4' 0") | 1.24 m (4' 1") | 1.24 m (4' 1") | 1.24 m (4' 1") |
| 250S125-18 | 300 mm (12 in) | 482 MPa (70 ksi) | 4.16 m (13' 8") | 3.3 m (10' 10") | 2.87 m (9' 5") | 3.63 m (11' 11") | 2.87 m (9' 5") | 2.51 m (8' 3") | 3.3 m (10' 10") | 2.61 m (8' 7") | 2.28 m (7' 6") |
| | 400 mm (16 in) | | 3.78 m (12' 5") | 2.99 m (9' 10") | 2.61 m (8' 7") | 3.3 m (10' 10") | 2.61 m (8' 7") | 2.28 m (7' 6") | 2.79 m (9' 2") | 2.38 m (7' 10") | 2.08 m (6' 10") |
| | 600 mm (24 in) | | 3.3 m (10' 10") | 2.61 m (8' 7") | 2.28 m (7' 6") | 2.48 m (8' 2") | 2.28 m (7' 6") | 1.75 m (5' 9") | 1.85 m (6' 1") | 1.85 m (6' 1") | 1.8 m (5' 11") |
| 362S125-18 | 300 mm (12 in) | 482 MPa (70 ksi) | 5.56 m (18' 3") | 4.41 m (14' 6") | 3.86 m (12' 8") | 4.85 m (15' 11") | 3.86 m (12' 8") | 3.37 m (11' 1") | 4.41 m (14' 6") | 3.5 m (11' 6") | 3.04 m (10' 0") |
| | 400 mm (16 in) | | 5.05 m (16' 7") | 4.01 m (13' 2") | 3.5 m (11' 6") | 4.41 m (14' 6") | 3.5 m (11' 6") | 3.04 m (10' 0") | 3.47 m (11' 5") | 3.17 m (10' 5") | 2.76 m (9' 1") |
| | 600 mm (24 in) | | 4.41 m (14' 6") | 3.5 m (11' 6") | 3.04 m (10' 0") | 3.09 m (10' 2") | 3.04 m (10' 0") | 2.33 m (7' 8") | 2.31 m (7' 7") | 2.31 m (7' 7") | 2.31 m (7' 7") |
| 400S125-18 | 300 mm (12 in) | 482 MPa (70 ksi) | 6.01 m (19' 9") | 4.77 m (15' 8") | 4.16 m (13' 8") | 5.25 m (17' 3") | 4.16 m (13' 8") | 3.63 m (11' 11") | 4.77 m (15' 8") | 3.78 m (12' 5") | 3.3 m (10' 10") |
| | 400 mm (16 in) | | 5.46 m (17' 11") | 4.34 m (14' 3") | 3.78 m (12' 5") | 4.77 m (15' 8") | 3.78 m (12' 5") | 3.3 m (10' 10") | 3.68 m (12' 1") | 3.42 m (11' 3") | 2.99 m (9' 10") |
| | 600 mm (24 in) | | 4.77 m (15' 8") | 3.78 m (12' 5") | 3.3 m (10' 10") | 3.27 m (10' 9") | 3.27 m (10' 9") | 2.51 m (8' 3") | 2.46 m (8' 1") | 2.46 m (8' 1") | 2.46 m (8' 1") |
| 600S125-18 | 300 mm (12 in) | 482 MPa (70 ksi) | 8.28 m (27' 2") | 6.57 m (21' 7") | 5.74 m (18' 10") | 7.23 m (23' 9") | 5.74 m (18' 10") | 5 m (16' 5") | 5.71 m (18' 9") | 5.2 m (17' 1") | 4.54 m (14' 11") |
| | 400 mm (16 in) | | 7.51 m (24' 8") | 5.96 m (19' 7") | 5.2 m (17' 1") | 5.71 m (18' 9") | 5.2 m (17' 1") | 4.54 m (14' 11") | 4.29 m (14' 1") | 4.29 m (14' 1") | 4.14 m (13' 7") |
| | 600 mm (24 in) | | 5.71 m (18' 9") | 5.2 m (17' 1") | 4.54 m (14' 11") | 3.81 m (12' 6") | 3.81 m (12' 6") | 3.47 m (11' 5") | 2.84 m (9' 4") | 2.84 m (9' 4") | 2.84 m (9' 4") |

**Notes:**

1 – 0.24 kPa, 0.36 kPa, and 0.50 kPa lateral loads have NOT been reduced for strength or deflection checks.

