



“The System”

U.S Patent #5,913,788

UL System No. HW-D-0027 2 Hour Rated Assembly (Metal Decking)

UL System No. HW-D-0028 1 Hour Rated Assembly (Metal Decking)

UL System No. HW-D-0208 1 Hour Rated Assembly (Metal Decking)

UL System No. HW-D-0051 2 Hour Rated Assembly (Concrete Slab)

UL System No. HW-D-0052 2 Hour Rated Assembly (Concrete Slab)

“The System” is a UL-listed deflection/seismic and fire resistant head-of-wall system that provides positive attachment and passes full scale cycling, furnace, and hose stream tests required by IBC 2009, 2012, 2015 & 2018.

IBC 2015 SECTION 702 DEFINITIONS – FIRE-RESISTANT JOINT SYSTEM. An assemblage of specific materials or products that are designed, tested, and fire-resistance rated in accordance with ASTM E 1966 to resist for a prescribed period of time the passage of fire through joints made in or between fire-resistance-rated assemblies.

“The System®” by Metal-Lite™ was tested to comply with the following excerpts from the IBC (International Building Code) 2015 Codes.

IBC 2015 Section 715.3 Fire Test Criteria- Fire-resistant joint systems shall be tested in accordance with the requirements of ASTM E 1966 and E119.

Size of Test Specimen is 100 square foot	
Preconditioned Cycles	
Type of Joint System	Number of Cycles
Seismic	100
Expansion/Contraction	500
Wind Sway	500

ASTM E 119 Section 17.1 – Size of Specimen

The area exposed to fire shall be not less than 100 ft² (9m²), with neither dimension less than 9ft (2.7 m). Restrain the test specimen on all four edges.

UL 2079 Section 1.2

The fire endurance ratings for joint systems are intended to register performance during the period of fire exposure and are not intended to be interpreted as having determined the acceptability of the joint systems for use before or after fire exposure. The intent of these methods is to develop data to assist others in determining the suitability of the joint systems where fire resistance is required.

METAL-LITE

www.metal-lite.net / 800.236.0302

Solutions for the Metal Stud Framing Industry



“The System”

U.S Patent #5,913,788

THE FIRE-RESISTIVE JOINT SYSTEM in section 702 is an assemblage of specific materials or products that are designed, tested, and fire-resistance rated in accordance with ASTM E 1966 to resist for a prescribed period of time the passage of fire through joints made in or between fire-resistance-rated assemblies.

“THE SYSTEM®” by **METAL-LITE** has solved the following problems at the head-of-wall:

1. **Cycling:** The **ONLY** single-track system that has been full scale furnace and hose stream tested and cycled 100 and 500 times.
2. **Deflection/Seismic Activity:** Movement both vertically and horizontally (inter-story drift).
3. **Fireproofing:** A system of fireproofing for about five cents a foot. NO caulking, NO cutins, NO ship laps, and NO sprayed on fireproofing.
4. **Installation:** NO waiting for fire-proofer, NO job down time. Contractor completes the system as the wall is finished.
5. **Code Requirements:** Single-track system with a secure installation method exceeds the UL 2079 requirements for one and two-hour fire with hose stream tests. Meets 2015 IBC Section 715.3.
6. **Cost:** “The System®” is the least labor intensive, and the most cost effective way to meet all building requirements and codes.

APPROVALS: OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT (OSHDP), NUMBER R-0370.

City of Los Angeles General Approval- Metal-Lite’s One and Two Hour Fire Rated Joint System for metal stud walls. City of Los Angeles Research Report: RR-25319.

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Metal-Lite “The System” Slotted Track Property Table

Thickness				Size		Weight		Packaging
Gauge	Mills	Design Thickness		Inches	Mm	Lbs/ft	Kg/m	Pcs/ Skid
		Inches	Mm					
20	33	0.0346	0.879	2 ½	63.5	0.882	1.309	100
				3 5/8	92.1	1.015	1.505	100
				4	101.6	1.571	1.571	100
				6	152.4	1.922	1.922	100
				8	203.2	1.529	2.270	100
				10	-	-	-	-
18	43	0.0451	1.146	2 1/2	63.5	1.150	1.706	100
				3 5/8	92.1	1.323	1.965	100
				4	101.6	1.380	2.047	100
				6	152.4	1.687	2.503	100
				8	203.2	1.993	2.959	100
				10	-	-	-	-
16	54	0.0566	1.438	2 1/2	63.5	1.443	2.142	100
				3 5/8	92.1	1.660	2.463	100
				4	101.6	1.732	2.571	100
				6	152.4	2.117	3.142	100
				8	203.2	2.502	3.713	100
				10	254	2.887	4.284	100
14	68	0.0713	1.811	2 1/2	63.5	1.818	2.699	100
				3 5/8	92.1	2.091	3.103	100
				4	101.6	2.182	3.237	100
				6	152.4	2.667	3.959	100
				8	203.2	3.152	4.677	100
				10	254	3.637	5.295	100

Metal-Lite “The System” Slotted Track Allowable Loads

20 Gauge ST P = 166 lbs.	16 Gauge ST P = 314 lbs.
18 Gauge ST P = 196 lbs.	14 Gauge ST P = 314 lbs. <u>±</u>



METAL-LITE, INC.

SLOTTED TOP TRACK - SINGLE TRACK
SLIP SYSTEM INTERIOR PARTITIONS

DES J.H.T.

