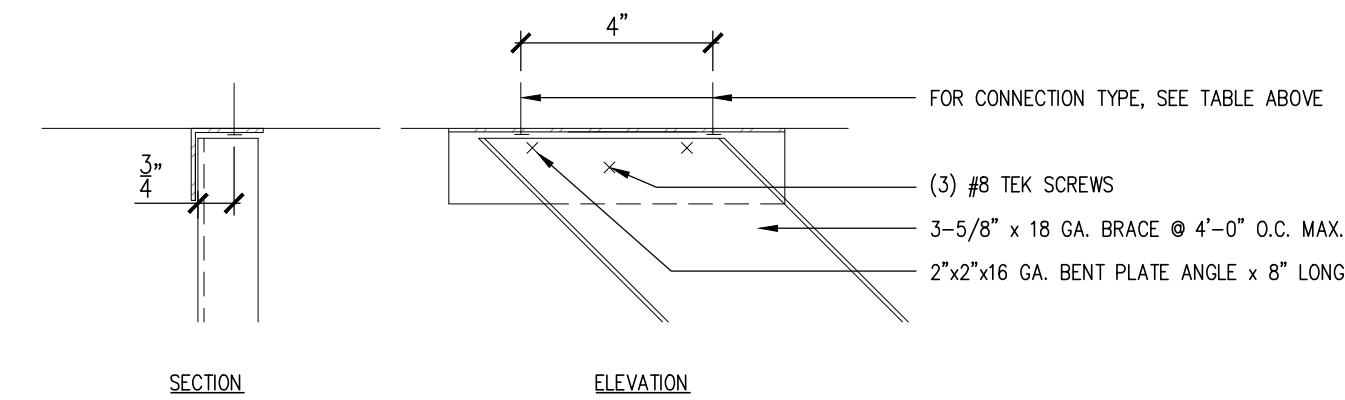


- #12 GAGE (MIN.) HANGER WIRES MAY BE USED FOR UP TO AND INCLUDING 4'-0" X 4'-0" GRID SPACING AND SHALL BE ATTACHED TO MAIN RUNNERS.
- PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN 8" OF THE SUPPORT OR WITHIN 1/4 OF THE LENGTH OF THE END TEE, WHICHEVER IS LEAST, FOR THE PERIMETER OF THE CEILING AREA. END CONNECTIONS FOR RUNNERS WHICH ARE DESIGNED AND DETAILED TO RESIST THE APPLIED VERTICAL AND HORIZONTAL FORCES MAY BE USED IN LIEU OF THE #12 GAGE HANGER WIRES.
- PROVIDE TRAPEZE OR OTHER SUPPLEMENTARY SUPPORT MEMBERS AT OBSTRUCTIONS TO TYPICAL HANGER SPACING. PROVIDE ADDITIONAL HANGERS, STRUTS OR BRACES AS REQUIRED AT ALL CEILING BREAKS, SOFFITS OR DISCONTINUOUS AREAS. HANGER WIRES THAT ARE MORE THAN 1 IN 6 OUT OF PLUMB ARE TO HAVE COUNTER-SLOPING WIRES.
- CEILING GRID MEMBERS MAY BE ATTACHED TO NOT MORE THAN 2 ADJACENT WALLS. CEILING GRID MEMBERS SHALL BE AT LEAST 3/4" CLEAR OF OTHER WALLS. IF WALLS RUN DIAGONALLY TO CEILING GRID SYSTEM RUNNERS, ONE END OF MAIN AND CROSS RUNNERS SHOULD BE FREE, AND A MINIMUM OF 3/4" CLEAR OF WALL.
- AT THE PERIMETER OF THE CEILING AREA WHERE MAIN OR CROSS RUNNERS ARE NOT CONNECTED TO THE ADJACENT WALL, PROVIDE INTERCONNECTION BETWEEN THE RUNNERS AT THE FREE END TO PREVENT LATERAL SPREADING. A METAL STRUT OR A #16 GAGE WIRE WITH A POSITIVE MECHANICAL CONNECTION TO THE RUNNER MAY BE USED. WHERE THE PERPENDICULAR DISTANCE FROM THE WALL TO THE FIRST PARALLEL RUNNER IS 12" OR LESS, THIS INTERLOCK IS NOT REQUIRED.
- PROVIDE BRACING ASSEMBLIES CONSISTING OF A COMPRESSION STRUT AND FOUR #12 GAGE SPLAYED BRACING WIRES ORIENTED 90 DEGREES FROM EACH OTHER AT THE FOLLOWING SPACING: 1.) FOR SCHOOL BUILDINGS, PLACE BRACING ASSEMBLIES AT A SPACING NOT MORE THAN 12'-0" X 12'-0" ON CENTER; 2.) FOR ESSENTIAL SERVICES BUILDINGS, PLACE BRACING ASSEMBLIES NOT MORE THAN 8'-0" X 12'-0" ON CENTER; 3.) PROVIDE BRACING ASSEMBLIES AT LOCATIONS NOT MORE THAN 1/2 THE AFOREMENTIONED SPACINGS, FROM EACH PERIMETER WALL AND AT THE EDGE OF VERTICAL CEILING OFFSETS. THE SLOPE OF THESE WIRES SHALL NOT EXCEED 45 DEGREES FROM THE PLANE OF THE CEILING AND SHALL BE TAUT. SPLICES IN BRACING WIRES ARE NOT TO BE PERMITTED. 4.) SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 144 SQUARE FEET OR LESS, AND FIRE RATED SUSPENDED ACOUSTICAL CEILINGS SYSTEMS WITH A CEILING AREA OF 96 SQUARE FEET OR LESS, SURROUNDED BY WALLS WHICH CONNECT DIRECTLY TO THE STRUCTURE ABOVE, DO NOT REQUIRE BRACING ASSEMBLIES WHEN ATTACHED TO TWO ADJACENT WALLS.
