

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

### Part 1 – General

#### 1.01 Scope

Furnish and install the Security Snap-In 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

Concealed Snap T-bar suspension system, clips, molding and metal pans shall be as manufactured by Steel Ceilings Inc., Johnstown, Ohio: [www.steelceilings.com](http://www.steelceilings.com)

#### 2.02 Materials

##### Suspension System

- Primary Channel shall be 1½" deep 16-gauge galvanized steel — minimum G60, and shall be spaced not to exceed 48" on center by direct suspension from the existing structure with not less than 12-gauge pre-straightened hanger wires, wrapped tightly 3 full turns, spaced 48 inches along the component length or ¼" threaded rod

- Snap T-bars shall be galvanized steel — minimum A40/G40 (stainless steel) and attached with galvanized wire T-clips and screws at right angles to the 1½" primary channel

- Wall molding shall be formed from galvanized steel (aluminum, stainless steel), in C-shape to receive metal pans

- Hold downs shall be formed from same materials as the molding

##### Snap-In Metal Panels

- Metal pans shall be formed from 24-gauge galvanized steel — minimum A40/G40 (aluminum, stainless steel)
- Panels shall measure 24" x 24" (12" x 24", 24" x 48" etc.)
- Panels shall be square edge (bevel edge on 12" x 24" or 24" x 24" or 24" x 48")

- Security clips shall slip over T-bars and engage holes in security panel flanges and then be turned upwards at 90° to prevent dislodging under normal force
- Panels shall be perforated (non-perforated) with pattern B (C, D, F, FF, G, M, R S or custom perforation)
- Panels shall be post painted to seal all perforations with polyester powder global white (color) gloss level 12% to 15% (preferred mill, natural anodized, 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.)

##### Access Panel

- Access Panels shall be assembled from 24" x 24" ceiling panels and have keyed-alike hardware

### Part 3 – Execution

#### 3.01 Examination

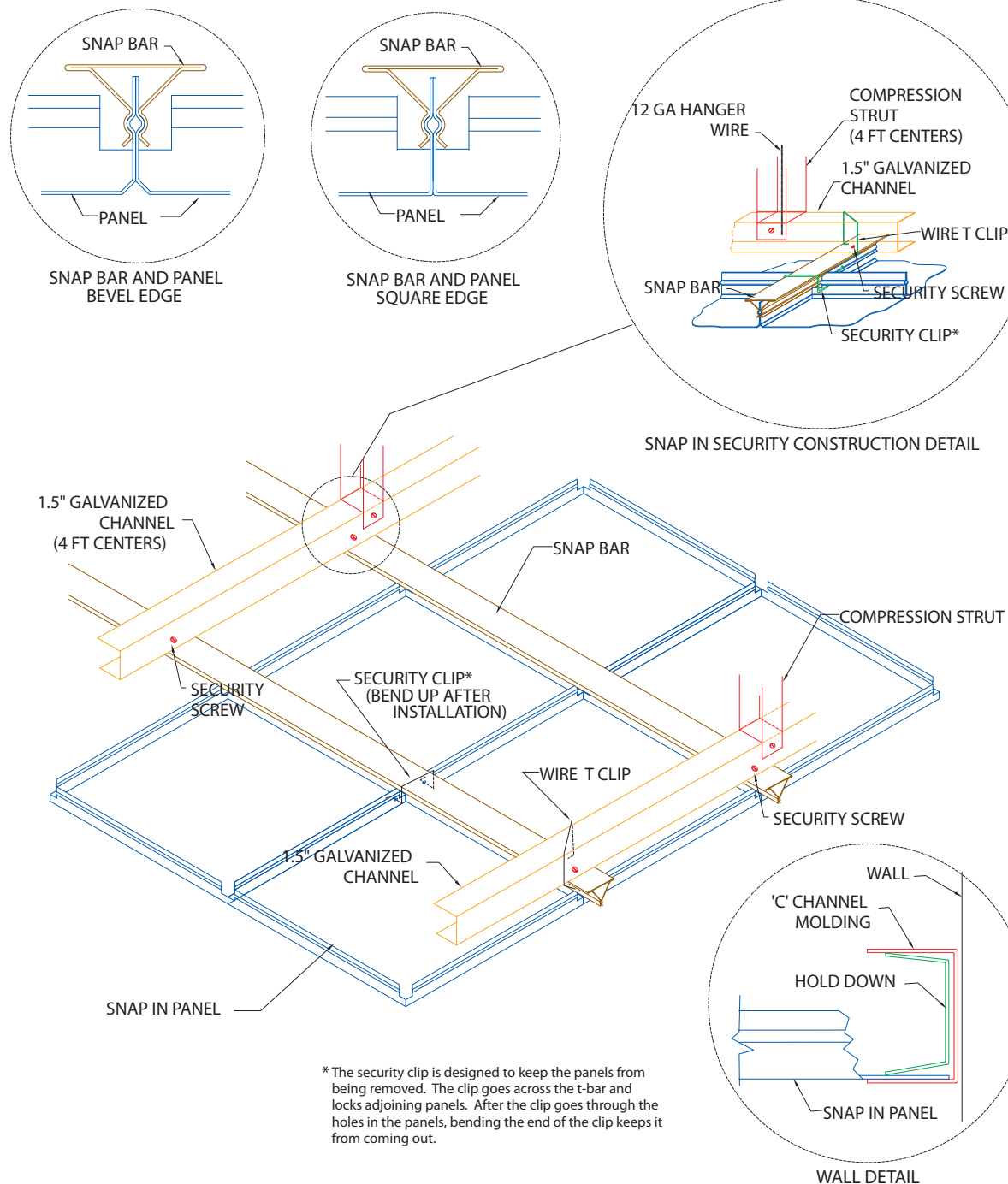
- Installer must inspect the area that is to receive the metal ceiling system for conditions that may affect the installation and notify, in writing, any conditions that must be rectified before commencing
- All work above the ceiling shall be completed before proceeding with this installation
- All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