JOB 8-9150

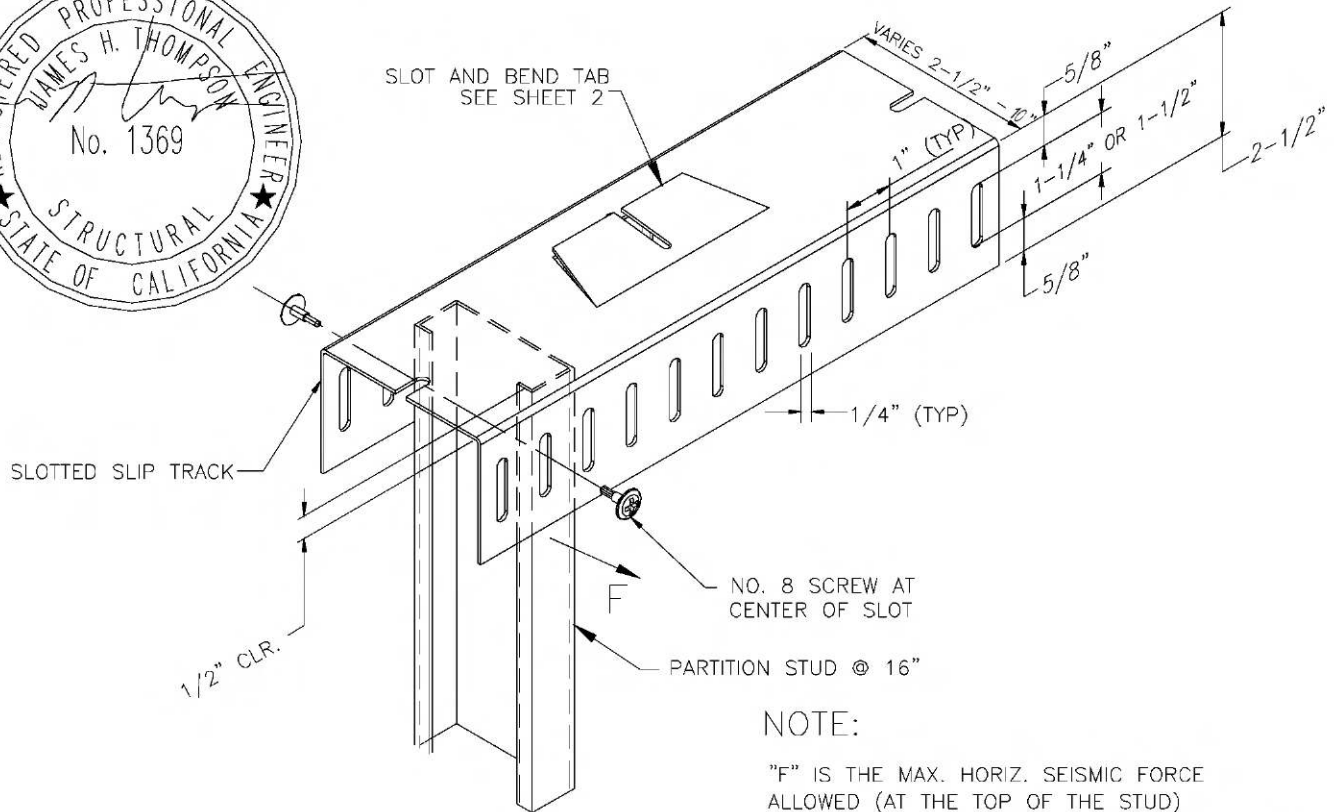
DATE 07-19-2010

SHEET

1

OF 3 SHEETS

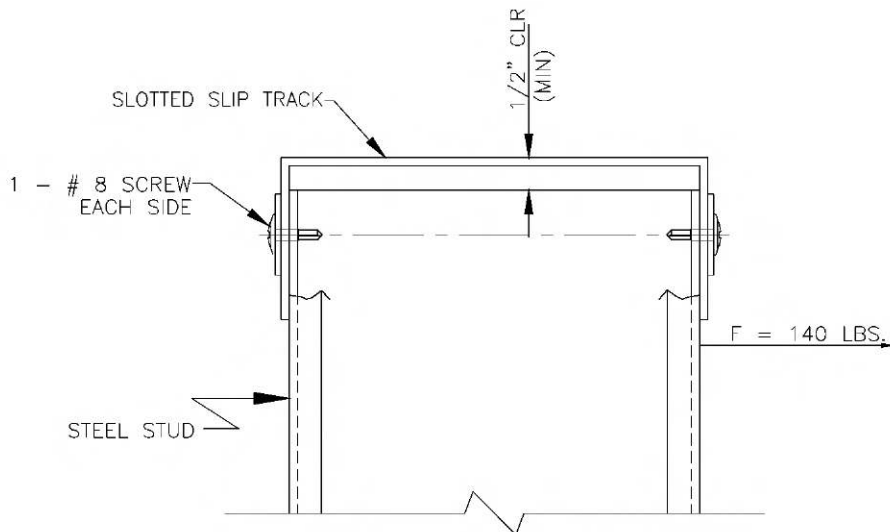
PHONE (800) 236-0302, (931) 277-5772



ISOMETRIC VIEW

NOTE:

"F" IS THE MAX. HORIZ. SEISMIC FORCE ALLOWED (AT THE TOP OF THE STUD) DUE TO THE WEIGHT OF THE WALL SUPPORTED EQUIP., BUT NOT INCLUDING CODE REQUIRED 5 PSF LATERAL LOAD WHICH IS NOT ADDITIVE TO WALL DEAD LOAD SEISMIC FORCES.



SECTION

METAL-LITE, INC.

SLOTTED TOP TRACK – SINGLE TRACK
SLIP SYSTEM INTERIOR PARTITIONS

DES J.H.T.

JOB 8-9150

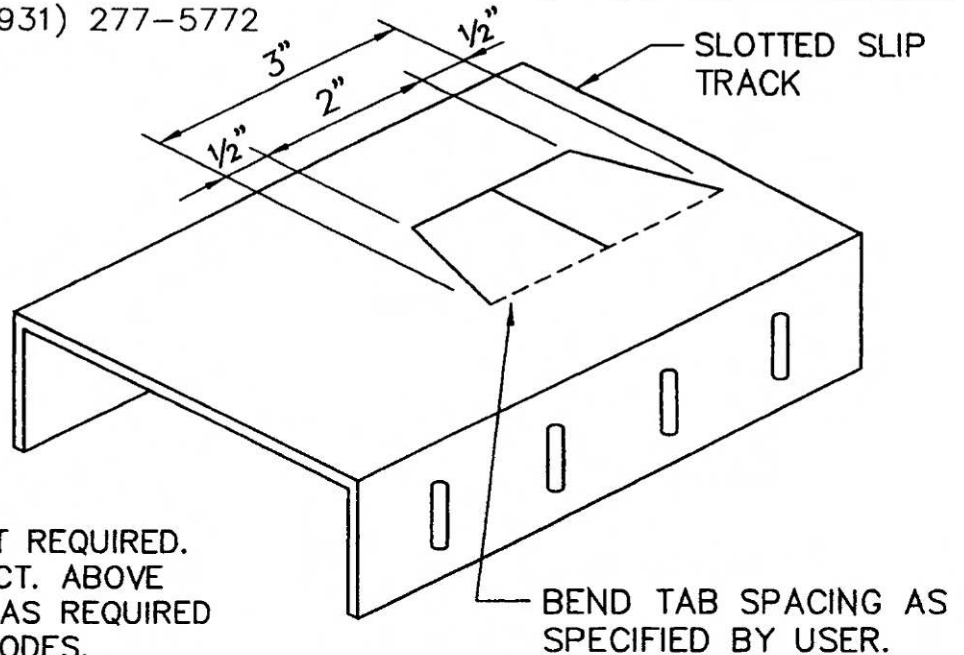
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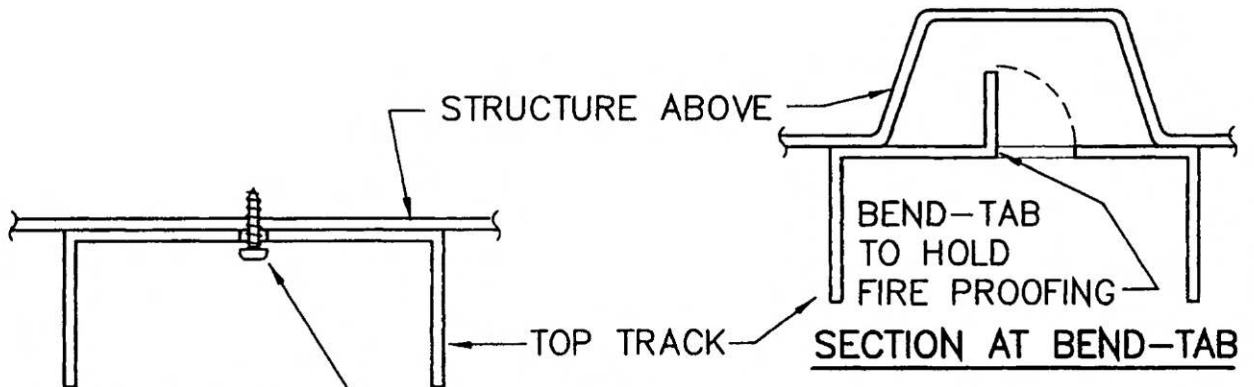
PHONE (800) 236-0302, (931) 277-5772



NOTES:

1. TRACK IS 20 GA. MIN.
2. FY = 30 KSI (MIN.)
3. SINGLE TRACK SYSTEM,
SECOND TOP TRACK NOT REQUIRED.
4. FASTEN TRACK TO STRUCT. ABOVE
FOR LATERAL SUPPORT AS REQUIRED
BY APPLICABLE BLDG. CODES.
5. SLIP TRACK PATENT NO. 5913788.

ISOMETRIC VIEW



10 SCREW TO STRUCT.
16" O.C., MIN AND AS
DETERMIND BY S.E.O.R.
SEE NOTE 1 ON DRWG. 3

SECTION AT SCREW

METAL-LITE, INC.

DES J.H.T.