- FASTEN HANGER WIRES WITH NOT LESS THAN THREE (3) TIGHT TURNS. FASTEN BRACING WIRES WITH FOUR (4) TIGHT TURNS. MAKE ALL TIGHT TURNS WITHIN A DISTANCE OF 1'-1/2". HANGER OR BRACING WIRE ANCHORS TO THE STRUCTURE SHOULD BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHOR ALIGNS AS CLOSELY AS POSSIBLE WITH THE DIRECTION OF THE WIRE. NOTE: WIRE TURNS MADE BY MACHINE WHERE BOTH STRANDS HAVE BEEN DEFORMED OR BENT IN WRAPPING CAN WAIVE THE 1'-1/2" REQUIREMENT, BUT THE NUMBER OF TURNS SHOULD BE MAINTAINED, AND BE AS TIGHT AS POSSIBLE.
- SEPARATE ALL CEILING HANGER AND BRACING WIRES AT LEAST 6" FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.
- ATTACH ALL LIGHT FIXTURES AND CEILING MOUNTED AIR TERMINALS, TO THE CEILING GRID RUNNERS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURES. SCREWS OR APPROVED FASTENERS ARE REQUIRED.
- FLUSH OR RECESSED LIGHT FIXTURES AND AIR TERMINALS, WEIGHING LESS THAN 56 LBS., MAY BE SUPPORTED DIRECTLY ON THE RUNNERS OF A HEAVY DUTY GRID SYSTEM BUT, IN ADDITION, THEY MUST HAVE A MINIMUM OF TWO (2) #12 GAGE SLACK SAFETY WIRES ATTACHED TO THE FIXTURE AT DIAGONAL CORNERS AND ANCHORED TO THE STRUCTURE ABOVE. ALL 4'-0" X 4'-0" LIGHT FIXTURES MUST HAVE SLACK SAFETY WIRES AT EACH CORNER.
- ALL FLUSH OR RECESSED LIGHT FIXTURES AND AIR TERMINALS WEIGHING 56 LBS. OR MORE MUST BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 WIRES, EACH ATTACHED TO THE FIXTURE AND TO THE STRUCTURE ABOVE REGARDLESS OF THE TYPE OF CEILING GRID SYSTEM USED. THE FOUR (4) TAUT #12 GAGE WIRES, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, MUST BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE UNIT.
- ALL FIXTURES AND AIR TERMINALS SUPPORTED ON HEAVY DUTY GRID SYSTEMS MUST BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE WIRES EACH ATTACHED TO THE FIXTURE OR TERMINAL, AND TO THE STRUCTURE ABOVE.
- SUPPORT SURFACE MOUNTED LIGHT FIXTURES BY AT LEAST TWO POSITIVE DEVICES WHICH SURROUND THE CEILING RUNNER AND WHICH ARE EACH SUPPORTED FROM THE STRUCTURE ABOVE BY A #12 GAGE WIRE. SPRING CLIPS OR CLAMPS THAT CONNECT ONLY TO THE RUNNER ARE NOT ACCEPTABLE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE 8'-0" OR LONGER.
- SUPPORT PENDANT MOUNTED LIGHT FIXTURES DIRECTLY FROM THE STRUCTURE ABOVE WITH HANGER WIRES OR CABLES PASSING THROUGH EACH PENDANT HANGER AND CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE FIXTURE. A BRACING ASSEMBLY IS REQUIRED WHERE THE PENDANT HANGER PENETRATES THE CEILING. SPECIAL DETAILS ARE REQUIRED TO ATTACH THE PENDANT HANGER TO THE BRACING ASSEMBLY TO TRANSMIT HORIZONTAL FORCES.
- T-BAR IN ALL LOCATIONS TO BE HEAVY DUTY SYSTEM.

