

<PROJECT NAME>  
PROJECT NO. 0000

SECTION 09 58 13  
INTEGRATED CEILING  
ASSEMBLIES

ISSUED DATE: <ISSUEDATE>  
ISSUED FOR: <ISSUEDFOR>

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Revision date: December 2023

#### ROCKFON SPEC NOTE:

This master specification is written to include SPEC NOTES to assist designers in their decision-making process. SPEC NOTES precede the text to which they apply. This section should serve as a guideline only and should be edited by a knowledgeable person to meet the requirements of each specific Project.

Text indicated in bold and by square brackets is optional. Make appropriate decisions and delete the optional text as well as the brackets in the final copy of the specification. Delete or hide the SPEC NOTES in the final version of the document.

This specification section is written to follow the recommendations of the Construction Specifications Institute/Construction Specifications Canada (CSI/CSC) such as MasterFormat™, SectionFormat™, and PageFormat™. It is also written with metric and imperial units of measurement.

This Section may also be specified under the following MasterFormat™ numbers:

09 23 13 Acoustical Gypsum Plastering  
09 51 00 Acoustical Ceilings  
09 51 13 Acoustical Panel Ceilings  
09 51 53 Direct Applied Acoustical Ceilings  
09 54 00 Integrated Ceiling Assemblies  
09 83 16 Acoustical Plaster Ceilings

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Rockfon does not practice architecture or engineering. Therefore, the design responsibility remains with the architect, engineer, or Consultant. We hope the information given here will be of assistance. It is based upon data considered to be true and accurate and is offered solely for the user's consideration, investigation, and verification. Nothing contained herein is representative of a warranty or guarantee for which Rockfon can be held legally responsible. Rockfon does not assume any responsibility for any misinterpretation or assumptions the reader may formulate.

This specification was developed with the assumption that it will be used with a CCDC standard Contract, as amended by any supplementary instructions. As a result, in keeping with CCDC standard definitions, some words have been capitalized. Please change defined terms and capitalization if this Specification is used with another type of Contract.

\*\*\*\*\***IMPORTANT NOTES**\*\*\*\*\*

Rockfon® Mono® Acoustic is a high sound absorbing (NRC 0.9 - 0.95) interior ceiling system with a lightly textured bright white surface providing a continuous, seamless monolithic surface.

There are three types of Mono® Acoustic systems included in this specification to choose from:

- Rockfon® Mono® Acoustic TE - 1200mm x 1800mm panels fastened directly to Chicago Metallic drywall suspension grid installed in a 1200mm x 600mm pattern.
- Rockfon® Mono® Acoustic TE Direct - 1200mm x 900mm panels adhered to existing or new smooth flat surfaces such as plaster or gypsum.
- Rockfon® Mono® Acoustic TE Flecto - 1200 x 900mm panels for concave or convex shapes with a minimum radius of 1500mm affixed to framework or solid surface in desired geometry.

This product should only be installed, maintained and repaired by certified Rockfon® Mono® Acoustic Installers. Please contact Rockfon customer service for contact details of your nearest certified installer. Mono® Acoustic systems are suitable for interior ceiling and wall applications not subject to impact.

Contact Rockfon Customer Service at 800.323.7164 for additional information or visit [rockfon.com](http://rockfon.com).

## PART 1 - GENERAL

### 1.1 GENERAL INSTRUCTIONS

1. Read and conform to: The general provisions of the Contract, including General and Supplementary Conditions; and the requirements of Division 01 Specifications and any additional documents referred to in this Section.

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2. Contractor is solely responsible for dividing the Work among Subcontractors and Suppliers. Consultant and Owner assume no responsibility to act as arbiters or to establish subcontract limits between Sections or Divisions of the Work. Any references to related work items contained in this Section are provided for convenience only.

## 1.2 SUMMARY

1. Provide labour, materials, Products, equipment and services to complete the integrated monolithic ceiling assemblies specified herein. This includes, but is not necessarily limited, to:

ROCKFON SPEC NOTE: Select one of the following 3 options. First option is for Rockfon® Mono® Acoustic TE, Second option is for Rockfon® Mono® Acoustic TE Direct and third option is Rockfon® Mono® Acoustic TE Flecto. You can duplicate the paragraph as needed if you have more than one condition on your project.