SIZE (INCHES)	Min. 12x12, Max. 24x48
ACCESSIBILITY	Exit panel/access door only
VISUAL	Concealed
EDGE DETAIL	Square, Beveled
MATERIALS	Steel, Aluminum, Stainless
FINISHES	Painted, Natural
RELATIVE COST	\$



## OVERVIEW

The Steel Ceilings Security Snap-In Metal Pan System has been a proven mainstay product of the metal ceilings business for years. It provides the end user a medium level of security in that there is no access into the plenum space at any point in the ceiling except via special exit panels or access doors. The panels have a continuous bead on the upturned flanges of the metal panels that engage into a concealed T-Snap Bar assuring a positive attachment. A security clip is then installed over the Snap T-bar locking the adjacent security panels.

## MODULE

Various module sizes are available (popular are 12"x24" and 24"x24"). The Snap-In panel has limitations of practicality such that sizes larger than 24"x 48" need Steel Ceilings, Inc. technical analysis first.

## METAL

The metal panels are manufactured from 20- to 26-gauge galvanized steel. Panels can also be produced in stainless steel or aluminum in varying thicknesses.

## PERFORATIONS

A full range of perforation patterns are available with or without plain borders. Steel Ceilings maintains a range of perforating dies in-house and custom perforations can be provided. Perforation patterns can be staggered, diagonal or straight row and the perforations can be provided in round, square or oblong holes in various diameters and sizes. The panels can also be provided without perforations.

## EDGE TREATMENTS

Depending on the sizes involved edges of the panels can be either square edge or beveled edge providing a subtle delineation between panels for a stronger visual effect.

## ACOUSTICS

The perforated metal panels can be provided with either a non-woven fabric or 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, 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 Snap-In Security System consists of a primary channel that is suspended from the structure with 9-gauge hanger wire or threaded rod, as required. The T Snap Bar is then fastened to the primary channel with Wire T-clips and screws. The metal panels are then snapped into the Snap Bar. Security Clips are installed over the T-bar that securely lock the adjacent panels to one another. Compression struts are installed at hanger locations to resist upward movement of the ceiling.

## CONCEALED OR EXPOSED SUSPENSION SYSTEM

The entire ceiling assembly has no visual suspension runners providing a clean unobstructed visual appearance.

## FINISHES

The finished appearance of the ceiling system is either a powder paint finish in white or color or a variety of metals including stainless steel, anodized or brushed aluminum, copper steel, brass steel or chrome steel.

## APPLICATIONS

This ceiling can be used for either interior or protected exterior applications. When the ceiling is used in an exterior application wind load requirements need to be considered and special installation procedures need to be followed.

## 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.