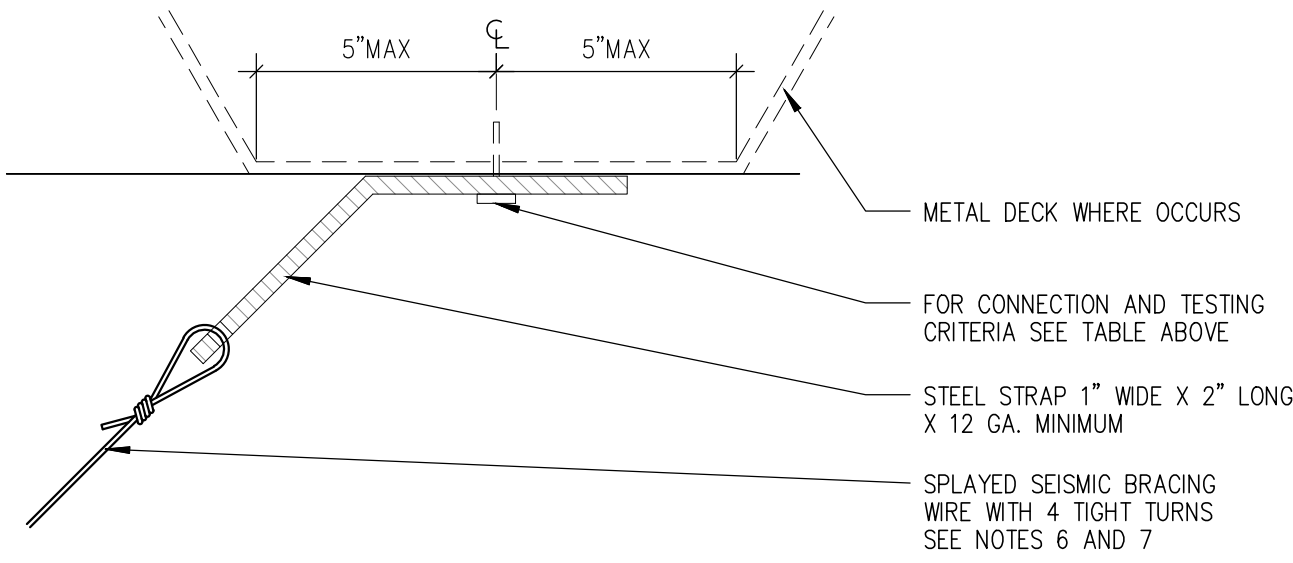
| FASTENING BASE MATERIAL | TYPE OF FASTENER | MIN. EMBEDMENT |
|--|---------------------------|----------------|
| 20 GAGE MIN. METAL DECK WITH CONCRETE FILL – NORMAL WEIGHT – 3000 psi MIN. | 1/4" Ø HILTI KWIK BOLT II | 2" |
| 20 GAGE MIN. METAL DECK WITH CONCRETE FILL – LIGHT WEIGHT – 3000 psi MIN. | | |
| CONCRETE SLAB/BEAM – NORMAL WEIGHT – 3000 psi MIN. | | |



ANGLE BRACING TO STRUCTURE

Scale: 3" = 1'- 0"