1. Monolithic ceiling assemblies **[attached to ceiling suspension systems.][directly adhered to existing flat surfaces.][attached to undulating and curved surfaces.][attached to ceiling suspension systems and directly adhered to existing flat surfaces.][attached to ceiling suspension systems and to undulating and curved surfaces.][attached to ceiling suspension systems, directly adhered to existing flat surfaces and attached to undulating and curved surfaces.]**
2. Auxiliary materials required for a complete installation including, but not limited to, suspension systems, perimeter mouldings, trims and accessories.

ROCKFON SPEC NOTE: Revise the list of related requirements only to include specification sections that are applicable to the project.

2. Related Requirements: Specifications throughout all Divisions of the Project shall be read as a whole and may be directly applicable to this Section.
  1. Related requirements provided below are for convenience purposes only.
    1. Section 09 22 00, Supports for Plaster and Gypsum Board.
    2. Section 09 51 13, Acoustical Panel Ceilings.
    3. Section 09 51 53, Direct applied acoustical ceilings.
    4. Section 09 53 23, Metal Acoustical Ceiling Suspension Assemblies.
    5. Section 09 54 00, Specialty Ceilings.
    6. Section 13 48 00, Sound, Vibration, and Seismic Control.
    7. Division 21, Fire Suppression.
    8. Division 22, Plumbing.
    9. Division 23, Heating, Ventilation and Air Conditioning (HVAC).
    10. Division 26, Electrical.

### 1.3 REFERENCES

1. Reference Standards: Unless otherwise indicated in this Section or the Building Code, the latest published editions of reference standards as of the Project's Bid Closing deadline apply.

ROCKFON SPEC NOTE: Revise the list of standards below only to include standards that are applicable to the section once you have finished editing it.

2. ASTM International
  1. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
  2. ASTM C367/C367M - Standard Test Methods for Strength Properties of Prefabricated Architectural Acoustical Tile or Lay-In Ceiling Panels.
  3. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
  4. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
  5. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
  6. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
  7. ASTM C645 - Standard Specification for Non-structural Steel Framing Members.
  8. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
  9. ASTM C834 - Standard Specification for Latex Sealants.
  10. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.
  11. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
  12. ASTM E1110 - Standard Classification for Determination of Articulation Class.
  13. ASTM E1264 - Standard Classification for Acoustical Ceiling Products.
  14. ASTM E1477 - Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.
3. International Organization for Standardization
  1. ISO 14025 - Environmental labels and declarations — Type III environmental declarations — Principles and procedures
4. Underwriters Laboratories
  1. UL 2821 - GREENGUARD Certification Program Method for Measuring and Evaluating Chemical Emissions From Building Materials, Finishes and Furnishings
5. Underwriters Laboratories of Canada

1. CAN/ULC S102 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

ROCKFON SPEC NOTE: The monolithic nature of the ceiling makes it non-demountable. As such, careful sequencing of construction work is required. Additionally, the installation of access hatches is essential if access is required. Mono® Acoustic integrates with various services, including lighting, HVAC, plumbing, and security systems, much like gypsum panel ceilings. This integration requires a similar level of coordination effort. It is important to select diffuser units that are compatible with the 40mm thickness of the Mono® Acoustic panels.

#### 1.4 ADMINISTRATIVE REQUIREMENTS

1. Pre-installation Meetings: Schedule and hold a pre-installation meeting at the Project site at least one week before beginning work on this Section to coordinate activities with related Subcontractors.
  1. Ensure attendance of Subcontractor performing work of this Section, as well as representatives from manufacturers and fabricators involved in or affected by installation. Notify Consultant and Owner of scheduled meeting dates in advance.
  2. Agenda:
    1. Review progress of related construction activities and preparations for particular activity under consideration.
    2. Make note of required sequencing and coordination with materials and activities that have preceded or will follow.
  3. Record significant discussions, agreements, and disagreements, including required corrective measures and actions.
  4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information not more than 72 hours after meeting.
2. Coordination: Coordinate with Division 23, HVAC and Division 26, Electrical.
  1. Integration with Mechanical, Electrical and Security Systems: Ensure compatibility of light fixtures, air diffusers, sprinkler systems, and security cameras with acoustical panels and suspension system specified in this Section.

