



Section 09 50 Ceilings/ Section 11 15 Security, Detention and Banking Equipment

Part 1 – General

1.01 Scope

Furnish and install the Plank Security Metal Ceiling System as manufactured by Steel Ceilings Inc., Johnstown, Ohio

1.02 Related Sections

- Section 09510 Acoustical Ceilings
- Section 09250 Plaster and Gypsum Board
- Section 15550 Heating, Ventilating and Air-conditioning
- Section 16500 Lighting

1.03 References

- American Society for Testing and Materials (ASTM)

C635 Standard specification for the manufacture, performance and testing of metal suspension systems for acoustical tile and lay-in panel ceilings

C636 Standard practice for installation of metal ceiling suspension systems for acoustical tile and lay-in panels

E84 Test method for surface burning characteristics of building materials

CISCA Ceilings and Interior Systems Construction Association

1.04 Submittals

- Provide product data sheets listing dimensions, style, edge detail, perforation pattern and finish
- Alternates require prior approval no later than 21 days prior to bid date. In addition to the requirements above, submittals for approved alternates must include samples of actual products to be substituted together with test certificates supporting performance claims, a mock up and a written warranty.

1.05 Project Conditions

Environmental Requirements

- Area to receive ceiling systems shall be protected from the weather
- Wet trades work shall be complete and dry prior to installation of ceiling system

- Installation shall not proceed until the temperature and humidity conditions closely approximate finish condition

1.06 Attic Stock

Provide 2% (3% etc) of the ceiling system area materials to be used as attic stock

1.07 Performance

- Materials and installation must comply with Local Building Code and Regulations
- Materials should be stored and handled in accordance with CISCA's *Acoustical Ceilings – Use and Practice*
- Materials to comply to CISCA's *Metal Ceilings Technical Guidelines*
- There are no special seismic requirements

Part 2 – Products

2.01 Manufacturer

Plank Security Metal Ceiling System shall be as manufactured by Steel Ceilings Inc., Johnstown, Ohio: www.steelceilings.com

2.02 Materials

Suspension System

- Primary support system shall be the wall molding. The secondary support system, if required, will be the mid-span supports in 14-gauge steel in similar material and finish to the security planks.
- Compression struts shall be ½" galvanized steel channel fixed to the mid-span at a minimum of 48" on center, fastened securely to the hanger wires and secured back to the building structure with drilled anchors as approved by the architect
- Wall molding shall be formed from 14-gauge steel in C-shape with 2" face designed to accept security metal planks. Wall molding to be secured to all vertical surfaces with drilled in anchors at a minimum of 16" on center.
- Hold downs shall be formed from same materials as the molding
- Fasteners and hardware shall be galvanized steel or other non-corrosive materials compatible with the security system. Security planks to be securely fastened to adjacent security planks with self-tapping screws. Exit planks shall be

securely fastened to Z-clips with tamper-proof fasteners.

Security Planks

- Metal pans shall be formed from 16-gauge galvanized steel — minimum A40/G40 (stainless steel)
- Plank width shall measure (12", 18", 24")
- Panels shall be perforated (non-perforated) with pattern S
- Panels shall be post painted to seal all perforations with polyester powder global white (brushed # 4)

Acoustical Infill

- Panels shall be supplied with 1" (2", etc.) thick 1pcf (2 pcf, etc.) glass fiber insulation wrapped in flame-retardant black polyfilm (nonwoven acoustic fleece) to provide sound absorption NRC of 0.75 (0.95, etc.)

Part 3 – Execution

3.01 Examination

- Installer must inspect the area that is to receive the metal ceiling system for conditions that may affect the installation and notify, in writing, any conditions that must be rectified before commencing
- All work above the ceiling shall be completed before proceeding with this installation
- All wet work shall be completed and thoroughly dry before proceeding with this installation

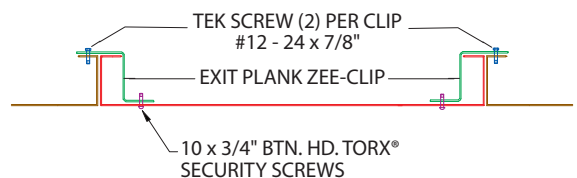
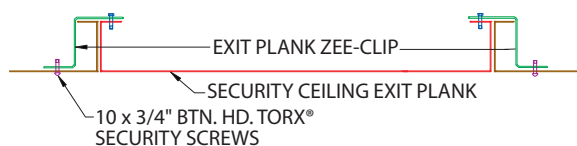
3.02 Installation

- Metal Ceiling components shall be delivered in unopened cartons and shall be clearly marked with manufacturer's name
- Material shall be stored in dry and protected areas
- Install the ceiling system in accordance with the manufacturer's recommendations and the approved shop drawings
- Cut panels shall, where possible, not be less than one half of full size
- Panels shall be free from defects and damaged panels shall be removed and replaced