SHEET

JOB 8-9150

3

SLOTTED TOP TRACK - SINGLE TRACK
SLIP SYSTEM INTERIOR PARTITIONS

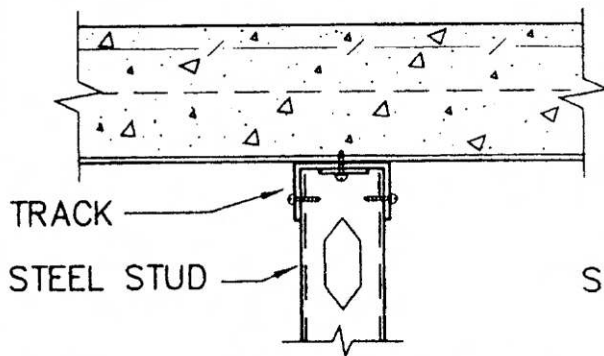
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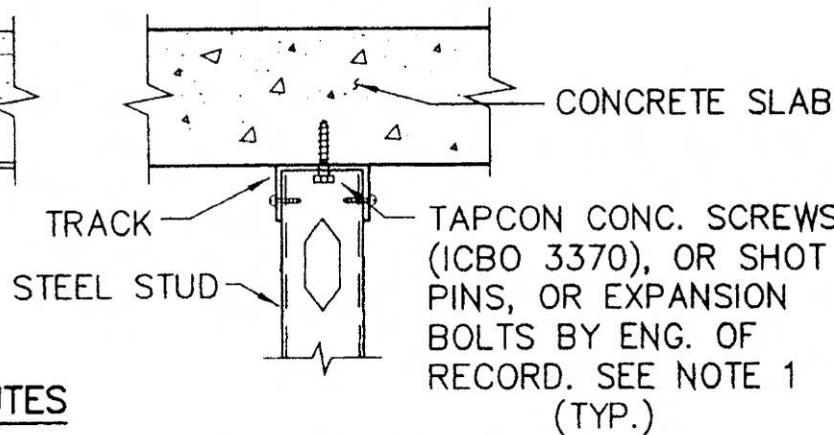
PHONE (800) 236-0302, (931) 277-5772

NOTES:

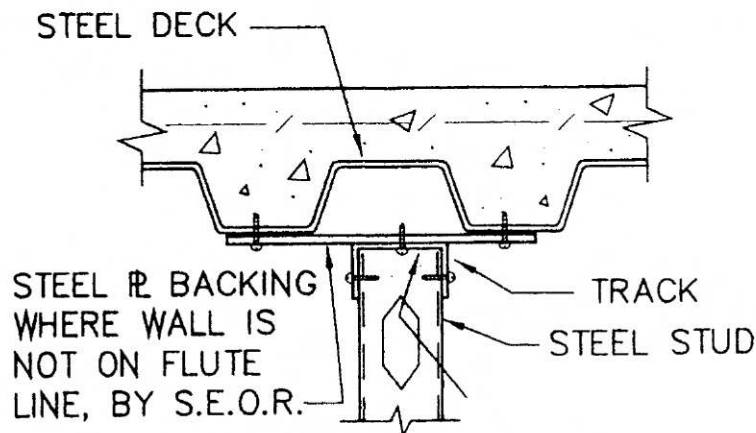
1. CONNECTION TO STRUCTURE ABOVE SHALL BE DESIGNED BY THE STRUCT. ENG. OF RECORD FOR A SITE SPECIFIC PROJECT. CAPACITY SHALL BE ABLE TO RESIST 140 LBS. PER STUD, MIN., HORIZ. LOAD, AT EA. STUD, WITH #10 SCREW (MIN.) @ 16" O.C. AT STEEL-TO-STEEL CONNECTIONS.
2. WHERE SHEET METAL SCREWS EXTEND INTO CONCRETE, PRE-DRILL CONCRETE AS REQUIRED.



WALL PERPENDICULAR TO FLUTES



FLAT SLAB SOFFIT

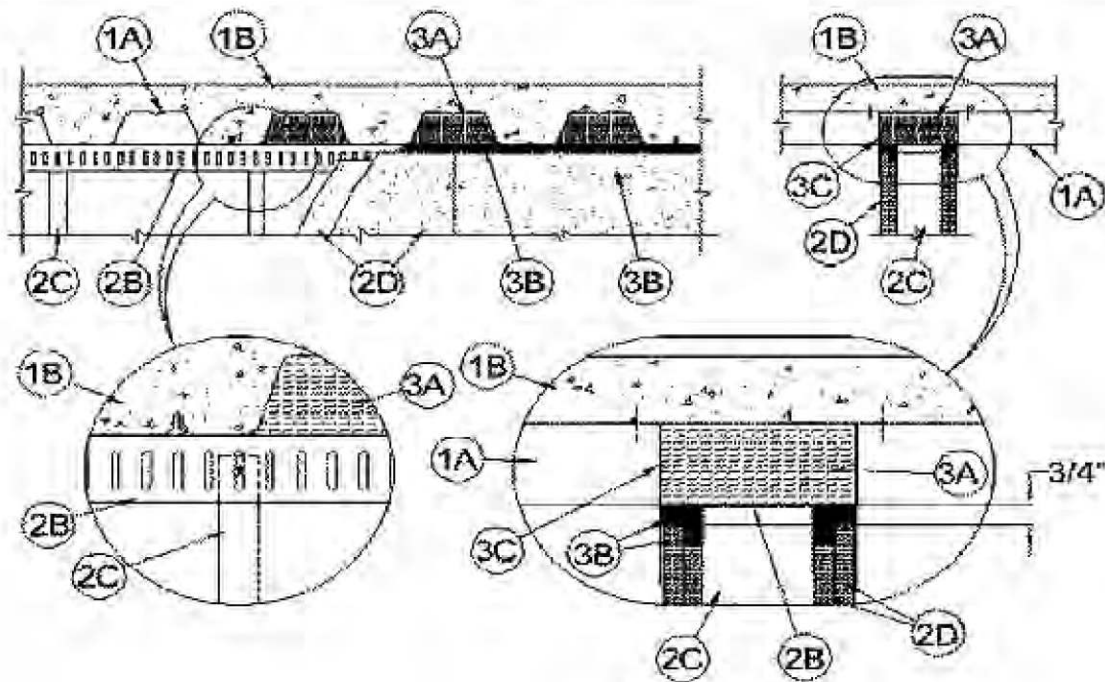


WALL PARALLEL TO FLUTES

April 16, 2004
Assembly Rating – 2 Hr

Nominal Joint Width – 3/4 in.

Class II and III Movement Capabilities – 33 Percent Compression or Extension



1. Floor Assembly - The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor And Form Units* - Nom 3 in. deep galv steel fluted units with symmetrical nom 5 in. wide valleys and crests spaced 12 in. OC.

See Steel Floor and Form Units — (CHWX) category for names of manufacturers.

B. Concrete - Min 2-1/2 in. thick reinforced concrete, as measured from the top plane of the floor units.

2. Wall Assembly – The 2 hr fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400- or V400- Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Floor Track (Not Shown) - Floor track of wall assembly shall consist of min 20 ga galv steel channels sized to accommodate steel studs (Item 5). Attached to floor with steel fasteners spaced max 24 in. OC.

3. Light Gauge Framing* — Slotted Ceiling Track — Slotted ceiling track shall consist of galv steel channels with slotted flanges. Slotted ceiling track sized to accommodate steel studs (Item 2C). Slotted ceiling track installed perpendicular to direction of fluted steel deck and secured with steel fasteners spaced max 24 in. OC.

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C. Studs — Studs to be min 3-5/8 in. wide and formed from min 20 ga galv steel. Studs cut 1/2 to 3/4 in. less in length than assembly height with bottom nesting in and resting on floor track and with top nesting in slotted ceiling track. Studs secured to flange of floor track on each side of wall with No. 8 by 1/2 in. long self-drilling, self-tapping wafer head steel screws. Studs secured to flange of slotted ceiling track on each side of wall with No. 8 by 1/2 in. long self-drilling, self-tapping wafer head steel screws. Stud spacing not to exceed 16 in. OC.

D. Gypsum Board* — Two layers of nom 5/8 in. thick gypsum board applied to each side of wall. Gypsum board installed as specified in the individual Wall or Partition Design except that inner (base) layer of gypsum board on each side of wall is to terminate 1-1/2 in. below valleys of steel deck at ceiling and secured to steel studs with 1 in. long Type S steel screws spaced 16 in OC in the field and along the vertical edges. Outer (face) layer of gypsum board on each side of wall to terminate 3/4 in. below valleys of steel deck at ceiling and secured to steel studs with 1-5/8 in. long Type S steel screws spaced 16 in. OC in the field and along the vertical edges. Outer layer of gypsum board also secured to floor track with 1-5/8 in. long type S steel screws midway between studs. Uppermost screws securing inner and outer layers of gypsum board to the studs are to be located 3 to 4 in. below the valleys of the steel deck at the ceiling. No board attachment screws are to penetrate the slotted ceiling track. Joints of outer layer to be offset from inner layer joints. Joints covered with paper tape and joint compound.

