SECTION 09 70 00

ACOUSTICAL AND DECORATIVE METAL WALL PANELS

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\*\* NOTE TO SPECIFIER \*\* Nelson Industrial Inc.; Wall and Ceiling Panels, Column Covers, Storage Solutions.
This section is based on the products of Nelson Industrial Inc., which is located at:1155 Squires Beach Rd.Pickering, ON, Canada L1W 3T9Toll Free Tel: 800-277-6897Tel: 905-428-2240Fax: 905-428-2392Email: [request info (architectural@nelsonindust.com)](https://arcat.com/rfi?action=email&company=Nelson%252BIndustrial%252BInc.&message=RE%253A%2520Spec%2520Question%2520(09700nel)%253A%2520&coid=42037&spec=09700nel&rep=&fax=905-428-2392)
Web: <https://nelsonamd.com>
 [ [Click Here](https://arcat.com/company/nelson-industrial-inc-42037) ] for additional information.
Since 1973 Nelson Industrial has been designing and manufacturing high-quality, precision-fabricated metal products for clients throughout North America. NELSON installations can be found everywhere from McDonald's to BMW; and Toronto International Airport to Harvard University.
At our 100,000 square foot facility in Pickering, ON, Nelson manufactures a comprehensive range of standard and customized products through four divisions.
 - Access Doors
 - Architectural Metals
 - Contract Manufacturing
 - Storage Products
Nelson's state-of-the-art design software, modern production practices and manufacturing equipment enable us to develop a product from concept through to completion under one roof - ensuring quick and efficient management of aggressive delivery schedules, maximization of resource utilization and prompt response to customer needs.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Metal Wall Panels.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 05 10 00 - Structural Metal Framing.
		2. Section 08 83 13 - Mirrored Glass Glazing.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. American Architectural Manufacturers Association (AAMA):
			1. AAMA 605.2 - Specification for High Performance Finishes.
		2. ASTM International (ASTM):
			1. ASTM A366/A366M Standard Specification for Commercial Steel (CS) Sheet, Carbon (0.15 Maximum Percent) Cold-Rolled; 1997.
			2. ASTM A666 Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2000.
			3. ASTM B36/B 36M Standard Specification for Brass Plate, Sheet, Strip, and Rolled Bar; 2006.
			4. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2004
			5. ASTM E84 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data:
			1. Manufacturer's data sheets on each product to be used.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Typical installation methods.
		3. Shop Drawings:
			1. Shop drawings shall show dimensions, sizes, thickness, alloys, tempers, finishes, joints, attachments and the relationship of adjoining work.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern and color.
		2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.
		3. Certification:
			1. Submit certificates from Wall Panel manufacturer attesting that products comply with specified requirements, including finish as specified.
			2. Submit list of projects completed. Projects listed shall be of similar type, scope and size, and shall have all necessary contact information for verification by the owner or Architect of Record.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Single manufacturer with a minimum of ten (10) projects of similar size and scope in the past five (5) years shall manufacture, fabricate and deliver Wall Panels and all primary products specified in this section.
		2. Installer / Fabricator Qualifications: Fabricator shall have a minimum of five (5) years experience installing systems of similar type and scope as those specified in this section.
			1. Fabricator must own and operate facilities capable of creating and finishing all metal components.
		3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
			1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
			2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
			3. Retain mock-up during construction as a standard for comparison with completed work.
			4. Do not alter or remove mock-up until work is completed or removal is authorized.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Protect all materials during fabrication, shipment, site storage and erection to prevent damage to the finished work from other trades.
		2. Store Wall Panels inside a well-ventilated area, away from uncured concrete and masonry and protected from weather, moisture, soiling, abrasion, extreme temperatures and humidity.
		3. Store and dispose solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
	2. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
	3. WARRANTY
		1. Upon project close-out, provide Owner with a copy of the manufacturers standard one (1) year limited warranty against manufacturing defect on the Metal Panels.

\*\* NOTE TO SPECIFIER \*\* Delete the following if Extended Warranty covering Finish is not required.

* + 1. Warranty on Metal Panel Finishes may be extended to a maximum of twenty-five (25) years following date of substantial completion, depending on the specified finish.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Nelson Industrial Inc., which is located at:1155 Squires Beach Rd.Pickering, ON, Canada L1W 3T9Toll Free Tel: 800-277-6897Tel: 905-428-2240Fax: 905-428-2392Email: [request info (architectural@nelsonindust.com)](https://arcat.com/rfi?action=email&company=Nelson%252BIndustrial%252BInc.&message=RE%253A%2520Spec%2520Question%2520(09700nel)%253A%2520&coid=42037&spec=09700nel&rep=&fax=905-428-2392);Web: <https://nelsonamd.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
	1. MATERIALS
		1. Metal Panels shall be Nelson Industrial Inc. NuvoWall System. All secondary posts, anchors, clips and fasteners are to be provided as a complete package of this work.

\*\* NOTE TO SPECIFIER \*\* Delete panel system type and panel edge options not required.