ROCKFON SPEC NOTE: If you're not using the Mono® Acoustic TE system (attached to a suspension system), delete the text in square brackets. The Mono® Acoustic TE system is not suitable for areas with negative air pressure in the plenum space, as this causes air movement through the ceiling's face. This movement leads to a filter effect on the panel surface, resulting in uneven visual appearance over time. To prevent this, use ducted air returns or another method to equalize air pressure between the room and the plenum space above the ceiling. In projects where negative air pressure exists in the plenum space, use the Mono® Acoustic TE Direct system. This system permits panels to be adhered to an existing solid substrate like gypsum, plaster, or concrete.

2. Air Pressure: Maintain neutral air pressure between plenum and room. **[Implement ducted air-return for acoustical panel system attached to suspension system.]**

## 1.5 SUBMITTALS

1. General Requirements and Procedures for Submittals: In accordance with Section **[01 33 00, Submittal Procedures]**.
2. Product Data: Submit manufacturer's product characteristics, catalogue cuts, installation instructions and other relevant information for each material and product used for Integrated monolithic ceiling assemblies work specified in this Section.
3. Embodied Carbon / Environmental Product Declarations (EPDs): submit product-specific EPD conforming to ISO 14025 or other recognized environmental Product declaration framework meeting following criteria:
  1. EPD Scope: Must cover Cradle-to-Gate (A1 to A3) as a minimum.
  2. EPD Impact Categories: Must report Global Warming Potential (GWP) in form of unit of kgCO<sub>2</sub>e/declared unit as a minimum.
4. Shop Drawings: Submit Shop Drawings indicating material layouts, construction details, connections, and relationships with adjacent construction.
  1. Ensure Shop Drawings are coordinated with other elements occurring within ceiling assemblies.
  2. Shop Drawings must include hanger locations, suspension systems, access panels, light fixtures, diffusers and return grilles, changes in ceiling height elevation, control joints, edge profiles and trims, life safety devices and other miscellaneous items that must be integrated with ceiling system.
5. Samples:
  1. Verification: Submit verification samples confirming colour and finish selections for each exposed element in integrated ceiling assemblies in minimum 150 by 150 mm (6 by 6 in.) size.
6. Qualification Data: Submit proof of installer's qualifications in the form of certificate issued by manufacturer, confirming installer is certified to install the Products specified in this section.

## 1.6 CLOSEOUT SUBMITTALS

1. General Requirements and Procedures for Closeout Submittals: In accordance with Section **[01 78 00, Closeout Submittals.]**
2. Operating and Maintenance Data: Submit care and maintenance instructions for integrate ceiling assemblies to be included in operation and maintenance manual.
3. Warranty Documentation: Submit copy of extended warranties specified in this Section.

## 1.7 MAINTENANCE MATERIAL SUBMITTALS

1. Extra Stock Materials: Deliver, for Owner's future maintenance use, additional materials equal to not less than **[five (5)%]** of each type of system installed.

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1. Maintenance materials must include ceiling panels, suspension system components and finish render.
2. Identify each package with pertinent information, including manufacturer's name, Product name and product reference number.
3. Unless indicated otherwise, maintenance materials submitted must be from same production run as installed materials.
4. Store materials in locations directed by Owner.

## 1.8 QUALITY ASSURANCE

1. Manufacturer Qualifications: Provide Products for work of this Section by manufacturer with at least 10 years' experience manufacturing such materials.
2. Installer Qualifications: Engage an entity with experience installing, erecting, or assembling work similar in material, design, and extent to that shown, and whose work has resulted in construction with a track record of successful in-service performance.
  1. Certification: Installer must be trained and certified by manufacturer.
3. Single Source Responsibility: Obtain primary materials such as ceiling panels and suspension assemblies from a single source by a single manufacturer, and secondary materials such as sealants from sources recommended by manufacturers of primary materials.
4. Mock-Ups: Construct mock-ups to verify selections made under submittals, demonstrate aesthetic effects, and to set quality standards for fabrication and installation.
  1. Location: In-situ (i.e. first installation), as directed on site by Consultant.
  2. Purpose: To set benchmarks for installation and to judge subsequent work. Maintain Mock-ups during construction in undisturbed condition.
  3. Reviewed mock-ups: May become part of the completed work if undisturbed at the time of **[Substantial Performance of The work] [Ready-for-Takeover]**, provided they are undisturbed, and comply with requirements outlined in Contract Documents.