See Gypsum Board (CKNX) category for names of manufacturers

ASTM C 1280-04

8.2.6 Fasteners shall be spaced not more than 8 in. (203 mm) on center along vertical ends or edges and intermediate supports. The length of fasteners shall be as indicated in table 1.

8.2.6.1 Fasteners shall be located not less than 3/8 in. (9.5 mm) from the ends and edges of the gypsum sheathing.

3. Joint System – Max separation between bottom of floor and top of wall at time of installation of joint system is 3/4 in. The joint system is designed to accommodate a max 33 percent compression or extension from its installed width. The joint system consists of forming materials and joint covers, as follows:

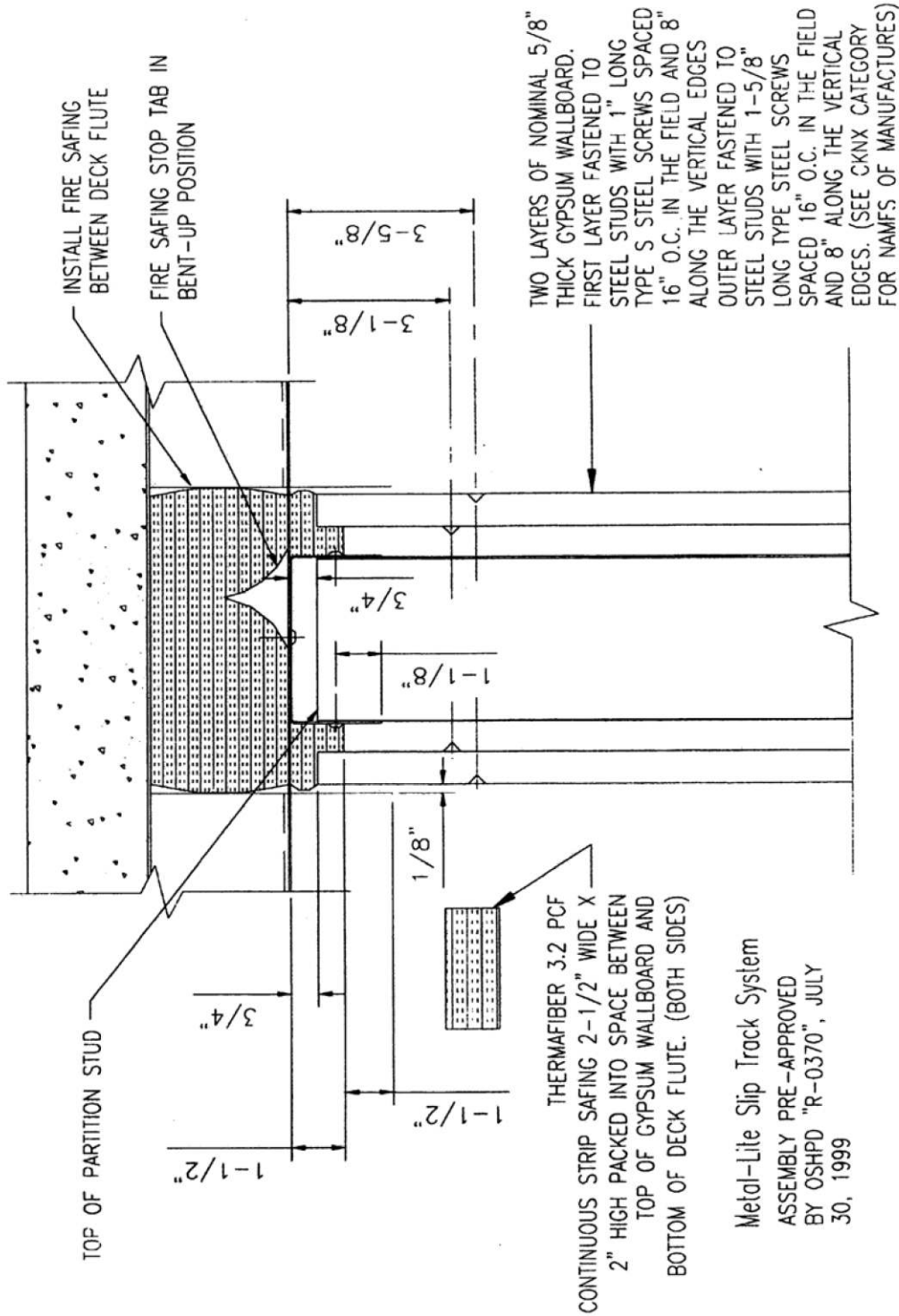
A. Flute Insulation – Forming Material* – Min 3 pcf density mineral wool batt insulation supplied in 24 by 48 by 2 or 3 in. thick sheets. Pieces cut approx 25 percent wider than the flutes and approx 4 in. longer than the width of the slotted ceiling track. Pieces stacked to height of 6 in. and then compressed 50 percent in thickness and inserted into the flutes of the steel floor units above the top of the slotted ceiling track. The excess length of the mineral wool batt insulation is to project approx 2 in. beyond each side of the slotted ceiling track. After installation of the joint insulation (Item 3B), the excess length of flute insulation projecting beyond the finished surface of the wall is to be compressed into the steel deck flute above the wall, flush with the wall surfaces.

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B. Joint Insulation – Forming Material* – Min 3 pcf density mineral wool batt insulation supplied in 24 by 48 by 2 or 3 in. thick sheets. Nom 1 in. wide by 2 in. thick insulation strips compressed in thickness and inserted in the 3/4 in. deep recess between the slotted ceiling track and the outer layer of gypsum board above the top edge of the inner layer of gypsum board. The insulation strips are to be pressed down until flush with the top edge of the outer layer of gypsum board. Nom 1-1/2 in. wide by 2 in. thick insulation strips compressed in thickness and inserted in the 3/4 in. linear gap between the gypsum board and the valleys of the steel floor units or the flute insulation. The joint insulation is to be packed into the linear gap until it is flush with the wall surfaces. After installation of the joint insulation, the excess length of flute insulation (Item 3A) projecting beyond the finished surface of the wall is to be compressed into the steel deck flute above the wall, flush with the wall surfaces.

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UL HW-D-0027 2 Hour Rated Assembly (Metal Decking)



U.S. Patent Nos. 5,913,788

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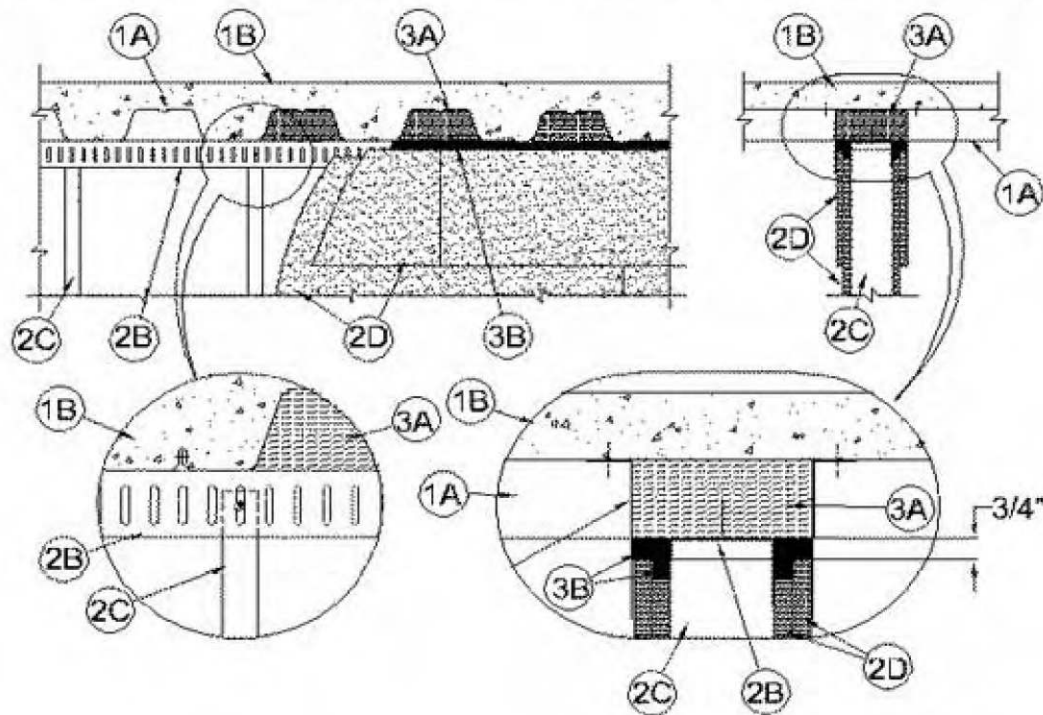
2-HR. ASSEMBLY

Metal-Lite Slip Track System
 ASSEMBLY PRE-APPROVED
 BY OSHPD "R-0370", JULY
 30, 1999

April 16, 2004
Assembly Rating – 1 Hr

Nominal Joint Width – 3/4 in.