2 – Calculations are based on steel properties only. (For non-composite).

3 – Calculations are based on effective section properties for deflection checks.

4 – Calculations are performed for studs simply supported on both ends.

## TABLE 5 – UMS EQ STUDS AND UMS EQ TRACKS ALLOWALBE LIMITING HEIGHTS: INTERIOR NON-STRUCTRUAL, NON-COMPOSITE BRACED 48 INCHES ON CENTER

| Member | Spacing, O.C. | $F_y$ | 0.24kPa (5 psf) | | | 0.36kPa (7.5 psf) | | | 0.5kPa (10 psf) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L/120 | L/240 | L/360 | L/120 | L/240 | L/360 | L/120 | L/240 | L/360 |
| 162S125-18 | 300 mm (12 in) | 482 MPa (70 ksi) | 2.89 m (9' 6") | 2.31 m (7' 7") | 2 m (6' 7") | 2.54 m (8' 4") | 2 m (6' 7") | 1.75 m (5' 9") | 2.26 m (7' 5") | 1.82 m (6' 0") | 1.6 m (5' 3") |
| | 400 mm (16 in) | | 2.64 m (8' 8") | 2.08 m (6' 10") | 1.82 m (6' 0") | 2.26 m (7' 5") | 1.82 m (6' 0") | 1.6 m (5' 3") | 1.67 m (5' 6") | 1.65 m (5' 5") | 1.44 m (4' 9") |
| | 600 mm (24 in) | | 2.26 m (7' 5") | 1.82 m (6' 0") | 1.6 m (5' 3") | 1.49 m (4' 11") | 1.49 m (4' 11") | 1.39 m (4' 7") | 1.11 m (3' 8") | 1.11 m (3' 8") | 1.11 m (3' 8") |
| 250S125-18 | 300 mm (12 in) | 482 MPa (70 ksi) | 4.16 m (13' 8") | 3.3 m (10' 10") | 2.87 m (9' 5") | 3.63 m (11' 11") | 2.87 m (9' 5") | 2.51 m (8' 3") | 3.3 m (10' 10") | 2.61 m (8' 7") | 2.28 m (7' 6") |
| | 400 mm (16 in) | | 3.78 m (12' 5") | 2.99 m (9' 10") | 2.61 m (8' 7") | 3.3 m (10' 10") | 2.61 m (8' 7") | 2.28 m (7' 6") | 2.64 m (8' 8") | 2.38 m (7' 10") | 2.08 m (6' 10") |
| | 600 mm (24 in) | | 3.3 m (10' 10") | 2.61 m (8' 7") | 2.28 m (7' 6") | 2.36 m (7' 9") | 2.28 m (7' 6") | 1.98 m (6' 6") | 1.75 m (5' 9") | 1.75 m (5' 9") | 1.75 m (5' 9") |
| 362S125-18 | 300 mm (12 in) | 482 MPa (70 ksi) | 5.56 m (18' 3") | 4.41 m (14' 6") | 3.86 m (12' 8") | 4.85 m (15' 11") | 3.86 m (12' 8") | 3.37 m (11' 1") | 4.41 m (14' 6") | 3.5 m (11' 6") | 3.04 m (10' 0") |
| | 400 mm (16 in) | | 5.05 m (16' 7") | 4.01 m (13' 2") | 3.5 m (11' 6") | 4.41 m (14' 6") | 3.5 m (11' 6") | 3.04 m (10' 0") | 3.3 m (10' 10") | 3.17 m (10' 5") | 2.76 m (9' 1") |
| | 600 mm (24 in) | | 4.41 m (14' 6") | 3.5 m (11' 6") | 3.04 m (10' 0") | 2.94 m (9' 8") | 2.94 m (9' 8") | 2.66 m (8' 9") | 2.2 m (7' 3") | 2.2 m (7' 3") | 2.2 m (7' 3") |
| 400S125-18 | 300 mm (12 in) | 482 MPa (70 ksi) | 6.01 m (19' 9") | 4.77 m (15' 8") | 4.16 m (13' 8") | 5.25 m (17' 3") | 4.16 m (13' 8") | 3.63 m (11' 11") | 4.62 m (15' 2") | 3.78 m (12' 5") | 3.3 m (10' 10") |
| | 400 mm (16 in) | | 5.46 m (17' 11") | 4.34 m (14' 3") | 3.78 m (12' 5") | 4.62 m (15' 2") | 3.78 m (12' 5") | 3.3 m (10' 10") | 3.45 m (11' 4") | 3.42 m (11' 3") | 2.99 m (9' 10") |
| | 600 mm (24 in) | | 4.62 m (15' 2") | 3.78 m (12' 5") | 3.3 m (10' 10") | 3.07 m (10' 1") | 3.07 m (10' 1") | 2.89 m (9' 6") | 2.31 m (7' 7") | 2.31 m (7' 7") | 2.31 m (7' 7") |
| 600S125-18 | 300 mm (12 in) | 482 MPa (70 ksi) | 8.28 m (27' 2") | 6.57 m (21' 7") | 5.74 m (18' 10") | 7.23 m (23' 9") | 5.74 m (18' 10") | 5 m (16' 5") | 5.48 m (18' 0") | 5.2 m (17' 1") | 4.54 m (14' 11") |
| | 400 mm (16 in) | | 7.51 m (24' 8") | 5.96 m (19' 7") | 5.2 m (17' 1") | 5.48 m (18' 0") | 5.2 m (17' 1") | 4.54 m (14' 11") | 4.11 m (13' 6") | 4.11 m (13' 6") | 4.14 m (13' 7") |
| | 600 mm (24 in) | | 5.48 m (18' 0") | 5.2 m (17' 1") | 4.54 m (14' 11") | 3.65 m (12' 0") | 3.65 m (12' 0") | 3.65 m (12' 0") | 2.74 m (9' 0") | 2.74 m (9' 0") | 2.74 m (9' 0") |