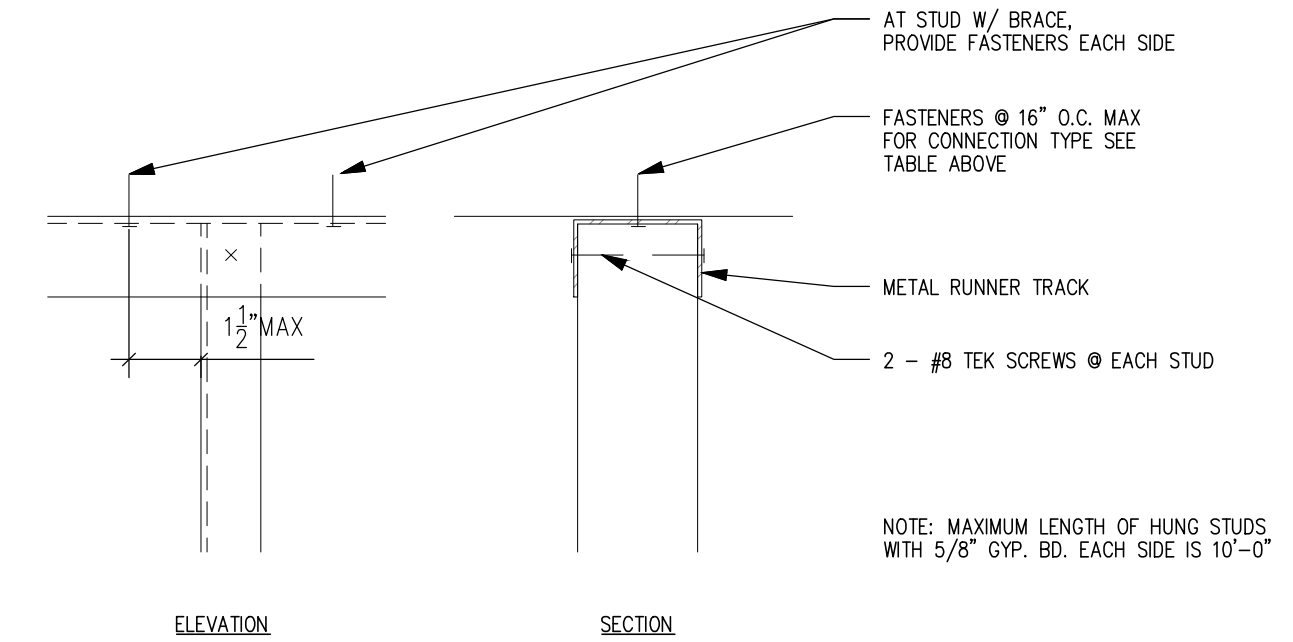
| FASTENING BASE MATERIAL | TYPE OF FASTENER | MIN. EMBEDMENT |
|--|---------------------------|----------------------------|
| 20 GAGE MIN. METAL DECK WITH CONCRETE FILL – NORMAL WEIGHT – 3000 psi MIN. | 1/4" Ø HILTI KWIK BOLT II | 1 – 1/8" |
| 20 GAGE MIN. METAL DECK WITH CONCRETE FILL – LIGHT WEIGHT – 3000 psi MIN. | 1/4" Ø HILTI KWIK BOLT II | 2" |
| CONCRETE SLAB/BEAM – NORMAL WEIGHT – 3000 psi MIN. | 1/4" Ø HILTI KWIK BOLT II | 1 – 1/8" |
| STEEL BEAM | HILTI X-AL-H27 P8 | THROUGH STEEL OR 1/2" MIN. |



ANGLED WIRE SUPPORT FOR CEILING SYSTEMS

Scale: 3" = 1'- 0"