Class II and III Movement Capabilities – 33 Percent Compression or Extension



1. Floor Assembly – The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor and Form Unit* – Nom 3 in. deep galv steel fluted units with symmetrical nom 5 in. wide valleys and crests spaces 12 in. OC.

See Steel Floor And Form units – (CHWX) category for names of manufacturers.

B. Concrete – Min 2-1/2 in. thick reinforced concrete, as measured from the top plane of the floor units.

2. Wall Assembly – The 1 hr fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400- or V400- Series Wall or Partition Design in the Fire Resistance Directory and shall include the following construction features:

A. Floor Track – (Not Shown) – Floor track of wall assembly shall consist of min 20 ga galv steel channels sized to accommodate steel studs (Item 2C). Attached to floor with steel fasteners spaced max 24 in. OC.

B. Light Gauge Framing* – Slotted Ceiling Track – Slotted ceiling track shall consist of galv steel channels with slotted flanges and with pop-up tabs in the web. Slotted ceiling track sized to accommodate steel studs (Item 2C). Slotted ceiling track installed perpendicular to direction of fluted steel floor deck and secured with steel fasteners spaced max 24 in. OC.

4. Studs – Studs to be nom 3-5/8 in. wide and formed from min 20 ga galv steel. Studs cut 1/2 to 3/4 in. less in length than assembly height with bottom nesting in and resting on floor track and with top nesting in slotted ceiling track. Studs secured to flange of floor track on each side of wall with No. 8 by 1/2 in. long self-drilling, self-tapping wafer head steel screws. Studs secured to flange of slotted ceiling track on each side of wall with No. 8 by 1/2 in. long self-drilling, self-tapping wafer head steel screws. Stud spacing not to exceed 16 in. OC.

5. Gypsum Board* – Single layer of nom 5/8 in. thick, applied vertically with joints centered over steel studs. Gypsum board on side of wall beneath steel deck valley to terminate 1-1/2 in. below steel deck. Gypsum board on opposite side of wall to extend 3/4 to 1 in. above top of slotted ceiling track into flute of steel deck. Gypsum board on each side of wall secured to steel studs with 1 in. long Type S steel screws spaced 16 in OC in the field and along the vertical edges. A min 12 in. wide strip of gypsum board is to be installed over the full sheets of gypsum board on the side of wall beneath the steel deck valley. The strip is to terminate 3/4 in. below the steel deck valley and is to be secured to steel studs with 1 5/8 in. long Type S steel screws spaced max 6 in. OC. Outer strip of gypsum board also secured to full sheets of gypsum board midway between studs with 1-5/8 in. long Type G steel laminating screws spaced max 6 in. OC, vertically. Uppermost screws securing the gypsum board layer and the gypsum board strip to the studs are to be located 3 to 4 in. below the valley of the steel deck. No gypsum board attachment screws are to penetrate the slotted ceiling track. Joints of gypsum board strip to be offset from joints of full sheets of gypsum board. Joints covered with paper tape and joint compound.

See Gypsum Board (CKNX) category for names of manufacturers.

6. Joint Insulation – Forming Materials* Min 3 pcf density mineral wool batt insulation supplied in 24 by 48 by 2 or 3 in. thick sheets. Nom 1 in. wide by 2 in. thick insulation strips compressed in thickness and inserted in the 3/4 in. deep recess between the slotted ceiling track and the outer strip of gypsum board on the side of the wall beneath the steel deck valley. On the same side of the wall, nom 1-1/2 in. wide by 2 in. thick insulation strips compressed in thickness and inserted, cut edge first, into the 3/4 in. linear gap between the gypsum board strip and the valley of the steel floor unit. The joint insulation is to be packed into the linear gap until it is flush with the wall surface. On the opposite side of the wall, nom 1 in. wide by 2 in. thick insulation strips compressed in thickness and inserted in the 3/4 to 1 in. deep recess between the gypsum board and the steel deck valley above the slotted ceiling track. The insulation strips are to be pressed down until flush with the top edge of the gypsum board.

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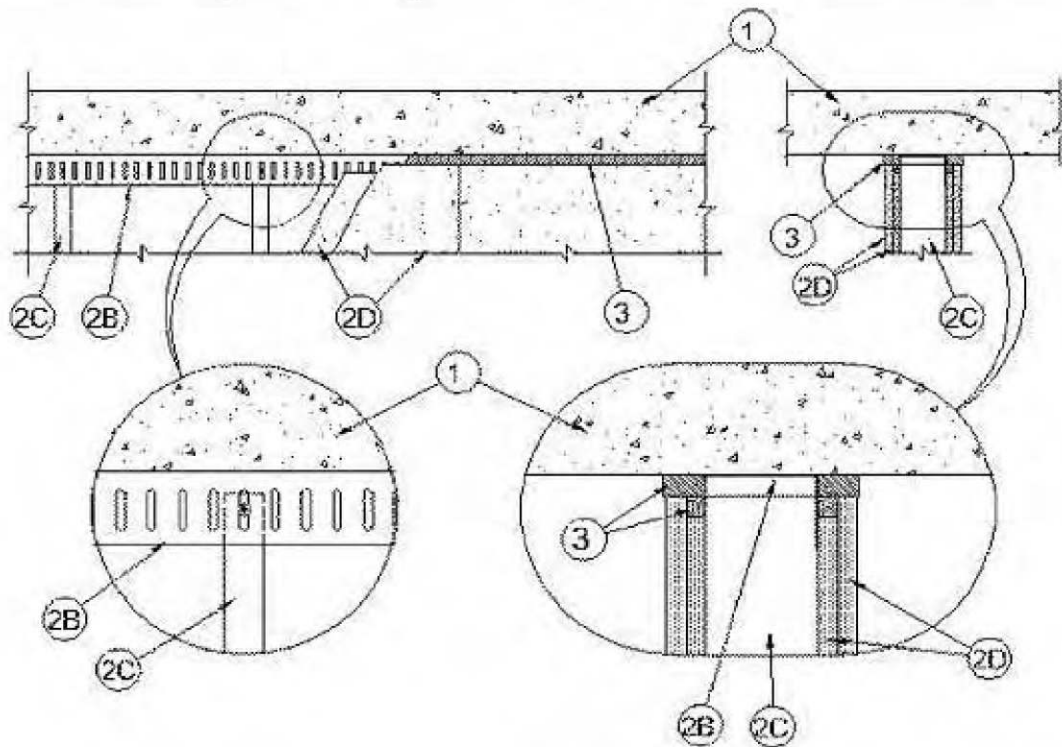
*Bearing the UL Classification Mark

April 16, 2004

Assembly Rating – 2 Hr.

Joint Width – 3/4 in. Max

Class II and III Movement Capabilities – 33 Percent Compression or Extension



1. Floor Assembly – Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete.

2. Wall Assembly – The 2 hr fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400- or V400-Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Floor Track – (Not Shown) – Floor track of wall assembly shall consist of galv steel channels sized to accommodate steel studs (Item 2C). Attached to floor with steel fasteners spaced max 24 in. OC.

B. Light Gauge Framing* – Slotted Ceiling Track – Slotted ceiling track shall consist of galv steel channels with slotted flanges. Slotted ceiling track sized to accommodate steel studs (Item 2C). Attached to concrete at ceiling with steel fasteners spaced max 24 in.

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C. Studs – Studs to be min 3-5/8 in. wide and formed from min 20 ga galv steel. Studs cut 1/2 to 3/4 in. less in length than assembly height with bottom nesting in and resting on floor track and with top nesting in slotted ceiling track. Studs secured to flange of floor track on each side of wall with No. 8 by 1/2 in. long self-drilling, self-tapping wafer head steel screws. Studs secured to flange of slotted ceiling track on each side of wall with No. 8 by 1/2 in. long self-drilling, self-tapping wafer head steel screws. Stud spacing not to exceed 16 in. OC.

