

This section includes AMBICO acoustic steel window frame assemblies and relies on applicable industry standards. This section includes proprietary, descriptive and performance type specification requirements. Edit to avoid conflicting requirements.

Part 1 General

1.1 SECTION INCLUDES

This article includes a summary of the content of this section which will not be included in other sections. This article is NOT intended to be used as a trade or other form of jurisdictional content.

- .1 Acoustic steel window frame assemblies shall be fixed-in-place and shall be designed to be inoperable.
- .2 Glazed lite acoustic steel frames.
- .3 Factory supplied glass and glazing.
- .4 Factory finishing.

1.2 RELATED SECTIONS

This article references other specification sections that inter-rely on this section. This listing should include those sections that describe subjects or products that affect this section directly.

- .1 Section [_____ - _____]: Masonry mortar fill of acoustic window frame assemblies.
- .2 Section 07 92 00 - Joint Sealing: Caulking between acoustic window frame assemblies and adjacent construction.
- .3 Section 09 81 16 - Acoustic Blanket Insulation: Insulation inside acoustic window frame assemblies.
- .4 Section 09 91 00- Painting: Field painting of acoustic window frame assemblies.

1.3 REFERENCES

Edit this article after editing the rest of this section. Only list reference standards below that are included within the text of this section, when edited for a project specification. Delete references that do not apply to this project.

- .1 ASTM A653/A653M-15e1 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .2 ASTM E90-09(2016) - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- .3 ASTM E413-16 - Classification for Rating Sound Insulation.
- .4 AWS D1.1/D1.1M:2015, Structural Welding Code - Steel.

- .5 CSA G40.20-13/G40.21-13 - General requirements for rolled or welded structural quality steel / Structural quality steel.
- .6 ASTM C1172 - 14 Standard Specification for Laminated Architectural Flat Glass
- .7 ASTM C1036 - 16 Standard Specification for Flat Glass
- .8 Selection and Usage Guide for Steel Doors and Frames, 2009.
- .9 HMMA 802-07 - Manufacturing of Hollow Metal Doors and Frames.
- .10 HMMA 840-16 - Installation and Storage of Hollow Metal Doors and Frames.

1.4 PERFORMANCE REQUIREMENTS.

- .1 Acoustic Attenuation: conform to ASTM E 90. Acoustic rating to be STC [33] [56] [].

1.5 SUBMITTALS

- .1 Section [01 33 00]: Submission procedures.
- .2 Product Data: Provide product data on door construction and [_____].
- .3 Shop Drawings: Indicate door and frame elevations, anchor types and spacing, closure methods, [finishes] location of cut-outs for hardware [and cut outs for glazing].
- .4 Samples: Submit corner of manufacturer's acoustic window frame assemblies.
- .5 Test Data:
 - .1 Submit test data indicating compliance with the Sound Transmission Class (STC) requirements. Include laboratory name, test report number, and date of test.
 - .2 Submit certification from test laboratory qualified under the National Voluntary Accreditation Program (NVLAP) of the U.S. Bureau of Standards.
 - .3 Installation Instructions: Submit manufacturer's installation instructions.

Include the following ONLY if specifying for a LEED project. Specify only the technical requirements necessary to achieve the credits desired for this project. The Type 3 EPD is normally required for LEED v4 certification. AMBICO STC products offer significant advantages to firms interested in supporting LEED certification. In particular, AMBICO products comply with both LEED for Schools as well as LEED for Healthcare.

- .6 Sustainable Design:
 - .1 Section 01 35 18: LEED documentation procedures.
 - .2 Provide required LEED documentation for Product.
 - .3 Submit Type 3 Environmental Product Declaration (EPD) for Products of this Section.
 - .4 Manufacturer's Certificate: Certify that Products meet or exceed [specified requirements].

1.6 QUALITY ASSURANCE

Include this article to identify a quality reference source affecting the work of this section; only one reference should be selected to avoid potential conflicts.

- .1 Perform Work to requirements of [CSDMA (Canadian Steel Door Manufacturers Association)] [HMMA (Hollow Metal Manufacturers Association)] standards.
- .2 Provide Products of this section from a single manufacturer, unless components are referenced specifically in other sections.
- .3 Manufacturer: Minimum 5 years documented experience manufacturing acoustic window frame assemblies.
- .4 Pre-installation Meeting: Convene a pre-installation meeting [2] [] weeks before installation of acoustic window frame assemblies. Require attendance from relevant subcontractors, consultants, and manufacturer's representative. Review installation and coordination with other work.

