“The System®”
U.S. Patent No. 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 1 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.

IBC 2009 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 either ASTM E 1966 or UL 2079 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) 2009 Codes.

IBC 2009
Section 714.3 Fire Test Criteria- Fire-resistant joint systems shall be tested in accordance with the requirements of either ASTM E 1966 or UL 2079.

<table>
<thead>
<tr>
<th>Type of Joint System</th>
<th>Number of Cycles</th>
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<tr>
<td>Seismic</td>
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<td>Expansion/Contraction</td>
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<td>Wind Sway</td>
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UL Standard 7.2 Section 7.2.1- Size and character of specimen
The area exposed to fire is to be not less than 100 square feet (9.3 m²), with neither dimension less than 9 feet (2.7 m). The test specimen is to be restrained on all four edges.

For construction joints, the area of the test specimen may be less than 100 square feet provided the length of the joint is not less than 9 feet. The test specimen shall be of sufficient size so as to produce a representative construction joint for which evaluation is desired.
“The System®”

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-0028 1 Hour Rated Assembly (Metal Decking)
UL System No. HW-D-0051 1 Hour Rated Assembly (Metal Decking)
UL System No. HW-D-0052 2 Hour Rated Assembly (Metal Decking)

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 either ASTM E 1966 or UL 2079 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 cut-ins, 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 2009 IBC Section 714.3.

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 (OSHPD), NUMBER R-0370.


METAL-LITE™
www.metal-lite.net / 800.236.0302
Solutions for the Metal Stud Framing Industry
## Metal-Lite “The System” Slotted Track Property Table

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Design Thickness</th>
<th>Inches</th>
<th>Mm</th>
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<th>Kg/m</th>
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## Metal-Lite “The System” Slotted Track Allowable Loads

<table>
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<tr>
<th>Thickness</th>
<th>Allowable Loads</th>
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<tr>
<td>20 Gauge ST</td>
<td>P = 166 lbs.</td>
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<tr>
<td>16 Gauge ST</td>
<td>P = 314 lbs.</td>
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<td>18 Gauge ST</td>
<td>P = 196 lbs.</td>
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<tr>
<td>14 Gauge ST</td>
<td>P = 314 lbs.</td>
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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.
NOTES:
1. TRACK IS 16 GA. MIN.
2. FY = 50 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.

# 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
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
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.

METAL-LITE – The System

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.
THERMAFIBER INC – Type SAF

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.
THERMAFIBER INC – Type SAF
UL HW-D-0027 2 Hour Rated Assembly (Metal Decking)

INSTALL FIRE SAFING BETWEEN DECK FLUTE
FIRE SAFING STOP TAB IN BENT-UP POSITION

1-1/2"
3/4"

1-1/2"
1/8"
1-1/8"
3/4"

3-1/8"
3-5/8"

THERMAFIBER 3.2 PCF CONTINUOUS STRIP SAFING 2-1/2" WIDE X 2" HIGH PACKED INTO SPACE BETWEEN TOP OF GYPSUM WALLBOARD AND BOTTOM OF DECK FLUTE. (BOTH SIDES)

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

TWO LAYERS OF NOMINAL 5/8" THICK GYPSUM WALLBOARD. FIRST LAYER FASTENED TO STEEL STUDS WITH 1" LONG TYPE S STEEL SCREWS SPACED 16" O.C. IN THE FIELD AND 8" ALONG THE VERTICAL EDGES. OUTER LAYER FASTENED TO STEEL STUDS WITH 1-5/8" LONG TYPE STEEL SCREWS SPACED 16" O.C. IN THE FIELD AND 8" ALONG THE VERTICAL EDGES. (SEE CKNX CATEGORY FOR NAME OF MANUFACTURES)

2-HR. ASSEMBLY

U.S. Patent Nos. 5,913,788
© Copyright 2006
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.

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 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.

THERMAFIBER INC – Type SAF

*Bearing the UL Classification Mark
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.

**METAL-LITE – The System**

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 ½ 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 1/58 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 wood 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.

THERMAFIBER INC – Type SAF

*Bearing the UL Classification Mark
UL HW-D-0051 2 Hour Rated Assembly (Concrete Slab)

Metal-Lite Slip Track System

ASSEMBLY PRE-APPROVED
BY DSHPD "R-0370", JULY 30, 1999

2-1/2" DEEP SLOTTED TOP TRACK

THERMAFIBER 3.2 PCF CONTINUOUS STRIP SANDING 2-1/2" WIDE X
2" HIGH PACKED INTO SPACE BETWEEN
TOP OF GYPSUM WALLBOARD AND
BOTTOM OF DECK FLUTE. (BOTH SIDES)

U.S. Patent Nos. 5,913,788
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2-HR. ASSEMBLY

TWO LAYERS OF NOMINAL 5/8"
THICK GYPSUM WALLBOARD
FIRST LAYER FASTENED TO
STEEL STUDS WITH 1" LONG
TYPE S STEEL SCREWS SPACED
16" O.C. IN THE FIELD AND 8"
ALONG THE VERTICAL EDGES.
OUTER LAYER FASTENED TO
STEEL STUDS WITH 1-5/8".
LONG TYPE S STEEL SCREWS
SPACED 16" O.C. IN THE FIELD
AND 8" ALONG THE VERTICAL
EDGES. (SEE CKNX CATEGORY
FOR NAMES OF MANUFACTURES)

FLOOR TRACK AND STUDS
BY METAL-LITE
### System No. HW-D 0052

#### 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.

   **Metal-Lite – The System**

   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.

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*Bearing the UL Classification Mark
UL HW-D-0052 1 Hour Rated Assembly (Concrete Slab)

1-1/2"

3/4"

3-1/8"

3-5/8"

TOP OF PARTITION STUD

Metal-Lite Slip Track System
ASSEMBLY PRE-APPROVED
BY OSHPD "R-0470", JULY
30, 1999

THERMAFIBER 3.2 PCF CONTINUOUS STRIP SAFING 2-1/2" WIDE X 2" HIGH PACKED INTO SPACE BETWEEN TOP OF GYPSUM WALLBOARD AND BOTTOM OF DECK FLUTE. (BOTH SIDES)

2-1/2" DEEP SLOTTED TOP TRACK

12" WIDE STRIP OF GYPSUM WALLBOARD TYPE "X" SECURED WITH 1-5/8" LONG TYPE S STEEL SCREWS SPACED MAX. 6" O.C.

(1) LAYER TYPE "X" GYP WALLBOARD FASTENED WITH 1" LONG TYPE S STEEL SCREWS SPACED 16" O.C. IN THE FIELD AND 8" ALONG VERTICAL EDGES (SEE CKNX CATEGORY NAMES OF MANUFACTURERS)

FLOOR TRACK AND STUDS BY METAL-LITE

1-HR. ASSEMBLY

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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
<table>
<thead>
<tr>
<th>METAL-LITE INC.</th>
<th>SHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOTTED TOP TRACK</td>
<td>JOB 8-9150</td>
</tr>
<tr>
<td>DETAIL VIEWS</td>
<td>DATE 9-1-92</td>
</tr>
</tbody>
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**Top View**

**Left View**

**Front View**

**Right View**

**Bottom View**

**Isometric View**

**E-Drawing**