D. Gypsum Board* – Two layers of nom 5/8 in. thick, applied vertically with joints centered over steel studs. Inner layer of gypsum board on each side of wall to terminate 1-1/2 in. below concrete at ceiling and secured to steel studs with 1 in. long Type S steel screws spaced max 16 in. OC in the field and along the vertical edges. Outer layer of gypsum board on each side of wall to terminate 3/4 in. below concrete at ceiling and secured to steel studs with 1-5/8 in. long Type S steel screws spaced max 16 in. OC in the field and along the vertical edges. Outer layer of gypsum board also secured to floor track with 1-5/8 in. long Type S steel screws midway between studs. Uppermost screws securing inner and outer layers of gypsum board to the studs are to be located 3 to 4 in. below the concrete ceiling. No gypsum board attachment screws are to penetrate the slotted ceiling track. Joints of outer layer to be offset from inner layer joints and to be covered with paper tape and joint compound.

See Gypsum Board (CKNX) category for names of manufacturers.

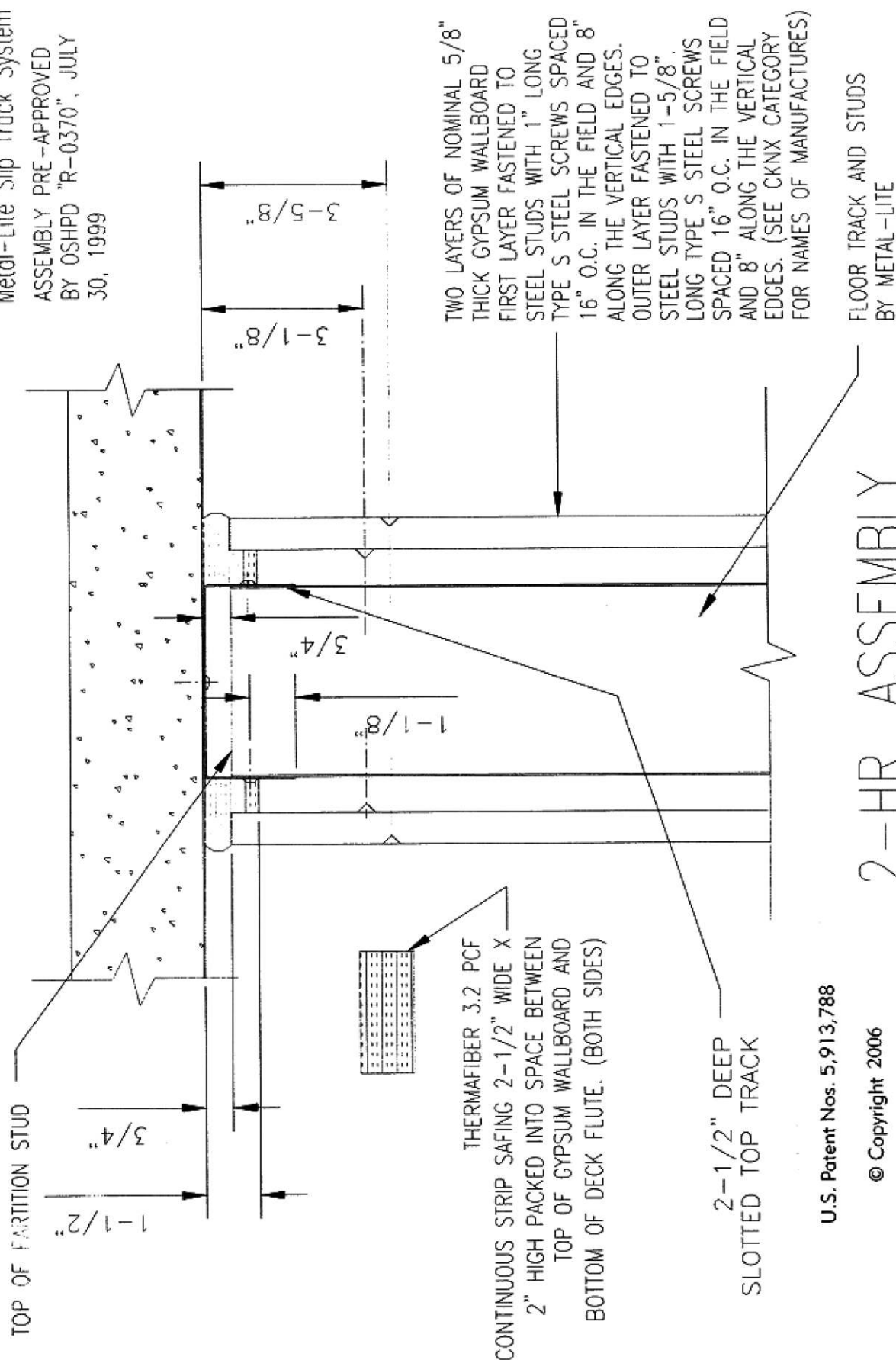
3. Joint Insulation – Forming Material* – Min 3 pcf density mineral wool batt insulation supplied in 24 by 48 by 2 or 3 in. thick sheets. Nom 1 in. wide by 2 in. thick strips compressed in thickness and inserted in the 3/4 in. deep recess between the slotted ceiling track and the outer layer of gypsum board above the top edge of the inner layer of gypsum board. The strips are to be pressed down until flush with the top edge of the outer layer of gypsum board. Nom 1-1/2 in. wide by 2 in. thick strips compressed in thickness and inserted in the 3/4 in. linear gap between the gypsum board and the concrete ceiling. The joint insulation is to be packed into the linear gap until it is flush with the wall surfaces.

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*Bearing the UL Classification Mark

UL HW-D-0051 2 Hour Rated Assembly (Concrete Slab)

Metal-Lite Slip Track System
ASSEMBLY PRE-APPROVED
BY OSHPD "R-0370", JULY
30, 1999



2-HR. ASSEMBLY

U.S. Patent Nos. 5,913,788

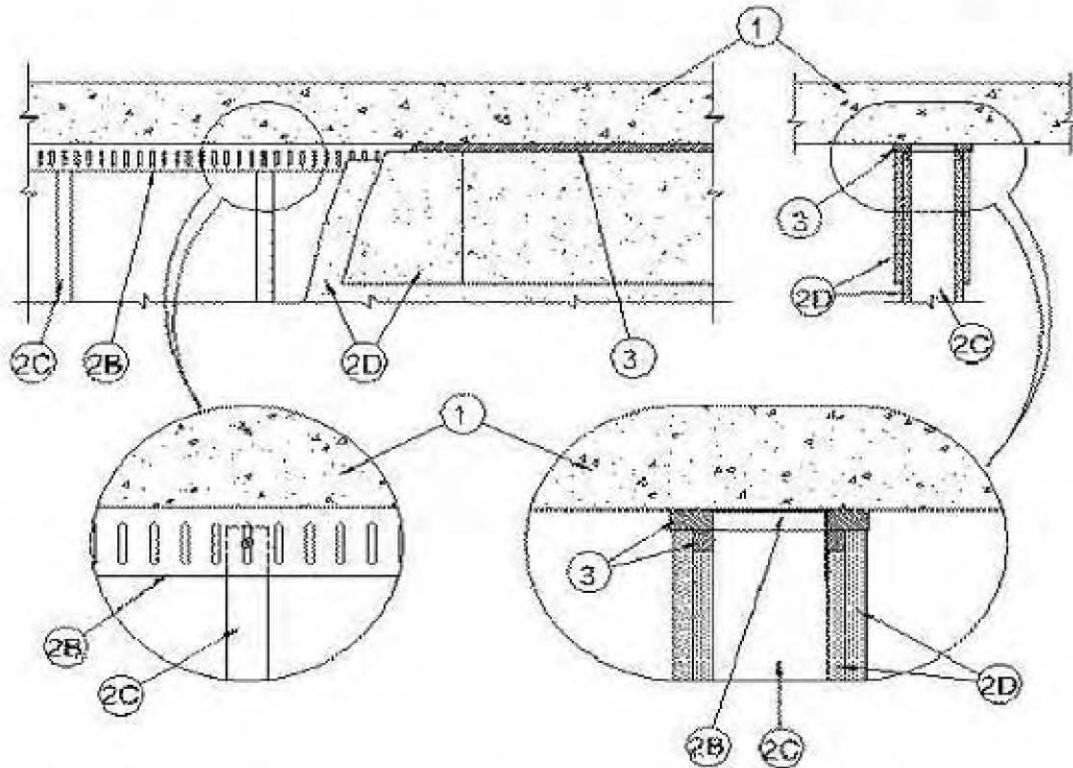
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April 16, 2004

Assembly Rating – 1 Hr

Joint Width – 3/4 in. Max

Class II and III Movement Capabilities – 33 Percent Compression or Extension



1. Floor Assembly – Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete.

2. Wall Assembly – The 1 hr fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400- or V400-Series Wall or Partition Design in the Fire Resistance Directory and shall include the following construction features:

A. Floor Track – (Not Shown) – Floor track of wall assembly shall consist of galv steel channels sized to accommodate steel studs (Item 2C). Attached to floor with steel fasteners spaced max 24 in. OC.

