

CELLINE® MH PLANK SECURITY CEILING SYSTEM

SECTION 09 57 53

PART 1 – GENERAL

1.01 SECTION INCLUDES:

- A. This specification covers the material, installation, and related requirements for the CELLINE® MH Plank Security Ceiling System – including all necessary Acoustical Insulation, Suspension Systems, and Fasteners.

1.02 RELATED DOCUMENTS/SECTIONS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions.
- B. Division 1 Specification sections apply to work of this Section.
- C. Finish Schedule or Finish Legend apply to work of this Section.

1.03 REFERENCES:

- A. GENERAL
 - 1. Comply with applicable requirements of the following, except where more stringent requirements are indicated by building codes.
- B. ASTM (American Society for Testing and Materials)
 - 1. ASTM C636, Recommended Practice for Installation of Metal Suspension System for Acoustical Tile and Lay-In Panels.
- C. CISCA Ceiling Systems Installation Handbook.
- D. New York State Office of Mental Health (NYSOMH) Patient Safety Standards, Materials and Systems Guidelines.
- E. National Association of Architectural Metal Manufacturers (NAAMM)
 - 1. Metal Finishes Manual for Architectural and Metal Products

1.04 DESIGN/PERFORMANCE REQUIREMENTS:

- A. All components of the CELLINE® MH Plank Security Ceiling System shall be provided by one (1) Manufacturer to ensure single source responsibility and quality control.
- B. Product Performance:
 - 1. Accessibility: CELLINE® MH Plank Security Ceiling System shall be designed and installed to resist access to the plenum area. System compatible hinged locking downward accessible Doors are to be provided in locations indicated on architectural Reflected Ceiling Plans. Access Doors are to be sized so as to fit into and trim off full module opening in Ceiling System.
 - 2. Acoustical Requirements: The perforated Ceiling Systems shall provide a Noise Reduction Coefficient (NRC) of no less than 0.80 when tested in accordance with ASTM C423-84a in an E-400 mounting as defined in ASTM E795-83

1.05 SUBMITTALS:

- A. Submission must be made within agreed upon time frame of the General Contract Award to avoid project delay.

- B. Product Data: Submit Manufacturer's CELLINE® MH Plank Security Ceiling System product specifications, detail drawings, and Installation Instructions for each component required.
- C. Shop Drawings shall show location of CELLINE® MH Plank Security Ceiling System as well as specified finish, tolerance, Panel thickness, perforation pattern, and Panel size.
- D. Samples: Submit three (3) samples consisting of curved members with Panels and Torsion Springs attached.
- E. Sustainability:
 - 1. Materials and Resources
 - 1. Building Life-Cycle Impact Reduction
 - a. LCAs for aluminum and steel are available.
 - i. Steel - http://www.gordon-inc.com/literature/pdf/cisca_background_report_steel_2020-04-24.pdf
 - 2. Building Product Disclosure and Optimization - Environmental Product Declarations
 - a. Industry-average EPDs for aluminum and steel are available.
 - i. Steel - http://www.gordon-inc.com/literature/pdf/102.1_cisca_industry_wide_epd_steel_specialty_products.pdf
 - 3. Building Product Disclosure and Optimization - Sourcing of Raw Materials
 - a. Regional Materials – Raw materials can be purchased from Vendors within 100 miles of the project location and fabrication of all materials in Bossier City, LA, U.S.A.
 - b. Gordon's mission is to locate recycled materials that are not only of high recycled content, but extracted, produced, or extruded in the U.S.A.
 - 4. Building Product Disclosure and Optimization - Material Ingredients
 - a. Full disclosure of material recycled content is available.
 - 5. Construction and Demolition Waste Management
 - a. Most products shipped from our plant are engineered to fit and reduce field cutting during installation.
 - i. Fewer indoor air quality problems
 - ii. Less scrap and debris – cleaner work environment
 - iii. Less noise pollution caused by field cutting of materials
 - iv. Maintain comfort and well-being of workers and occupants
 - 2. Indoor Environmental Quality
 - 1. Low-Emitting Materials
 - a. Gordon's State-of-the-art Powder Coating line produces the highest quality powder coated surfaces while also contributing to our sustainability drive.
 - i. No heavy Metals used in pre-treatment