**Notes:**

1 – 0.24 kPa, 0.36 kPa, and 0.50 kPa lateral loads have NOT been reduced for strength or deflection checks.

2 – Calculations are based on steel properties only. (For non-composite).

3 – Calculations are based on effective section properties for deflection checks.

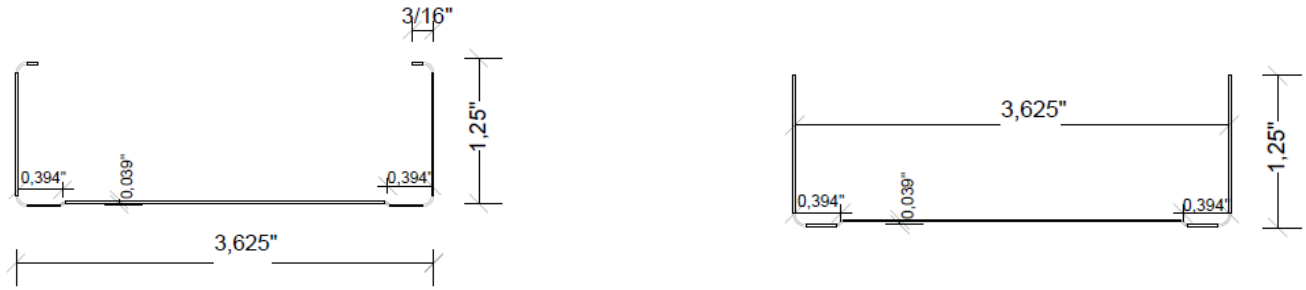
4 – Calculations are performed for studs simply supported on both ends.