* + - 1. Panel System Type: \_\_\_\_\_\_\_\_.
				1. Panel Edge: Soft-Vee butt joint.
				2. Panel Edge: Reveals.
				3. Panel Edge: Perforations.
			2. Panel System Type: Hook on wall.
				1. Panel Edge: Soft-Vee butt joint.
				2. Panel Edge: Reveals.
				3. Panel Edge: Perforations.
			3. Panel System Type: Screw on wall.
				1. Panel Edge: Soft-Vee butt joint.
				2. Panel Edge: Reveals.
				3. Panel Edge: Perforations.
			4. No exposed fasteners for metal closures shall be allowed.

\*\* NOTE TO SPECIFIER \*\* Delete sheet metal type options not required. Aluminum 3003-H14 is suitable for painted finishes, and 5005-H34 is suitable for anodized finishes.

* + 1. Aluminum Sheet per ASTM B209/B209M: 3003-H14 alloy.
			1. Thickness: Minimum 14 gauge; 0.064 inch (1.63 mm).
		2. Aluminum Sheet per ASTM B209/B209M: 5005-H34.
			1. Thickness: Minimum 14 gauge; 0.064 inch (1.63 mm).
		3. Stainless Steel Sheet per ASTM A666: Type 304.
			1. Thickness: Minimum 16 gauge; 0.062 inch (1.57 mm).
		4. Bronze Sheet per ASTM B36/B36M: Muntz metal alloy 280.
			1. Thickness: Minimum 14 gauge; 0.064 inch (1.63 mm) thickness.
		5. Galvanized Steel Electroplated per ASTM A 366/366/M:
			1. Thickness: Minimum 16 gauge; 0.062 inch (1.57 mm).

\*\* NOTE TO SPECIFIER \*\* The next article applies only to interior applications. Delete entire article if installation is an exterior application or metal panels are not required to provide sound absorption. Modify the included text as instructed.

* 1. ACOUSTICAL PROPERTIES
		1. Panels will be perforated as noted in manufacturer's standard perforation chart.

\*\* NOTE TO SPECIFIER \*\* Select Panel Core type. Delete two of the next three paragraphs and modify the included text, as necessary.

* + 1. Panel Core: 1 Lb density glass fiber core encapsulated within 1 mil polyethylene sealed bag.

\*\* NOTE TO SPECIFIER \*\* Delete core thickness options not required. 1 ich (25 mm) is standard.

* + - 1. Core Thickness: 1 inch (25 mm).
			2. Core Thickness: 1 1/2 inch (38 mm).
			3. Core Thickness: 2 inch (51 mm).

\*\* NOTE TO SPECIFIER \*\* Fiberglass core density up to 6# is available.

* + 1. Panel Core: \_\_\_\_ Lb. density glass fiber core encapsulated within a 1 mil polyethylene sealed bag.

\*\* NOTE TO SPECIFIER \*\* Delete core thickness options not required. 1 ich (25 mm) is standard.

* + - 1. Core Thickness: 1 inch (25 mm).
			2. Core Thickness: 1 1/2 inch (38 mm).
			3. Core Thickness: 2 inch (51 mm).
		1. Panel Core: SoundTex Fabric encapsulated within a 1 mil polyethylene sealed bag.

\*\* NOTE TO SPECIFIER \*\* Delete core thickness options not required. 1 ich (25 mm) is standard.

* + - 1. Core Thickness: 1 inch (25 mm).
			2. Core Thickness: 1 1/2 inch (38 mm).
			3. Core Thickness: 2 inch (51 mm).
	1. NUVOWALL FABRICATION
		1. Wall Panels: Fabricated as one piece unit.

\*\* NOTE TO SPECIFIER \*\* Wall panels larger than 48 x 48 inches (1219 x 1219 mm) are available through special order. Metal Walls are typically supplied up to a maximum of 4 ft-8 inches (1422 mm) in width and 12 ft (3658 mm) in height. Contact Nelson Industrial for special order sizing before selecting custom sizes. Delete one of the next three paragraphs. Enter custom sizes if required.

* + - 1. Maximum Size (WxH): 48 x 48 inches (1219 x 1219 mm)
			2. Fabricated Panel Size (WxH): \_\_\_\_x \_\_\_\_ inches (\_\_\_\_ x \_\_\_\_ mm).
			3. Fabricated Panel Size: As detailed on the Drawings.
		1. Joints Between Wall Panels:
			1. Closed, soft-vees.
			2. Feature reveal joints.
			3. As shown on the architectural drawings.
		2. Fabricate all other details including base, if any, and other termination points in accordance with architectural drawings.
		3. Manufactured true to geometry as shown on plan view of architectural drawings with a tolerance of plus or minus 1/16 inch (1.5 mm).
		4. Fabricate with Return Flanges for Structural Strength: Minimum 1-1/2 inch (38 mm).
		5. Feature concealed "tab and slot" engagements from panel to panel along all horizontal panel joint lines.
		6. Provisions for screw attachment of panels to a suitable substructure.
			1. Pre-punched holes spaced at a maximum distance of 24 inches (610 mm).
	1. NUVOMESH FABRICATION
		1. NuvoMesh Expanded Metal Mesh Ceiling Panels:

\*\* NOTE TO SPECIFIER \*\* Delete material options not required.