B. Light Gauge Framing* – Slotted Ceiling Track – Slotted ceiling track shall consist of galv steel channels with slotted flanges. Slotted ceiling track sized to accommodate steel studs (Item 2C). Attached to concrete at ceiling with steel fasteners spaced max 24 in.

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C. Studs – Steel studs to be min 2-1/2 in. wide. Studs cut 1/2 to 3/4 in. less in length than assembly height with bottom nesting in and resting on floor track and with top nesting in slotted ceiling track. Studs secured to flange of floor track on each side of wall with No. 8 by 1/2 in. long self-drilling, self-tapping wafer head steel screws. Studs secured to the flange of slotted ceiling track on each side of wall with No. 8 by 1/2 in. long self-drilling, self-tapping wafer head steel screws. Stud spacing not to exceed 16 in. OC.

D. Gypsum Board* – Single layer of nom 5/8 in. thick, applied vertically with joints centered over steel studs. Gypsum board on each side of wall to terminate 1-1/2 in. below concrete at ceiling and secured to steel studs with 1 in. long Type S steel screws spaced max 12 in. OC in the field and along the vertical edges. A min 12 in. wide strip of gypsum board is to be installed over the full sheets of gypsum board on each side of wall. The strip is to terminate 3/4 in. below concrete at ceiling and is to be secured to steel studs with 1-5/8 in. long Type S steel screws spaced max 6 in. OC. Outer strip of gypsum board also secured to full sheets of gypsum board midway between studs with 1-5/8 in. long Type G steel laminating screws spaced max 6 in. OC, vertically. Uppermost screws securing the gypsum board layer and the gypsum board strip to the studs are to be located 3 to 4 in. below the concrete at the ceiling. No gypsum board attachment screws are to penetrate the slotted ceiling track. Joints of Gypsum wallboard strip to be offset from joints of full sheets of gypsum board. Joints covered with paper tape and joint compound.

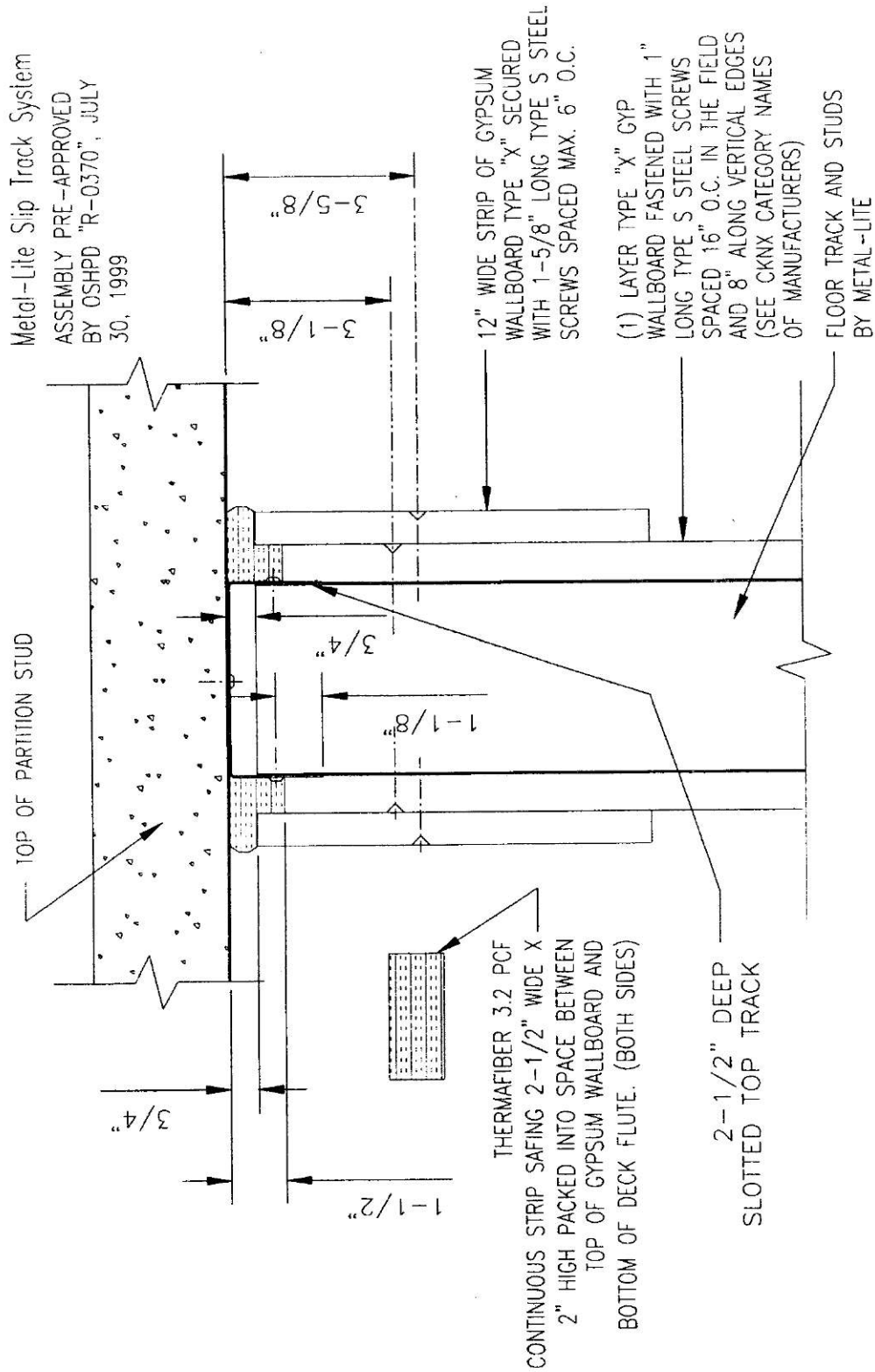
See Gypsum Board (CKNX) category for names of manufacturers.

3. Joint Insulation — Forming Material* — Min 3 pcf density mineral wool batt insulation supplied in 24 by 48 by 2 or 3 in. thick sheets. Nom 1 in. wide by 2 in. thick insulation strips compressed in thickness and inserted in the 3/4 in. deep recess between the slotted ceiling track and the outer layer of gypsum board above the top edge of the inner layer of gypsum board. The insulation strips are to be pressed down until flush with the top edge of the outer layer of gypsum board. Nom 1-1/2 in. wide by 2 in. thick strips compressed in thickness and inserted in the 3/4 in. linear gap between the gypsum board and the concrete ceiling. The joint insulation is to be packed into the linear gap until it is flush with the wall surfaces.