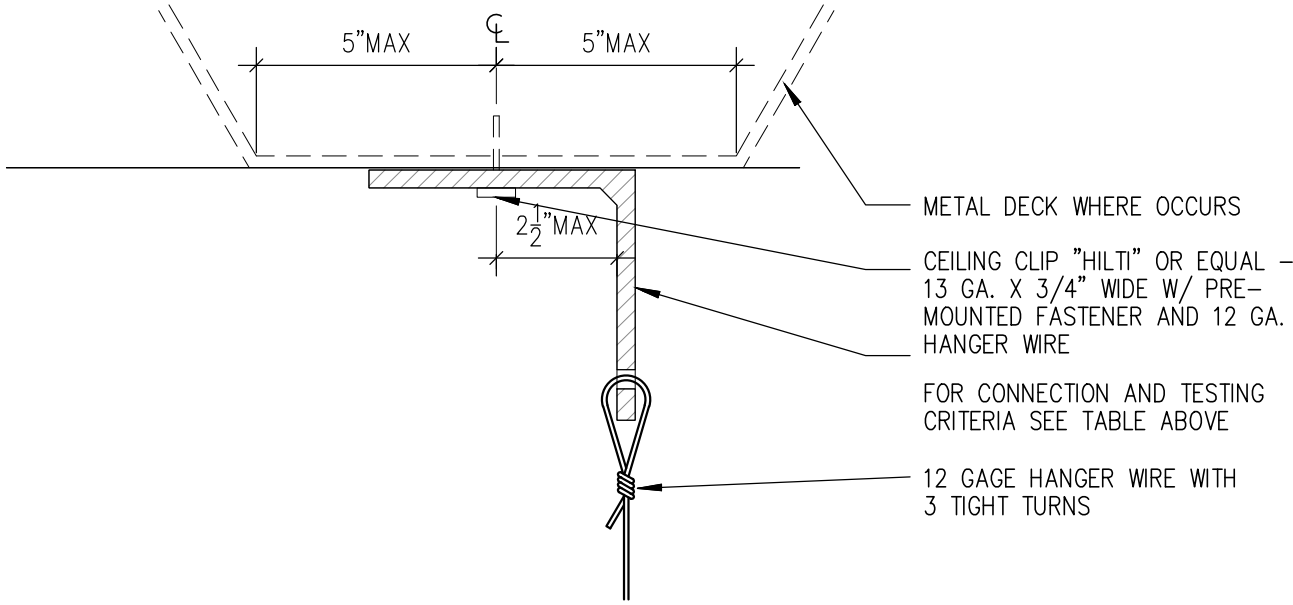
| FASTENING BASE MATERIAL | TYPE OF FASTENER | MIN. EMBEDMENT |
|--|---------------------------|----------------|
| 20 GAGE MIN. METAL DECK WITH CONCRETE FILL – NORMAL WEIGHT – 3000 psi MIN. | 1/4" Ø HILTI KWIK BOLT II | 1 – 1/8" |
| 20 GAGE MIN. METAL DECK WITH CONCRETE FILL – LIGHT WEIGHT – 3000 psi MIN. | 1/4" Ø HILTI KWIK BOLT II | 1 – 1/8" |
| CONCRETE SLAB/BEAM – NORMAL WEIGHT – 3000 psi MIN. | 1/4" Ø HILTI KWIK BOLT II | 1 – 1/8" |



STUD CONNECTION TO STRUCTURE

Scale: 3" = 1'- 0"

| FASTENING BASE MATERIAL | TYPE OF FASTENER | MIN. EMBEDMENT |
|--|-----------------------|----------------|
| 20 GAGE MIN. METAL DECK WITH CONCRETE FILL – NORMAL WEIGHT – 3000 psi MIN. | HILTI CC 27DNI 27 P8T | 1" |
| 20 GAGE MIN. METAL DECK WITH CONCRETE FILL – LIGHT WEIGHT – 3000 psi MIN. | HILTI CC 27DNI 32 B8T | 1-1/4" |
| CONCRETE SLAB/BEAM – NORMAL WEIGHT – 3000 psi MIN. | HILTI CC 27DNI 27 P8T | 1" |
| STEEL BEAM – FLANGE GREATER THAN OR EQUAL TO 3/4" THICK | HILTI X-AL-H27 P8 | 1/2" MIN. |
| STEEL BEAM – FLANGE BETWEEN 3/8" AND 9/16" THICK | HILTI X-AL-H22 P8 | THROUGH STEEL |