* + - 1. Aluminum: 003-H14 alloy Flat expanded metal mesh.
				1. Minimum thickness 16 ga; 0.052 inch (1.32 mm)
			2. Carbon Steel: Cold Rolled C1008 Flat expanded metal mesh.
				1. Minimum thickness 18 ga; 0.047 inch (1.19 mm).
			3. Stainless Steel: Typically provided uncoated.
				1. Type 304 flat expanded metal mesh.

Minimum thickness 18 Ga; 0.050 inches (1.27 mm).

* + - * 1. Type 316 flat expanded metal mesh.

Minimum thickness 18 Ga; 0.050 inches (1.27 mm).

* + - 1. Dimensions (WxH): Up to 44 x 92 inch (1118 x 2337 mm) inclusive of frame.
			2. Acoustics: Sound absorbing acoustical insulation. Superior NRC values can be achieved via acoustical insulation batts applied on-site.

\*\* NOTE TO SPECIFIER \*\* For complete mesh pattern and panel design options please contact your Nelson Sales Representative to assist with your project design..

* + - 1. Patterns and Designs: \_\_\_\_\_\_\_\_.
	1. FINISHES
	2. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations relative to applying and designating finishes.
	3. Delete material options not required..
		1. Aluminum:

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - 1. Finish: Baked polyester powder enamel.
				1. Color: As determined by the Architect from Manufacturer's standard range.
			2. Finish: Fluropolymer Coating System: Manufacturer's standard thermo-cured system composed of specially formulated inhibitive primer, fluropolymer color coat, and clear fluropolymer topcoat, with both color coat and clear topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 605.2.

\*\* NOTE TO SPECIFIER \*\* Delete coat options not required.

* + - * 1. Two-coat fluoropolymer.
				2. Three-coat fluoropolymer.
				3. Four-coat fluoropolymer.
			1. Anodized: Class 1, 0.0007 inch thickness; exterior grade.
			2. Anodized: Class 2, 0.0004 inch thickness; interior grade.

\*\* NOTE TO SPECIFIER \*\* Delete color option not required.

* + - 1. Color and Gloss: \_\_\_\_\_\_\_\_.
			2. Color and Gloss: As specified by Architect from manufacturers standard range.
			3. Ourborite: \_\_\_\_\_\_\_\_. Replicated wood veneer durable laminate.
		1. Galvanized Steel Sheets:

\*\* NOTE TO SPECIFIER \*\* Delete finish option not required. Galvanized steel is recommended for interior use only.

* + - 1. Factory applied gray polyester primer for field painting.
			2. Factory applied, baked polyester powder.

\*\* NOTE TO SPECIFIER \*\* Delete color option not required.

* + - * 1. Color: \_\_\_\_\_\_\_\_.
				2. Color: As specified by Architect from manufacturers standard range.
		1. Stainless Steel Sheets: Factory-applied finish:

\*\* NOTE TO SPECIFIER \*\* Delete finish options not required. If finish is not listed, specify custom finish under "Other".

* + - 1. Nelson No. 505 ( No. 4 Brush).
			2. Nelson No. 501 (No. 7 Brush).
			3. Nelson No. 502 (X-L Blend "S").
			4. Nelson No. 503 (X-L Suede/Non-Directional).
			5. Nelson No. 504 (X-L Supreme 8 /Mirror Finish).
			6. Other: \_\_\_\_\_\_\_\_.
		1. Bronze Sheets: Factory-applied finish with air-dry clear lacquer finish.

\*\* NOTE TO SPECIFIER \*\* Delete finish option not required.

* + - 1. Finish: No. 5 Brush.
			2. Finish: No. 8 Mirror.
			3. Finish: Oxidized.
1. EXECUTION
	1. INSTALLATION
		1. Install metal panels in accordance with manufacturer's written installation instructions and shop drawings.
			1. Install and remove panels in a progressive fashion, with installation starting from the lowest point.
		2. In no case shall fasteners be exposed. Exposed fasteners will be considered defective work and will be rejected by the Architect.
		3. Wall panels shall be erected plumb, level, square, true to line, securely anchored, and in proper alignment and relationship to work of other trades. Exterior joints shall be sealed by installer with backer rods and sealant.
		4. Wall panels shall be inspected before installation to be free from dents, scratches and other defects.
	2. CLEANING
		1. Removal of protective covering shall occur immediately after installation to prevent adhesive transfer.
		2. Clean all surfaces following installation.
		3. Maintenance per manufacturer's finish maintenance instructions.
	3. PROTECTION
		1. Protection of Wall Panels from damage by other trades after installation to be provided by general contractor.

END OF SECTION