- ii. Processed water is fully compliant for introducing into waste stream
- iii. Extremely efficient use of powder coating through reclamation system reducing powder wastage
- iv. Factory finished products shipped from our plant eliminates field painting
 - 1. Prevents odorous and irritating air contaminants
 - 2. Introduces no hazardous waste
 - 3. Contributes no VOCs
 - 4. Maintains comfort and well-being of workers and occupants

2. Thermal Comfort

- a. Gordon acoustical ceilings and walls aid in providing Thermal Comfort Control with encapsulated acoustical media containing insulation or nonwoven acoustical fabric for insulative purposes to meet the requirements of ASHRAE Standard 55–2010, Thermal Comfort Conditions for Human Occupancy.

3. Interior Lighting

- a. Gordon's AAMA 2604 powder coat finishes can provide the proper light reflectance to improve illumination in the space and reduce lumen output requirements.

4. Acoustic Performance

- a. Gordon manufactures a vast array of ceiling systems that provide acoustical performance to meet Noise Reduction Coefficient (NRC) requirements.

3. Innovation

1. Innovation

- a. Gordon is a strategic partner with the design community and continuously finds ways to design products that can aid in improving environmental performance.

2. LEED Accredited Professional

- a. Gordon has LEED Accredited Professionals on staff to assist with your sustainability requirements

- 4. Detailed explanation of LEED Credits and Gordon, Inc.'s Contribution can be located at <http://www.gordon-inc.com/company/sustainability/>.

F. Certification: Submit certification from Manufacturer of ceiling panels attesting that product complies with specified requirements including finish as specified.

G. Qualification Data:

- 1. Firms specified in "Quality Assurance" Article must demonstrate their capabilities and experience by including lists of completed projects with project names and addresses, names and addresses of Architects and owners, and other information specified.

H. Warranty:

- 1. Provide product warranty for one (1) year from date of material shipment.

1.06 QUALITY ASSURANCE:

- A. Manufacturers' Qualifications: Firm with manufacturing and delivery capacity required for the project, shall have successfully completed at least ten (10) projects within the past five (5) years, utilizing systems, materials, and techniques as herein specified.
- B. Fabricator must own and operate its own manufacturing facilities for all metal components. Systems consisting of components from a variety of Manufacturers will not be considered or accepted.
- C. Manufacturer/Fabricator must own and operate its own painting and finishing facility to assure single source responsibility and quality control.
- D. Installer's Qualifications: Firm with not less than three (3) years of successful experience in the installation of systems similar to those required by this project and acceptable to the Manufacturer of the System.

1.07 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Deliver Panels and all System Hardware to the job site in Manufacturer's original packaging, unopened and undamaged, just prior to installation.
- B. Avoid warpage and damage by storing Panels and all System Hardware above floor, flat and in a dry, humidity and temperature controlled interior location.
- C. Follow Manufacturer's instructions and exercise care during off loading, handling and installation to avoid damage and marring of finishes.

1.08 WARRANTY:

- A. Standard Warranty:
 - 1. Furnish Manufacturer's Standard Warranty of one (1) year for workmanship and for finish against defects in materials and/or workmanship.
- B. Extended Workmanship Warranty:
 - 1. Furnish Manufacturer's Standard Workmanship Warranty (must be requested at time of quotation) may be extended up to a maximum of twenty (20) years from date of material shipment, when installed in accordance with Manufacturer's recommendations.
- C. Extended Finish Warranty:
 - 1. Furnish Manufacturer's Standard Finish Warranty (must be requested at time of quotation) may be extended up to a maximum of twenty (20) years from date of material shipment, when installed in accordance with Manufacturer's recommendations.