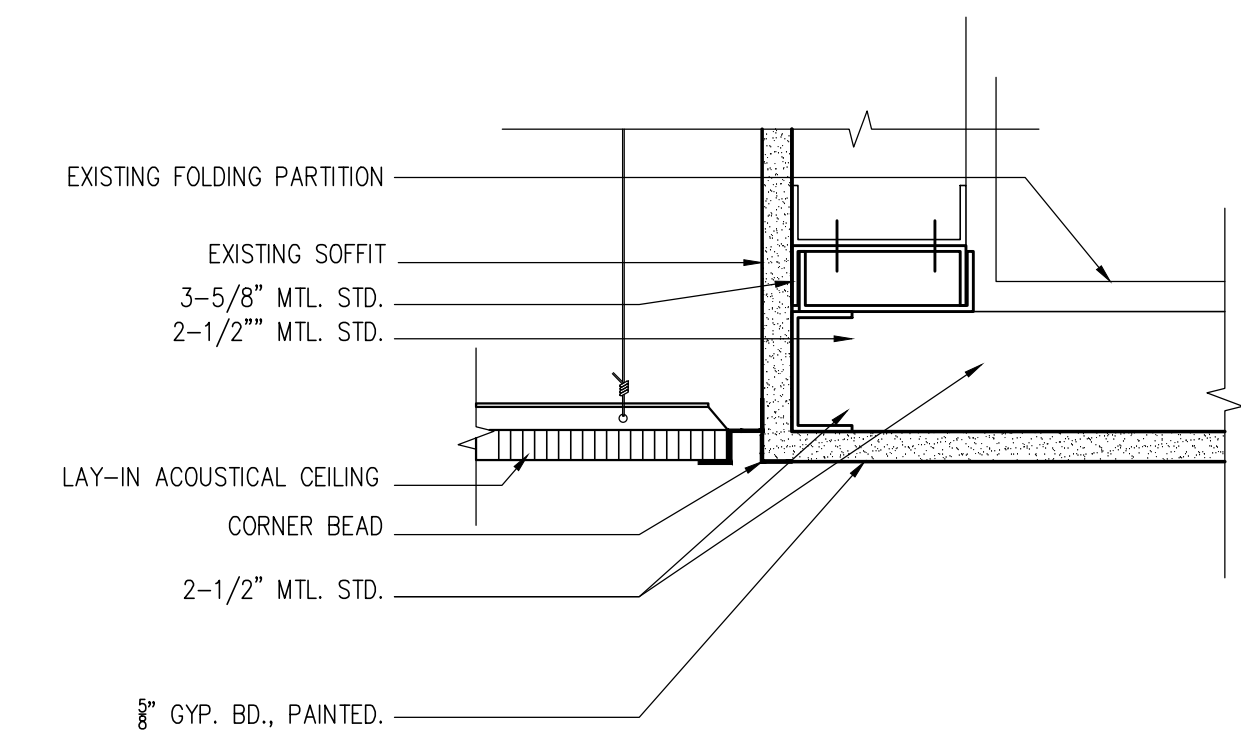


VERTICAL WIRE SUPPORT FOR CEILING SYSTEMS

Scale: 3" = 1'- 0"

