



# City of Santa Monica Building and Safety Division

## T-bar Guide

***This list is to be used as a general guide.***

***It is not inclusive of all code requirements and inspection criteria.***

**Based on 2016 California Building Code (CBC), ASTM C636 & ASCE 7 &  
CISCA (Ceiling and Interior Systems Construction Association)  
and the Santa Monica Municipal Code (S.M.M.C.)  
California Codes available at [www.bsc.ca.gov](http://www.bsc.ca.gov)**

### **SUPPORT WIRES**

- Verify anchorage (minimum) 100 lb. (or 5X design load) (ASCE7)
- 12 gauge galvanized wires at 4' on center maximum (4-5 ft. o.c.=10 gauge wires required)
- First support wire 8" maximum from walls and seismic joints
- 3 tight turns in first 3" at top and bottom of support wires ASTM C636
- Within 1/6 of plumb (if not, counter sloping wire required)
- Horizontal bracing (splay wire clusters-not required for installations of less than 144 square feet)
  - 90 degrees from each other and within 45 degrees of ceiling plane (four wires)
  - 6' from walls or seismic joints and 12' on center (each way)
  - within 2" of cross tees and minimum of 6" from all unbraced horizontal pipes and ducts
- All wires taught with no local kinks or bends (typical)
- T-bar ceiling maximum six foot below structural deck to which it is attached without design professional for lateral bracing (S.M.M.C.)

### **TBAR GRID**

- Grid must be heavy duty- verify installation and manufacturer's certification of component performance CBC 2506.2.1—ASCE7 13.5.6.2.2—ASCE7 11A.1.3.9) and level within ¼"
- Grid may be attached to two adjacent walls (rivets typical)
- Unattached ends of grid system (at opposite walls) ¾" (minimum) short of wall
- 2" wall molding (or listed seismic clips) at unattached ends of grid S.M.M.C.
- Perimeter (spreader bars) support required for all unattached grid ends, 12" or greater
- Positively brace changes in ceiling height CBC Chapter 1613
- No partitions attached to grid (typical) ASCE 7
- Seismic joints (or structural analysis)
  - every 2500 square feet
  - 1 ½" gap with listed clips
- Trapeze or equivalent device shall be used where obstructions preclude direct suspension
- Trapeze beneath large ducts/plenums require *two* 1 ¼" cold rolled channels (back to back) for spans exceeding 4'
- Cross tees supporting mechanical or electrical must have main beam carrying capacity (must be heavy duty) (ASTM C636)



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### GENERAL

- Verify rated assemblies intact or complete above grid CBC 3403.3
- Verify plenum rated equipment above grid (if non-ducted return) CMC 602.2
- Insulated condensate drains in non-conditioned space CMC 1106.
- Identify mechanical units as to area served CMC 303.6
- Properly supported copper piping (6' o.c. if 1 ½" or less) CPC table 3-2
- Duct work sealed and insulated CMC 602.4 and 605
- Ducts supported per CMC 604 and Table 6-7
- Ducts seismically restrained per CMC 604.2.4 and ACSE 7
- VAV's properly supported and seismically restrained
- Hydronic piping labeled (30' and change of dir.) and insulated CMC chapter 12
- Provide for expansion/contraction of hydronic piping per CMC 1201.2.7.5
- All electrical equipment independently supported and braced (S.M.M.C. 1613)
  - pendant fixtures require #9 wire
- Free floating objects supported per ASCE 7 (televisions, etc.)
- Minimum 2" oversized trim (to allow 1" movement in any direction) ex.- 3" hole for a 1" pipe (if ceiling is not restrained (no seismic posts) or there is no swivel joint in sprinkler line)
- Special requirements for means of egress for 30 or more occupants and lobbies of assembly occupancies (S.M.M.C. and CBC 1613)
  - o Support wires at 2' on center
  - o Two clips (min.) on tiles within 4' of exit signs and exit lighting
  - o All lights, diffusers, exit signs require independent support
- Rough fire approval
- No incompatible metal contact (typically support wires in contact with copper)
- Minimum two wires on lights over ten pounds (or added ceiling support wire within 6" of corners)