1.09 SUBSTITUTIONS:

- A. No substitutions are permitted for the CELLINE® MH Plank Security Ceiling System.
- B. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00. Companies desiring to submit a proposal shall submit all descriptive information of the system proposed including photographs and Shop Drawings of at least ten (10) projects within the past five (5) years, utilizing systems, materials and techniques as herein specified

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

- A. Basis of Design: CELLINE® MH Plank Security Ceiling System shall be manufactured by Gordon, Inc. For all inquiries contact:

Gordon, Inc.
5023 Hazel Jones Road
Bossier City, LA 71111
(800) 747-8954
sales@gordon-inc.com

- B. The listed Manufacturer shall not be construed as closing specifications to other prospective Manufacturers, but rather as establishing a level of quality in a metal system. Other systems may be submitted for approval, as provided for in the specifications at least ten (10) working days prior to submission of bids. Companies desiring to submit a proposal shall submit all descriptive information of the system proposed including photographs and Shop Drawings of at least three (3) projects similar in detail and scope.

2.02 MATERIALS:

- A. Ceiling Components:
1. Metal Plank Ceilings: Planks shall be (12) (14) (16) (18) Gauge perforated and/or non-perforated galvanized (minimum A60) steel.
 2. Metal Plank Suspension: Perimeter Angles and Main Tee Runners shall be (12) (14) (16) Gauge factory finished galvanized (minimum A60) steel.
- B. Acoustical Material:
1. The inside surface of all perforated Ceiling Panels shall be covered with Class A fiberglass Insulation wrapped in black Fire-Retardant Poly. Insulation shall be of sufficient thickness and density to provide the acoustical requirements as outlined herein.
- C. Lights and Air:
1. All light and air units are to be system compatible and sized so as to fit into and trim off full module opening in Ceiling System and shall be independently supported from above by installing trade
- D. Access Doors:
1. All security Access Doors to be installed in the Metal Security Ceiling System shall be supplied by the Metal Security Ceiling System Manufacturer. Access Doors shall have the following characteristics:
 - i. Size: 24" x 24", which fits an opening of 23-3/4" x 23-3/4"
 - ii. Door: 16 Gauge steel
 - iii. Frame: 16 Gauge steel
 - iv. Hinge: Full-length semi-concealed piano hinge that opens 180 degrees
 - v. Anchors: Heavy steel, welded to frame
 - vi. Lock: Theft-proof, security bolt, with key

E. Fasteners:

1. All exposed Fasteners shall be tamper-proof and shall be a minimum No. 12 size. Fasteners for securing the Wall Molding to the wall are to be selected and furnished by the Contractor and approved by the Architect/Engineer

2.03 **FABRICATION**

A. Product Components:

1. Metal Plank Ceilings: The CELLINE® MH Plank Security Ceiling System is to be fabricated and installed in accordance with the Manufacturer's approved Shop Drawings. Metal Planks shall be factory formed from (12) (14) (16) (18) Gauge perforated (non-perforated) galvanized (minimum A60) steel as indicated on the Shop Drawings. Planks shall be formed (12") (18") (24") wide in lengths of up to 12'-0" as shown on Reflected Ceiling Plans. Vertical legs of Metal Planks are to be factory formed so that Panels overlap tightly to provide positive self-alignment with adjacent Panels.
2. Metal Plank Suspension: Perimeter Angles and Main Tee Runners shall be factory fabricated from (12) (14) (16) Gauge factory finished galvanized (minimum A60) steel. Angles and Tees shall be factory pre-punched to receive Fasteners. Angles shall be fastened to all abutting vertical surfaces through the use of drilled in anchors or other approved Fasteners at a minimum of 16" O.C. Tee sections shall be suspended by 14 Gauge 1-1/2" x 1-1/2" galvanized slotted Angles bolted to Main Tees at minimum of 5'-0" O.C., hung from structural members or drilled in anchors of appropriate type and dimension as approved by the Architect. Panels shall be securely fastened to all Angles and Tee sections with (steel rivets) (Torx® security fasteners)¹ of appropriate dimension (painted to match Panels) minimum 6" O.C. [or through the use of concealed Hold Down Angle mechanically fastened to abutting vertical surfaces].
 - a. Acoustical Material: The inside surface of all perforated Ceiling Panels shall be covered with Class A fiberglass Insulation wrapped in black Fire-Retardant Poly. Insulation shall be of sufficient thickness and density to provide the acoustical requirements as outlined herein.
 - b. Lights and Air: All light and air units are to be system compatible and sized so as to fit into and trim off full module opening in Ceiling System and shall be independently supported from above by installing trade.
 - c. Access Doors: All security Access Doors to be installed in the Metal Security Ceiling System shall be supplied by the Metal Security Ceiling System Manufacturer in quantities indicated on the Architectural Drawings or as approved by the Architect.