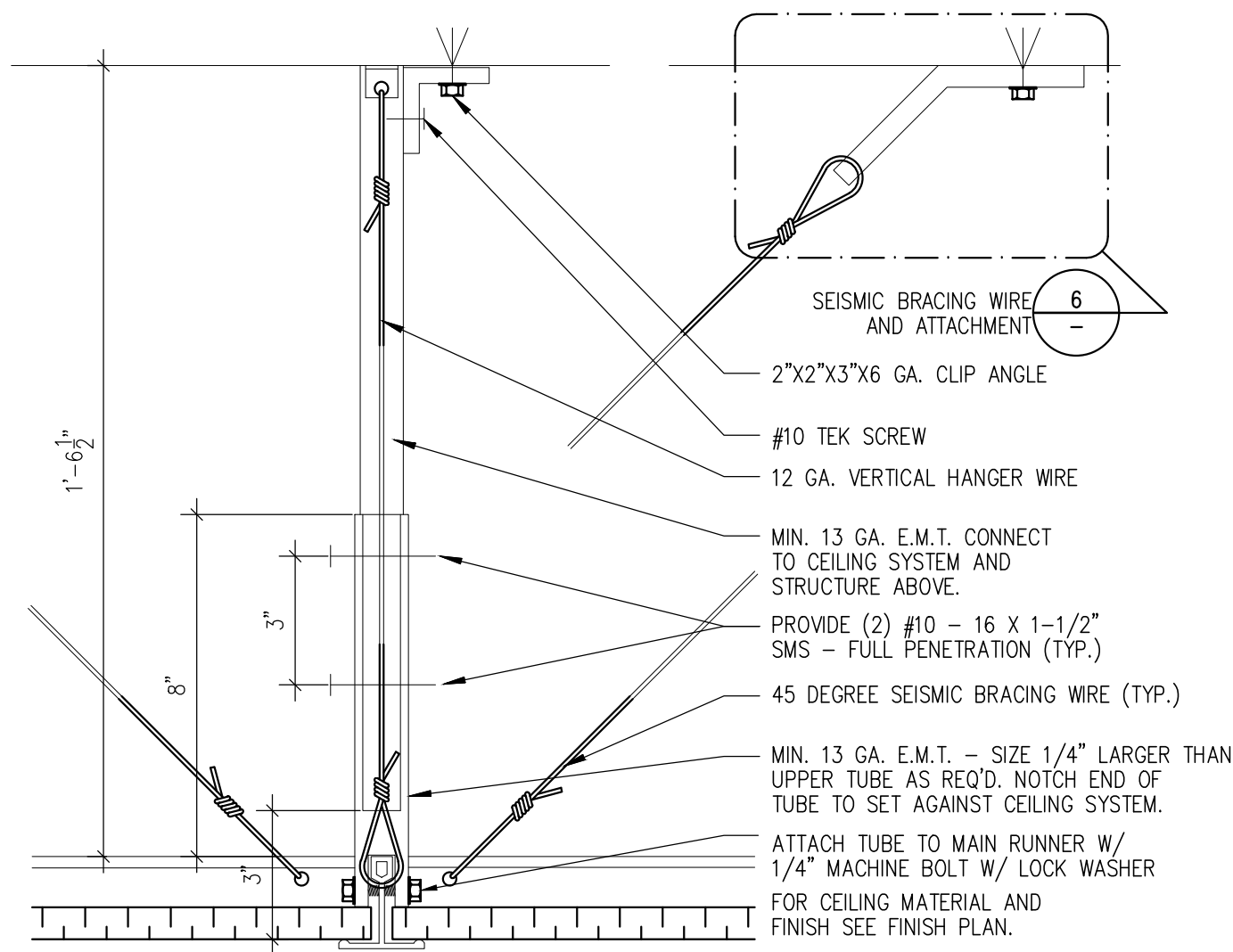
GYPSUM BOARD/ LAY-IN CEILING TRANSITION

Scale: 3" = 1'-0"



FOLDING WALL PARTITION SOFFIT

Scale: 3" = 1'-0"

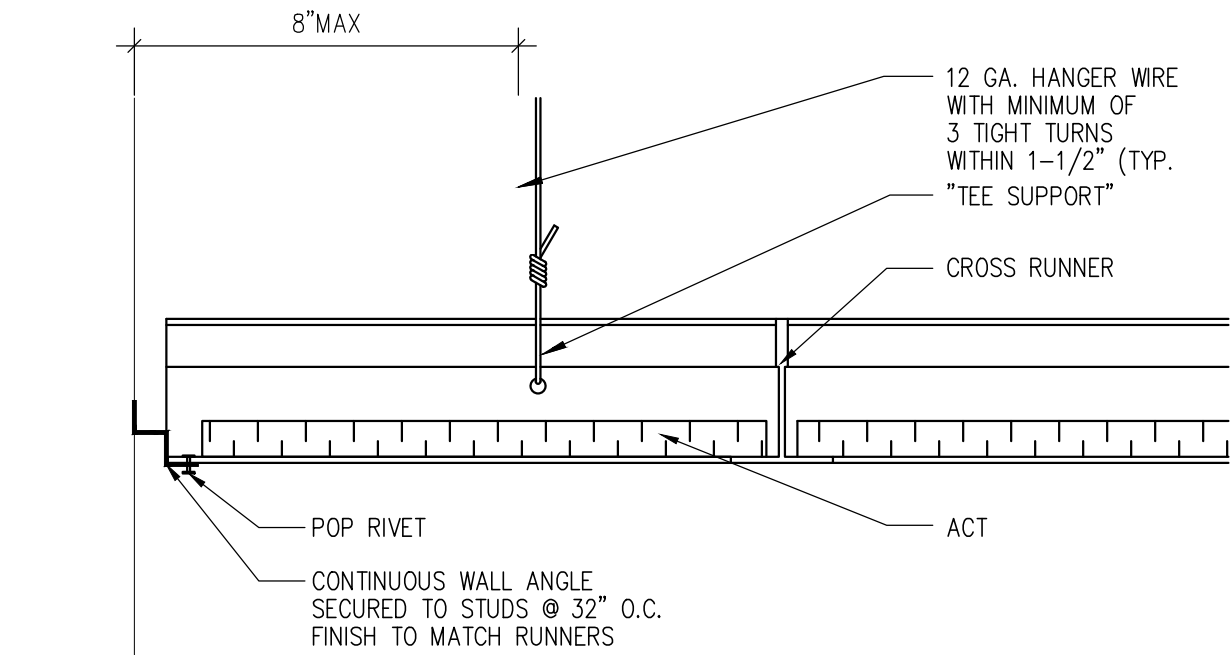


TYPICAL LAY-IN CEILING E.M.T. SUPPORT

Scale: 3" = 1'- 0"