THERMAFIBER INC – Type SAF

*Bearing the UL Classification mark

UL HW-D-0052 1 Hour Rated Assembly (Concrete Slab)



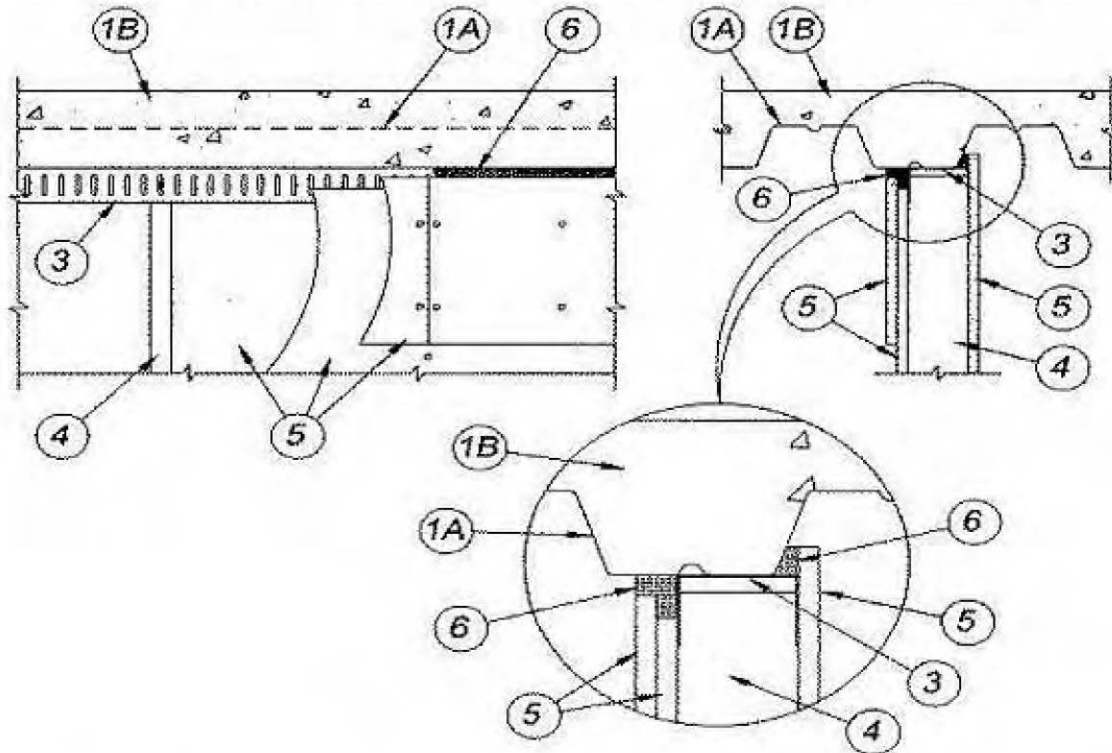
1-HR. ASSEMBLY

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**October 04, 2004
Assembly Rating – 1 Hr**

Joint Width – 3/4 in.

Class II and III Movement Capabilities – 33 Percent Compression or Extension



1. Floor Assembly – The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor And Form Units* – Nom 3 in. deep galv steel fluted units with symmetrical nom 5 in. wide valleys and crests spaced 12 in. OC.

See Steel Floor And Form Units – (CHWX) category for names of manufacturers.

B. Concrete – Min 2-1/2 in. thick reinforced concrete, as measured from the top plane of the floor units.

2. Floor Track – (Not Shown) – Floor track of wall assembly shall consist of nom 3-5/8 in. wide channels formed of min 20 ga galf steel. Attached to floor with steel fasteners spaced max 24 in. OC.

3. Light Gauge Framing* – Slotted Ceiling Track Slotted ceiling track shall consist of nom 3-5/8 in. wide galv steel channels with slotted flanges. Slotted ceiling track installed beneath and parallel with valley of fluted steel deck, with one edge extending 3/4 in. beyond valley edge. Attached to steel deck valley with steel fasteners spaced 12 in. OC.

METAL-LITE – The System

4. Studs – Studs to be nom 3-5/8 in. wide and formed from min 20 ga galv steel. Studs cut 1/2 to 3/4 in. less in length than assembly height with bottom nesting in and resting on floor track and with top nesting in slotted ceiling track. Studs secured to flange of floor track on each side of wall with No. 8 by 1/2 in. long self-drilling, self-tapping wafer head steel screws. Studs secured to flange of slotted ceiling track on each side of wall with No. 8 by 1/2 in. long self-drilling, self-tapping wafer head steel screws. Stud spacing not to exceed 16 in. OC.

5. Gypsum Board* – Single layer of nom 5/8 in. thick, applied vertically with joints centered over steel studs. Gypsum board on side of wall beneath steel deck valley to terminate 1-1/2 in. below steel deck. Gypsum board on opposite side of wall to extend 3/4 to 1 in. above top of slotted ceiling track into flute of steel deck. Gypsum board on each side of wall secured to steel studs with 1 in. long Type S steel screws spaced 16 in OC in the field and along the vertical edges. A min 12 in. wide strip of gypsum board is to be installed over the full sheets of gypsum board on the side of wall beneath the steel deck valley. The strip is to terminate 3/4 in. below the steel deck valley and is to be secured to steel studs with 1-5/8 in. long Type S steel screws spaced max 6 in. OC. Outer strip of gypsum board also secured to full sheets of gypsum board midway between studs with 1 5/8 in. long Type G steel laminating screws spaced max 6 in. OC, vertically. Uppermost screws securing the gypsum board layer and the gypsum board strip to the studs are to be located 3 to 4 in. below the valley of the steel deck. No gypsum board attachment screws are to penetrate the slotted ceiling track. Joints of gypsum board strip to be offset from joints of full sheets of gypsum board. Joints covered with paper tape and joint compound.

See Gypsum Board (CKNX) category for names of manufacturers.

6. Joint Insulation – Forming Materials* Min 3 pcf density mineral wool batt insulation supplied in 24 by 48 2 or 3 in. thick sheets. Nom 1 in. wide by 2 in. thick insulation strips compressed in thickness and inserted in the 3/4 in. deep recess between the slotted ceiling track and the outer strip of gypsum board on the side of the wall beneath the steel deck valley. On the same side of the wall, nom 1-1/2 in. wide by 2 in. thick insulation strips compressed in thickness and inserted, cut edge first, into the 3/4 in. linear gap between the gypsum board strip and the valley of the steel floor unit. The joint insulation is to be packed into the linear gap until it is flush with the wall surface. On the opposite side of the wall, nom 1 in. wide by 2 in. thick insulation strips compressed in thickness and inserted in the 3/4 to 1 in. deep recess between the gypsum board and the steel deck valley above the slotted ceiling track. The insulation strips are to be pressed down until flush with the top edge of the gypsum board.

THERMAFIBER INC – Type SAF

*Bearing the UL Classification Mark

THOMPSON AND LA BRIE, STRUCTURAL ENGINEERS, PASADENA, CA.

METAL-LITE

SLOTTED TOP TRACK SINGLE TRACK
DETAIL VIEWS

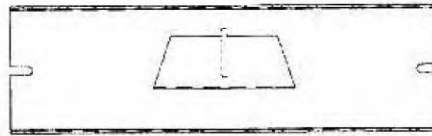
DES. J.H.T.

JOB 8-9150

DATE 9-1-97

SHEET

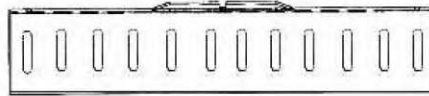
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TOP VIEW



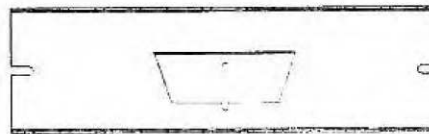
LEFT VIEW



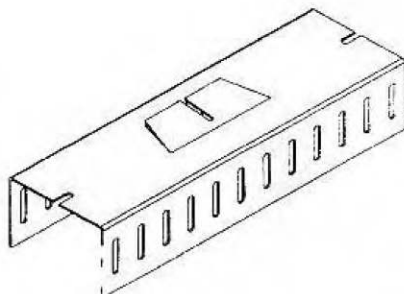
FRONT VIEW



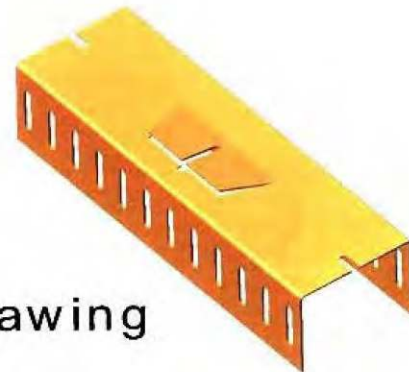
RIGHT VIEW



BOTTOM VIEW



ISOMETRIC VIEW



E-Drawing