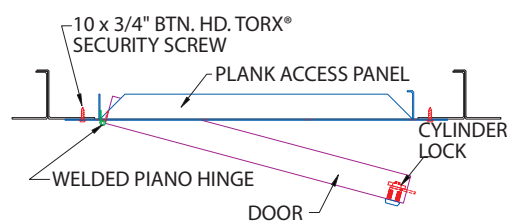
SECURITY PLANK

METAL PAN SYSTEM

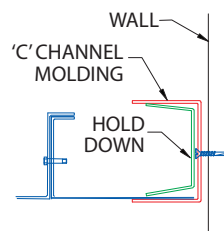
SIZE (INCHES)	Width 12", 18" and 24"
ACCESSIBILITY	Exit panel/access door only
VISUAL	Concealed
EDGE DETAIL	Square
MATERIALS	Steel, Stainless Steel
FINISHES	Painted, Natural
RELATIVE COST	\$\$



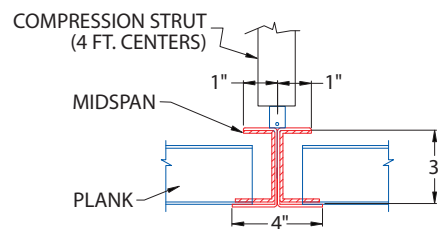
EXIT PLANK (2 OPTIONS)



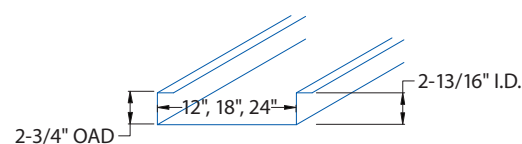
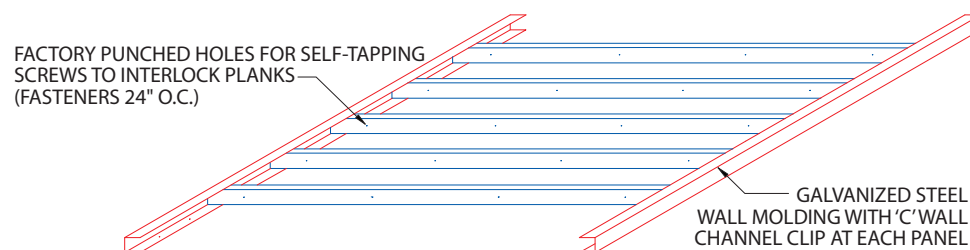
PLANK ACCESS DOOR



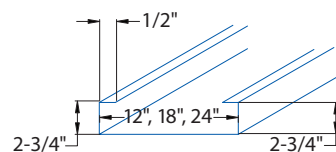
WALL DETAIL



MIDSPAN DETAIL



STANDARD PLANK



EXIT PLANK

OVERVIEW

The Steel Ceilings Plank Metal Pan System provides a high level of security when using ceiling systems for detention facilities. There is no access into the plenum space at any point in the ceiling except via special exit panels or access doors. The planks are fastened together through their overlapping legs with screws that are not visible from below.

MODULE

Plank is available in varying lengths in three standard width modules of 12", 18" and 24".

METAL

The metal panels are manufactured from 12- to 16-gauge galvanized or stainless steel. Panels can also be produced in aluminum, but would have limited security application. Gauge is often correlated to the security level required.

PERFORATIONS

Plank is available in Steel Ceilings' "S" pattern only. The panels can also be provided without perforations.

EDGE TREATMENTS

All edges are square bearing in mind the metal thickness.

ACOUSTICS

The perforated metal panels can be provided with a fiberglass pad that is wrapped at the factory in black flame retardant polyfilm. Noise reduction coefficients of up to .95 can be achieved depending on the thickness and density of the fiberglass pad that is used. In areas where sound transmission needs to be controlled, steel attenuation pans can be provided on the back of the perforated pans that can achieve a CAC rating of up to 40 dB.

TYPE OF INSTALLATION

The Plank system consists of a plank running from channel wall molding to channel wall molding. Longer sections are secured by a midspan channel that is suspended from above with 9-gauge wire or 14-gauge 1 1/2" x 1 1/2" galvanized angle and compression struts.

CONCEALED OR EXPOSED SUSPENSION SYSTEM

The entire ceiling assembly has no visible grid suspension.

FINISHES

The finished appearance of the ceiling system is either a powder paint finish in white or color or stainless brushed #4.

APPLICATIONS

This non-accessible ceiling is primarily for interior applications.

FIRE PERFORMANCE

The ceiling system has been tested in accordance with ASTM E-84 and is considered incombustible. The material has a Flame Spread of less than 25 and Smoke Generation of less than 50.

IMPACT

All materials are 100% recyclable with a high recycled content.

SECURITY PLANK