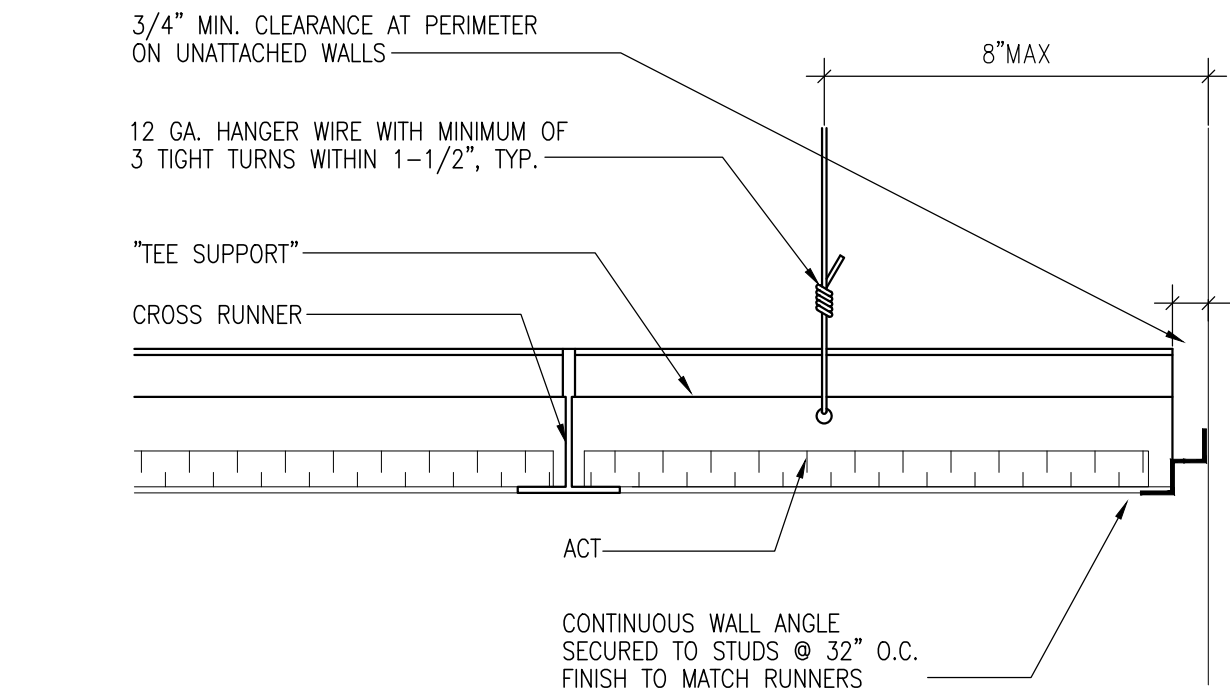
TYPICAL CEILING FIXTURE INSTALLATION

Scale: NTS



TYPICAL LAY-IN CEILING @ ATTACHED END

Scale: 3" = 1'- 0"



TYPICAL LAY-IN CEILING @ UNATTACHED END

Scale: 3" = 1'- 0"

MKTHINK

Architects:

MKTHINK

Roundhouse One, 1500 Sansome Street
San Francisco, CA 94111
p 415 402 0888
f 415 288 3383
mkthink.com

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Project:

Media Services Relocation
200 McAllister Street
San Francisco, CA

Project Number:

491-142



Clients:

UC Hastings College of Law
200 McAllister Street
San Francisco, CA

| Rev. | Issue | Date |
|---------|-------|----------|
| BID SET | | 11.05.14 |

Seal:

Scale: **AS NOTED**

Drawing Description:

**CEILING
DETAILS**

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Drawn By: --

Checked By: --

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