**Stud** **Track**

**Figure 1 – UMS 41.27 mm (1-5/8 inch) EQ Stud and Track**


**Stud** **Track**

**Figure 2 – UMS 63.50 mm (2-1/2 inch) EQ Stud and Track**




**Stud** **Track**

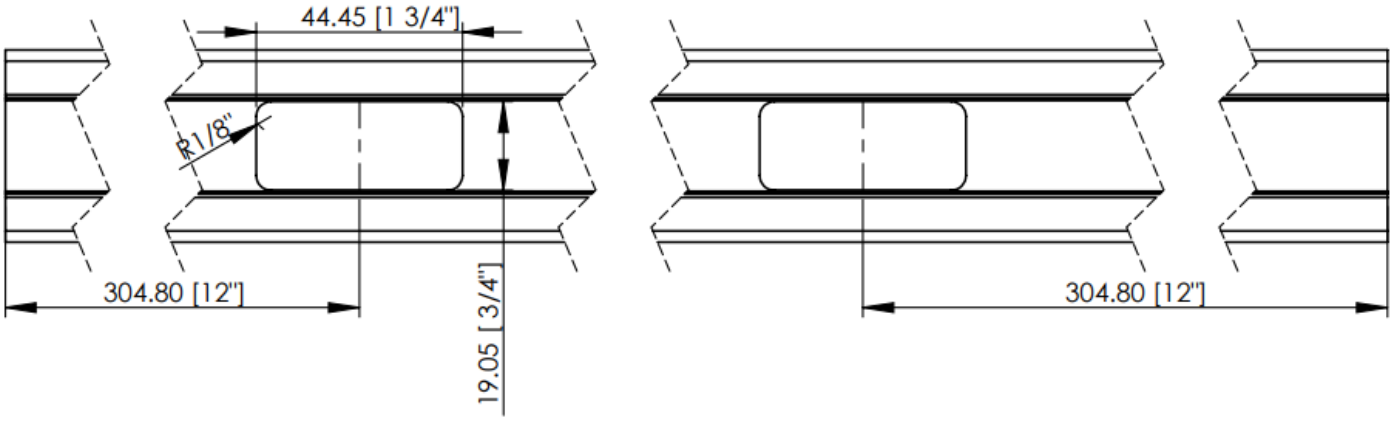
**Figure 3 – UMS 88.90 mm (3-5/8 inch) EQ Stud and Track**


**Stud** **Track**

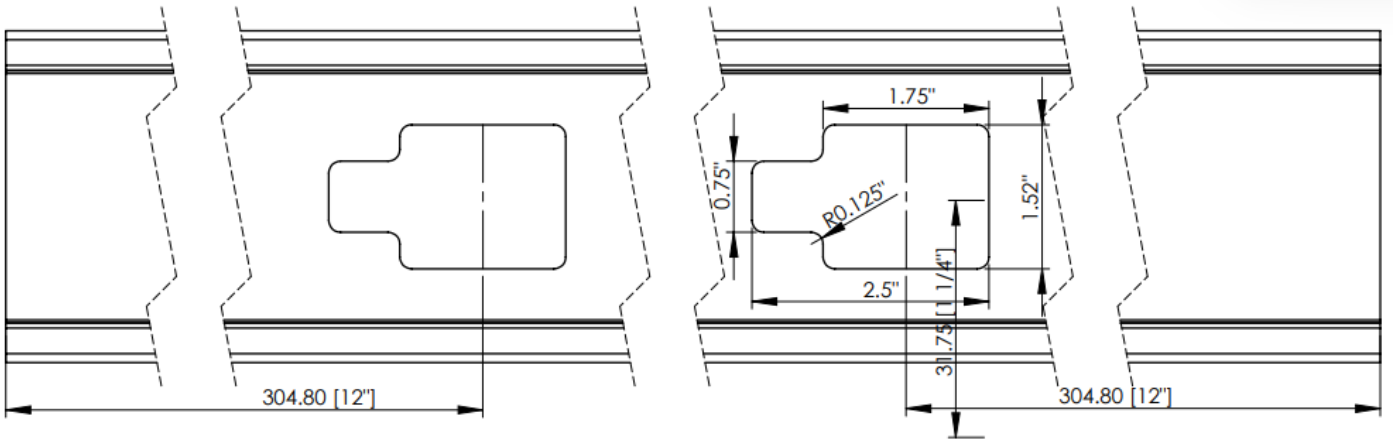
**Figure 4 – UMS 92.70 mm (4 inch) EQ Stud and Track**


**Stud** **Track**

**Figure 5 – UMS 152.40 mm (6 inch) EQ Stud and Track**




**41.27 mm (1-5/8 inch) and 63.50 mm (2-1/2 inch) Studs**




**88.90 MM (3-5/8 inch), 92.70 MM (4 inch) and 152.40 MM (6 inch) Studs**

**Figure 6 – Stud Web Punchouts**