## 1.9 DELIVERY, STORAGE AND HANDLING

1. General Product Requirements: In accordance with Section **[01 61 00, Common Product Requirements]** and ASTM C840. Deliver, store and handle Integrated monolithic ceiling assemblies materials in accordance with manufacturer's written instructions.
2. Deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
3. Store materials off-ground, in clean, dry, well-ventilated area with a temperature between 5 deg C and 30 deg C (41 deg F to 86 deg F) and relative humidity between 40% and 60%
4. Protect materials from direct rain, snow, sunlight, or extreme weather exposure.
5. Protect compounds from freezing, extreme heat, and direct sunlight.

6. Replace defective or damaged materials with new.

#### 1.10 FIELD CONDITIONS

1. General Environmental Restrictions: Do not deliver or install Integrated monolithic ceiling assemblies until building is enclosed, wet work is complete, and HVAC system is operational and will maintain temperature and relative humidity levels equal to occupancy levels for remainder of construction period.
2. Application of bonding adhesives, joint treatment, texturing, and decoration: maintain room temperature at minimum 10 deg C (50 deg F) and 40% to 60% relative humidity for 48 hours prior to application and continuously thereafter until materials are dry. Maintain adequate ventilation in working area during installation and curing period.

#### 1.11 WARRANTY

1. Product warranty: Submit for Owner's review and acceptance, manufacturer's extended warranty in which manufacturer commits to supply replacement components of Integrated monolithic ceiling assemblies that fail within specified warranty period. Manufacturer's extended warranty is in addition to, and does not supersede, any other rights that Owner may have under Contract Documents.
  1. Warranty Period for Monolithic Acoustical Panels: 15 years from date of [date of manufacture] [Substantial Performance of The work] [Ready-for-Takeover].
  2. Warranty Period for Suspension System: 30 years from date of [date of manufacture] [Substantial Performance of The work] [Ready-for-Takeover].
  3. Warranty Scope: Materials only.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

1. Basis-of-Design: Materials specified in this Section are based on Rockfon Mono Acoustic as supplied by Rockfon; 4849 South Austin Avenue, Chicago, IL 60638. 1-800-323-7164; www.rockfon.com
2. Substitution Limitations: [In accordance with requirements of Section 01 25 00, Substitution Procedures.] [Not permitted.]

#### 2.2 PERFORMANCE / DESIGN CRITERIA

1. Acoustical panels specified in this Section must meet following minimum performance criteria:
  1. Surface Burning Characteristics: Flame spread value (FSV) of not more than 10 when tested in accordance with CAN/ULC S102.



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2. Noise Reduction Coefficient (NRC): Not less than 0.90 for finished system when tested in accordance with ASTM C423 (E-mount).
  3. Articulation Class (AC): Not less than 190 when measured in accordance with ASTM E1110.
  4. Light Reflectance (LR): Not less than 0.87.
  5. Mould and mildew resistance: Not less than 10 when tested in accordance with ASTM D3273.
  6. Sag Resistance: No sag when tested at 100% relative humidity in accordance with ASTM C367.
2. VOC Emissions: Integrated monolithic ceiling assemblies must comply with California Department of Public Health (CDPH) Standard Method v1.2–2017 for VOC Emissions (California Specification 01350) and certified in accordance with UL 2821 (Greenguard).

**ROCKFON SPEC NOTE:** From the list of paragraphs below, delete the acoustical panels that do not apply to your project.

## 2.3 MONOLITHIC ACOUSTICAL PANELS

1. Acoustical Panels for Attachment to Metal Framing: manufacturer's standard stone wool-based acoustical panels manufactured from volcanic rock and low-percentage of binder and monofilament mineral fibres having following characteristics:

**ROCKFON SPEC NOTE:** You can use the "Material Tag" below to cross-reference the abbreviation used on the Drawings and Schedules to the Specifications to ensure the Contractor can easily identify the materials being called out.