1.7 DELIVERY, STORAGE AND PROTECTION

- .1 Section [01 61 00]: Transport, handle, store, and protect products.
- .2 Comply with HMMA 840, and manufacturer's written instructions.
- .3 Remove window frame assemblies from wrappings or coverings upon receipt on site and inspect for damage.
- .4 Store materials out of water and covered to protect from damage.
- .5 Clean and touch up scratches or disfigurement caused by shipping or handling with zinc-rich primer.

1.8 WARRANTY

- .1 Manufacturer's Limited Warranty: Five (5) years from date of supply, covering material and workmanship.

Part 2 Products**2.1 MANUFACTURERS**

List the manufacturers acceptable for this project. Edit the subsequent descriptive specifications of Part 2, to identify project requirements and to eliminate any conflict with specified manufacturer's products.

- .1 AMBICO Limited
1120 Cummings Avenue
Ottawa, Ontario, Canada K1J 7R8
Toll Free Phone 888-423-2224
Phone 613-746-4663
Toll Free Fax 800-465-8561
Fax 613-746-4721

- .2 Other Acceptable Manufacturers:
 - .1 [_____].
 - .2 [_____].
- .3 Substitutions: [Refer to Section 016000.] [Not permitted.]

2.2 MATERIALS

- .1 Sheet Steel:
- .2 Galvanized steel ASTM A653/A653M, ZF75 (A25) minimum 1.5 mm thick.
 - .1 Coating designation [Z275] ([G90]) for exterior acoustic steel window frame assemblies.
 - .2 Coating designation [ZF001] ([A01]) for interior acoustic window steel frame assemblies.
 - .3 Recycled Content: Minimum [_____] %.
- .3 Reinforcement: Same material as sheet steel.
- .4 Glass: Type as tested to achieve STC specified in conformance with ASTM E90 as well as with ASTM C1036 and ASTM C1172 standards.

2.3 FABRICATION

If more than one type of acoustic rating is required, include the STC rating in a window schedule and delete the paragraph below.

- .1 Manufacture window frames to STC rating of [33] [56] [____], measured in accordance with ASTM E90.
- .2 Acoustic Steel Window Frame assemblies: fixed in-place and inoperable
 - .1 Sheet steel and metal thickness appropriate to maintain specified acoustic ratings.
 - .2 Frame members shall be fabricated with mitred corners.
 - .3 Factory assemble and weld frames.
 - .4 Glass: Type as tested to achieve STC specified and to be supplied by the factory and to be shipped loose.
 - .5 Affix permanent metal nameplates to window frame assemblies, indicating manufacturer's name, tag, model number, and performance rating.

2.4 SUPPLY OF GLAZING

- .1 Glazing shall be designed in conformance with Performance Requirements and glazing standards referenced above.
- .2 Glazing shall be factory supplied and shipped loose ready for site installation by others.

2.5 FINISHES

- .1 Factory Finish: Factory applied zinc phosphate primer [applied to all surfaces] [touch-up only where Product has been welded and ground smooth].

2.6 ACCESSORIES

- .1 Glazing Stops: Formed galvanized steel channel, [butted] [mitred] corners; prepared for countersink style [tamperproof] screws.
- .2 Primer: Rust inhibitive zinc phosphate.
- .3 Acoustic seals: Provide perimeter seals, tested as part of the ASTM E90 assembly to meet the specified STC rating.

Part 3 Execution**3.1 INSTALLATION**

- .1 Install components to manufacturer's written instructions.
- .2 Install factory supplied glazing to frames.
- .3 Utilize welders certified by [Canadian Welding Bureau (CWB)] [American Welding Society (AWS)] for field welding.
- .4 Coordinate with [masonry] [gypsum board] [concrete] [_____] wall construction for anchor placement.
- .5 Set window frame assemblies plumb, square, level at correct elevation in accordance with Section 05 50 00.
- .6 Allow for deflection to ensure that structural loads are not transmitted to acoustic window frame assemblies.
- .7 Adjust operable parts for correct clearances and function.
- .8 Finish paint in accordance with Section 09 91 00.
- .9 Touch up painted finishes where damaged.

3.2 ERECTION TOLERANCES

Do not assume that there are industry standards for tolerances. Specify tolerances below as appropriate to the nature or character of the project. Verify that such tolerances are realistic and realizable.

- .1 Section 01 73 00: Tolerances.
- .2 Maximum deviation from square, alignment, twist and plumb: +/- 0.75 mm (1/32").

3.3 FIELD QUALITY CONTROL

- .1 Provide qualified manufacturer's representative to instruct installers on the proper installation and adjustment of acoustic window frame assemblies.
- .2 Provide manufacturer's representative to inspect acoustic window frame installation. Correct any deficient assemblies.

END OF SECTION