¹ Torx® is a registered trademark of Camcar

2.04 FINISHES:

- A. Comply with the National Association of Architectural Metal Manufacturers (NAAMM) “Metal Finishes Manual for Architectural and Metal Products” for recommendations relative to applying and designating finishes.
- B. Metal Planks and Related Suspension:
 - 1. The Metal Planks shall have a factory-applied white super-durable polyester powder coating finish. Finish to be applied after perforation (if applicable) to ensure coating of perforated holes. Panels shall be coated to a minimum thickness of 2.0 mils on the finish side.
 - 2. Prior to painting, galvanized steel surfaces shall be cleaned, rinsed, and properly treated with a 5-stage pretreatment with dried-in-place conversion coating.
 - 3. Finish to achieve the following performance characteristics:
 - a. Salt Spray per ASTM B-117 – 1,000 hours PASS at less than 1/8” from score.
 - b. Humidity Resistance per ASTM D-2247 – 1,000 hours PASS at less than 1/8” from score.

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Examination of Surfaces: Installer must examine conditions under which work is to be performed and must notify Contractor in writing of unsatisfactory conditions.
- B. Verify that field measurements and block-out dimensions are as shown on Shop Drawings.

3.02 PREPARATION:

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the Manufacturer to achieving the best result for the project conditions.

3.03 INSTALLATION:

- A. General: Comply with Manufacturer’s printed instructions, governing regulations for Seismic Codes, Local Building Codes, and the Ceiling & Interior Systems Construction Association Standards applicable to work.
- B. The CELLINE® MH Plank Security Ceiling System shall be installed in accordance with ASTM C636 and Cisca guidelines, in layouts as reflected on the approved Shop Drawings, all in compliance with the Manufacturer’s Installation Instructions.
 - 1. The Suspension System and Wall Moldings shall be installed plumb and level.
 - 2. Start installation of Metal Plank at location as shown on Reflected Ceiling Plans. Slide Metal Plank along Perimeter Angle to create a ship lapped joint between adjoining Panels. Ensure self-aligning legs overlap each other. **Side stitch Panels together along ship lapped Panel joints with self-tapping fasteners per approved Shop Drawings or at a minimum of 24” O.C.**

3. In order to achieve secure and tightly engaged Panel joint details, Panels must be installed progressively from the start Panel through the closure Panel. Except for the openings for light, air, fire protection, or access shown on the Reflected Ceiling Plans, all openings or cut outs required in the Ceiling Planks shall be field cut by the trades requiring the openings.

3.04 CLEANING:

- A. Follow Manufacturer's cleaning instructions for specified finish.

3.05 PROTECTION:

- A. Procedures: Advise the Contractor of procedures required to protect the finished work from damage during the remainder of the construction period.
- B. Care should be taken during the remainder of construction to protect the CELLINE® MH Plank Security Ceiling System from damage.
- C. Damage to Finished Work: Finished units of the CELLINE® MH Plank Security Ceiling System shall be without damage. Damage shall be repaired by the Contractor at the expense of the party damaging the material, as in accordance with the contract requirements.

END OF SECTION