1. **[Material Tag: This item is identified as "ACP-#" on Drawings and Schedules.]**
  2. Classification: conforming to ASTM E1264, Type IV, Form 3, Pattern G
  3. Base Material: Stone wool core with white non-woven fleece.
  4. Edge: Tapered edge.
  5. Exposed Surface: White, monolithic with site-applied render.
  6. Panel Size: 1200 mm x 1800 mm (~24 in. x 71 in.)
  7. Panel Thickness: 40 mm (~1-5/8 in.)
  8. Joints: Manufacturer's standard joint tape and joint compound.
  9. Acceptable Products: "Mono® Acoustic TE" by Rockfon.
2. Acoustical Panels for Direct Attachment to Substrates: manufacturer's standard stone wool-based acoustical panels manufactured from volcanic rock and low-percentage of binder and monofilament mineral fibres having following characteristics:

ROCKFON SPEC NOTE: You can use the "Material Tag" below to cross-reference the abbreviation used on the Drawings and Schedules to the Specifications to ensure the Contractor can easily identify the materials being called out.

1. **[Material Tag: This item is identified as "ACP-#" on Drawings and Schedules.]**
  2. Classification: conforming to ASTM E1264, Type IV, Form 3, Pattern G
  3. Base Material: Stone wool core with white non-woven fleece.
  4. Edge: Tapered edge.
  5. Exposed Surface: White, monolithic with site-applied render.
  6. Panel Size: 1200 mm x 900 mm (~24 in. x 35 in.).
  7. Panel Thickness: 40 mm (~1-5/8 in.).
  8. Joints: Manufacturer's standard joint tape and joint compound.
  9. Acceptable Products: "Mono® Acoustic TE Direct" by Rockfon.
3. Acoustical Panels for Attachment to Undulating Surfaces: manufacturer's standard stone wool-based acoustical panels manufactured from volcanic rock and low-percentage of binder and monofilament mineral fibres having following characteristics:

ROCKFON SPEC NOTE: You can use the "Material Tag" below to cross-reference the abbreviation used on the Drawings and Schedules to the Specifications to ensure the Contractor can easily identify the materials being called out.

1. **[Material Tag: This item is identified as "ACP-#" on Drawings and Schedules]**
2. Classification: conforming to ASTM E1264, Type IV, Form 3, Pattern G
3. Base Material: Stone wool core with white non-woven fleece.
4. Edge: Tapered edge.
5. Exposed Surface: White, monolithic with site-applied render.
6. Panel Size: 1200 mm x 900 mm (~24 in. x 35 in.).
7. Panel Thickness: 40 mm (~1-5/8 in.).
8. Joints: Manufacturer's standard joint tape and joint compound.
9. Acceptable Products: "Mono® Acoustic TE Flecto" by Rockfon.

ROCKFON SPEC NOTE: Keep the Article "SUSPENSION SYSTEM" below if using "Mono® Acoustic TE" system. Delete it if you're using "Mono® Acoustic TE Direct" or "Mono® Acoustic TE Flecto". "Mono® Acoustic TE Direct" panels are adhered to an existing smooth flat substrate such as plaster or gypsum board. "Mono® Acoustic TE Flecto" panels are attached to existing curved substrate such as plaster or gypsum board with a minimum 1500mm radius.

## 2.4 SUSPENSION SYSTEM

1. Description: ASTM C635/C635M, direct-hung metal suspension system consisting of T-shaped main runner with 35 mm (~1-3/8 in) wide face and designed for gypsum board installation.
  1. Classification: Heavy-duty.
  2. Basic Material: commercial quality steel, hot-dip galvanized body conforming to ASTM C635/C635M; minimum Z120 (G40) coating.
  3. End Conditions:
    1. Main Runners: bayonet-end coupling.
    2. Cross Runners: Channel Hook-end.
  4. Hanger Wire: Minimum 12 ga (2.7 mm / 0.1055 in.) wire to ASTM A641/A641M, Class 1 zinc coating, soft temper; sized in accordance with ASTM C635/C635M.
2. Acceptable Products: "Chicago Metallic® Drywall Grid" by Rockfon.

