

Part 1 General

1.1 SECTION INCLUDES

- .1 Work in this section consists of furnishing all access, labour, materials, equipment, supervision and incidentals to supply the metal cladding system described herein utilizing a concealed fastener system and shown on the drawings including the supply and installation of all metal framing components and connections to secure the metal cladding system to the structural back-up.

1.2 RELATED SECTIONS

- .1 Section 07 62 00 – Metal Flashing and Trim.

1.3 REFERENCES

- .1 CAN/CGSB 93.4-92: Galvanized and Aluminum-Zinc Alloy Coated Steel Siding, Soffits and Fascia, Prefinished, Residential.
- .2 CAN/CGSB 93.5-92: Installation of Metal Residential Siding, Soffits and Fascia.
- .3 CAN3/CSA S136-07: North American Specification for the Design of Cold-Formed Steel Structural Members.
- .4 CSSBI 20M-08: Standard for Sheet Steel Cladding for Architectural, Industrial and Commercial Building Applications.
- .5 ASTM A653M-90: Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- .6 2005 National Building Code of Canada.
- .7 Deflection of exterior cladding profile not to exceed 1/180th of the span for the NBC 2005 specified wind load for Winnipeg, Manitoba.
- .8 Cladding to be designed to accommodate thermal movement over an ambient temperature range of -40°C to +50°C.
- .9 Design expansion joints to accommodate movement in cladding and between cladding and structure, to prevent permanent distortion or damage to the cladding.
- .10 Design wall system to maintain the following erection tolerances:
- .11 Maximum variation from plane or location shown on shop drawings: 0.75 inch / 30 feet.
- .12 Maximum offset from true alignment between two adjacent members abutting end to end in line: 0.04 inches.

1.4 PRE-INSTALLATION MEETING

- .1 Convene pre-installation meeting one week prior to beginning work of this Section and on-site installations. Agenda for meeting to include:
 - .1 Verify project requirements.
 - .2 Review installation and substrate conditions.
 - .3 Co-ordinate with other building subcontractors.
 - .4 Review manufacturer's installation instructions and warranty requirements.
- .2 Co-ordinate pre-installation meeting with trades of the following sections:
 - .1 Section 07 27 00 – Air Barrier.
 - .2 Section 07 62 00 – Sheet Metal flashing and Trim.

1.5 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop Drawings:
 - .1 Show on shop drawings:
 - .1 Dimensions.
 - .2 Profiles.
 - .3 Attachment Methods.
 - .4 Schedule of wall elevations.
 - .5 Trim and closure pieces.
 - .6 Related work.
- .3 Samples:
 - .1 Submit duplicate 12" x 12" samples of siding, roofing and flashing material, of and profile specified. Fully colour range samples to be submitted. Colour choice by The City.
- .4 Qualification Statements:
 - .1 Submit proof of installer's minimum of five years' experience specialized in the installation of fibreglass windows.

1.6 CLOSEOUT SUBMITTALS

- .1 Provide the City with three (3) copies of operation and maintenance data and information, including cleaning instructions, for windows, glass, and frames.
- .2 Submit final executed warranty.

1.7 QUALITY ASSURANCE

- .1 Qualifications
 - .1 Manufacturer and installers are to be specialized in the manufacturing and installation respectively of metal siding systems with a minimum of five years each of documented experience.
- .2 Mock-Up
 - .1 Construct mock-up in accordance with Section 01 45 00 – Quality Control.
 - .2 Where directed by Contract Administrator, install an 8'-0" x 10'-0" mock-up of the metal siding system into typical exterior wall system. Mock-up to include through wall flashing and vertical joint details.
 - .3 Allow 24 hours for inspection of mock-up by Contract Administrator before proceeding with installation of windows. Mock-up may remain as part of the Work.
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1.8 DELIVERY, STORAGE, AND HANDLING

- .1 Store cladding products and all components of the wall system in accordance with manufacturer's recommendations and protected from the elements.
- .2 Protect pre-finished steel during fabrication, transportation, site storage and erection, in accordance with CSSBI Standards.

1.9 WARRANTIES

- .1 Construction Warranty: Provide two (2) year warranty against leakage, defects and defective material, and workmanship from the date of substantial completion.

- .1 Include glazing cracks which form within one year from the date of substantial completion.
 - .1 Including dislodgement and/or displacement in the metal panel system including but not limited to the metal panel and steel girts which support the cladding
- .2 Manufacturer Warranty:
 - .1 Provide two (2) year warranty against defects and malfunction under normal usage from the date of substantial completion.
 - .1 Including blistering, peeling or failure in the pre-finished metal panel coating system.

Part 2 Materials

2.1 DESIGN CONSIDERATIONS

- .1 The flashing and ventilation clearances must be very carefully followed.
- .2 Maximum offset from true alignment between two adjacent members abutting end to end in line: 1/16".

2.2 STEEL CLADDING

- .1 Fabricated from ASTM A653M-90 structural quality Grade 230 galvanized steel, with Z275 zinc coating, as designated by ASTM A653M-90 panel. Thickness to be 20 gauge (0.0299").
- .2 Pre-painted with HMP or 10,000 Series, full range. Colour samples to be submitted to The City for review. Final colour will be selected by the City after mock-up installation has been completed.
- .3 Horizontal Wall Panels: Vicwest AD150.

2.3 SUPPORTING SUB-GIRTS

- .1 Minimum 20 gauge thick Z Girts cold formed galvanized steel, ASTM A653M Grade 230 with Z275 zinc coating.

2.4 FASTENING SYSTEM

- .1 Refer to drawings for fasteners.
- .2 Provide hot, dipped, galvanized washers as spacers when fastening flashing to panel to ensure required vent spaces are not closed off.
- .3 Paint all exposed fasteners threads to match metal panel colour.

2.5 ACCESSORIES

- .1 Flashing, Trim and Closures: Fabricate to profiles indicated on shop drawings, or as required to meet performance requirements. Use preformed corner pieces only. Double back exposed edges. Material to match cladding in exposed locations, galvanized material in concealed locations.

Part 3 Execution

3.1 FABRICATION

- .1 All components including flashings shall be fabricated wall components to comply with dimensions, profiles, thicknesses and details as shown on the drawings.

- .2 Fabricate all components of the system in the factory, ready for field installation.
- .3 Provide cladding and all accessories in longest practicable length to minimize field lapping of joints.

3.2 INSTALLATION

- .1 Install cladding in accordance with CGSB 93.5-92, and manufacturer's written instructions. Examine work of other trades over which cladding will be applied for conformity to drawings. Report all discrepancies to Contract Administrator prior to proceeding.
- .2 Install metal furring strips and support girts as indicated on drawings. Ensure girt installation provides a true surface.
- .3 Install continuous starter strips, inside and outside corners, edgings, drip, cap, sill and window opening flashings as indicated.
- .4 Install outside corners, fillers and closure strips with carefully formed and profiled work.
- .5 Install cladding in accordance with manufacturer's standard installation procedures, providing proper laps and detailing to ensure a weather tight face.
- .6 Maintain joints in exterior cladding, true to line, tight fitting, hairline joints.
- .7 Components are to be attached in a manner that will not restrict thermal expansion and contraction. Oversize fastener holes as shown by 1/8" for metal panel pieces longer than 12'.
- .8 Caulk all junctions to adjoining work with sealant.

3.3 TOUCH-UP AND CLEANING

- .1 Touch up minor paint abrasions with manufacturer approved touch-up paint.
- .2 Clean cladding by dry wiping.
- .3 Field paint all cut or exposed edges not treated with HMP coating with manufacturer approved coating.

END OF SECTION