## 2.5 MOULDINGS AND TRIMS

1. Room Perimeter Trim: ASTM C645, manufacturer's standard 0.5mm (0.01 in.) thick galvanized steel perimeter trim for use along perimeter walls.
  1. Dimensions: 3000 mm (~9.8 ft) long by 40mm (~1-5/8 in.) high with 25mm (~1 in.) top and bottom flange.
  2. Acceptable Products: "Chicago Metallic Channel" by Rockfon.
2. Floating islands and peninsulas: Manufacturer's standard edge trim manufactured from extruded aluminum with grooved taping flange and primed for adhesion of joint compound and paint. Include splice plates, corner pieces, and attachment and other clips for complete installation.
  1. Configuration: **[straight] [curved]**
  2. Height: **[100 mm (~4 in.)] [150 mm (~6 in.)]**
  3. Acceptable Products: "InfinityD Perimeter Trim" by Rockfon.

## 2.6 JOINT TREATMENT MATERIALS

ROCKFON SPEC NOTE: All Mono® Acoustic panels are finished on-site with Mono® Acoustic joint compound, Mono® Acoustic joint tape, and Mono® Acoustic Elegant Render spray-applied acoustical surface treatment. Use of any other finishing materials is not recommended as they could negatively impact the system's performance. When critical light conditions due to incident light exist, unevenness in the ceiling will become visible. This visibility issue applies to both traditional gypsum ceilings and Rockfon® Mono® Acoustic ceilings. If more than the recommended amount of Elegant Render is used, or if the finished installation is repainted, anticipate a reduction in sound absorption.

1. Material standard, generally: Conform to ASTM C475.

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2. Joint Tape: Manufacturer's standard 40mm (~1-5/8 in.) wide joint tape.
  1. Acceptable Product: "Mono® Acoustic Joint Tape" by Rockfon.
3. Joint Compound: Manufacturer's standard powder filler, mixed with water at jobsite in accordance with manufacturer's instructions. For each coat, use formulation that is compatible with other compounds applied on previous or for successive coats.
  1. Acceptable Product: "Mono® Acoustic Joint Compound" by Rockfon.
4. Finish Render: Manufacturer's standard acoustically transparent white, water-based spray-applied texture.
  1. Acceptable Products: "Mono® Acoustic Elegant Render" by Rockfon.

## 2.7 AUXILIARY MATERIALS

1. Provide required auxiliary materials required for a complete installation including but not limited to, mounting brackets, acoustic washers, intersecting brackets, fastening washers, clips, and other accessories.
2. Anchors and Attachment Devices: Size for five times the design load indicated in ASTM C635/C635M, Table 1, "Direct Hung," unless otherwise indicated.

ROCKFON SPEC NOTE: Remove paragraph below if not using "Mono® Acoustic TE Direct" on the project.

3. **[Adhesive for Acoustical Panel Installation: Titebond® GREENchoice Acoustical Ceiling Tile Construction Adhesive.]**

ROCKFON SPEC NOTE: Remove paragraph below if not using "Mono® Acoustic TE Flecto" on the project.

4. **[Fasteners for Acoustical Panel Installation: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten acoustical panels to substrates.]**
5. Access Panels: Manufacturer's standard access and inspection hatches designed to accommodate field cuts and fit with monolithic acoustical panels specified. Access panels to be sprayed with finish render specified in order to achieve monolithic aesthetic.
  1. Square Inspection Hatch: **[400 mm x 400mm (~16 in. x 16 in.)] [600 mm x 600mm (~24 in. x 24 in.)]**; 40 mm (~1-5/8 in.) thick.
  2. Round Inspection Hatch: 700mm (~28 in.) diameter; 40 mm (~1-5/8 in.) thick.
  3. Other inspection and access panels: Coordinate with Division 23, HVAC and Division 26, Electrical.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

1. Verify actual site conditions and location of adjacent materials prior to commencing work. Notify Consultant in writing of any conditions which would be detrimental to the installation.
2. Examine suspension assemblies, with installer present, to ensure that they are square and level within 2 mm in 1 m (~1/16 in. in 10 ft) and maximum 5 mm in 5 m (~3/16 in. in 16.4 ft) in all directions.
3. Check that movement joints, if required, are installed to align with those of base building.

### **3.2 INSTALLATION, GENERAL REQUIREMENTS**

1. Install work of this Section in strict accordance with manufacturer's written installation instructions and reviewed Shop Drawings.
2. Supplement manufacturer's installation instructions with additional installation requirements specified in this Section to produce specified work results.
3. Installation standards, generally:
  1. Framing: ASTM C754 and ASTM C636.
  2. Finishing: ASTM C840.
4. Integrate services in similar manner as with typical gypsum panel ceiling installation. Make allowance for 40mm (~1-5/8 in.) thickness of monolithic acoustical panels specified in this Section.

<b>ROCKFON SPEC NOTE:</b> Use the article below to specify "Mono® Acoustic TE"
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### **3.3 INSTALLATION OF ACOUSTICAL PANELS ON SUSPENSION SYSTEM**

1. Install suspension system components in accordance with manufacturer's instructions, but not with greater than spacing required by referenced installation standards.
  1. Hanger Wire: 1200 mm (~48 in.) o.c. minimum and within 450mm (~18 in.) of perimeters.
  2. Main Runners: 1200 mm (~48 in.) o.c. minimum
  3. Furring Members: 600 mm (~24 in.) o.c., as required to create 1200mm x 600mm (~48 in. x 24 in.) framing grid.
2. Attach acoustical panels to suspension system using #8 x 60 mm (2-3/8 in.) long self-drilling sheet metal fasteners through intersection brackets at panel edges. Use round washers to attach the panels at center and at perimeter trim, with maximum spacing of 300mm (~12 in.) o.c.
3. Control Joints: Comply with ASTM C840 and generally as follows:

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1. Install control joints where ceilings intersect with construction movement joints (e.g., expansion, seismic) in base building structure.

ROCKFON SPEC NOTE: Use the article below to specify "Mono® Acoustic TE Direct"

### 3.4 INSTALLATION OF ACOUSTICAL PANELS WITH ADHESIVE TO FLAT SURFACES

ROCKFON SPEC NOTE: Allowable surfaces include gypsum board, plaster and smooth concrete. New surface to be constructed from gypsum board with finished joints, attached to Rockfon Chicago Metallic drywall ceiling suspension.

1. Prior to installation, ensure existing surfaces are flat, smooth, dry, and free from any material that may deter adhesion.
2. Install acoustical panels to existing flat surfaces using manufacturer's recommended adhesive.

ROCKFON SPEC NOTE: Use the article below to specify "Mono® Acoustic TE Flecto"

### 3.5 INSTALLATION OF ACOUSTICAL PANELS ON CURVED SURFACES

1. Install acoustical panels to existing framework manufactured from curved drywall grid, or lightweight steel framing, having minimum bend radius of 1500mm (~59 in.). Comply with requirements of authorities having jurisdiction regarding use combustible materials with integrated ceiling assemblies' construction.
2. Attach panels to framing using fasteners suitable for framing material recommended by manufacturer. Use washers specified by acoustical panel manufacturer.

### 3.6 TAPING AND FINISHING

1. Apply joint tape and joint filler layers in accordance with manufacturer's instructions to maintain system acoustical performance.
2. Apply acoustically transparent finish layers in accordance with manufacturers' installation instructions to achieve system acoustical performance and visual evenness. Allow proper drying time between coats.

### 3.7 TOLERANCES

1. Install integrated ceiling assemblies including main runners, cross runners and trims level to a tolerance of 2 mm in 3 m (~1/16 in. in 10 ft), non-cumulative.

### **3.8 PROTECTION**

1. Protect integrated monolithic ceiling assemblies from damage, soiling and contaminating substances resulting from construction activities or caused by work of other trades.
2. Where soiling or spills have occurred, remove spills and soiling from adjacent surfaces using cleaning procedures recommended in writing by affected material's manufacturer. Do not use materials or processes that can damage finishes, surfaces, or construction.
3. Promptly replace integrated monolithic ceiling assemblies work damaged during construction that cannot be satisfactorily repaired.
4. Cover small areas of dirt using manufacturer's specified render. Apply using pencil paint brush. Apply blocker to cover surface discoloration before painting if required.

### **3.9 CLEANING AND WASTE MANAGEMENT**

1. Cleaning: Maintain clean construction area at the end of each day. When activities of this Section are complete, remove materials, tools, equipment and rubbish.
2. Dry clean exposed surfaces carefully with vacuum cleaner and soft brush operating at low power.
3. Waste Management and Disposal: sort waste for reuse, recycling, or disposal, as specified. Remove recycling bins and containers from site and dispose of contents at the appropriate waste disposal facilities.

**END OF SECTION**