

Partie 1 General

1.1 RELATED REQUIREMENTS

- .1 The list of Work in this division is indicative but non-limiting. It does not exclude Work described in other specification divisions shown on the drawings or required for full execution of the Work as intended on the drawings.
- .2 Sheet metal work on exterior walls and soffits (except those included in curtain walls) illustrated for main sectors plans as identified on key plan (EAST, CENTRAL AND WEST) are included in the present section.

Add. No 1 .3 Section 02 41 16 Structure Demolition.

~~Section 02 42 13 Deconstruction of structures~~

.4 Section 02 41 17 Demolition for minor works

- .5 Section 04 05 00 Common Work Results for Masonry.
- .6 Section 05 50 00 Metal Fabrications.
- .7 Section 06 15 00 Wood Decking.
- .8 Section 06 17 53 Shop-fabricated Wood Trusses.
- .9 Section 06 10 00 Rough Carpentry.
- Add. No 6 .10 Section 07 21 16 Blanket insulation**
- .11 Section 07 26 00 Vapor retarders**
- .12 Section 07 62 00 Sheet Metal Flashing and Trim.
- .13 Section 08 11 00 Metal doors and frames**
- .14 Section 08 50 00 New wood Windows
- .15 Section 08 52 05 Historic works- existing wood windows
- .16 Section 07 92 00 Joint Sealants.
- .17 Section 09 21 16 Gypsum board assemblies**
- .18 Section 09 22 16 Non structural metal framing**
- .19 Section 26 43 13 Lightening Protection for Structures.

1.2 REFERENCES

- .1 ASTM International
 - .1 ASTM A167-99(2009), Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
 - .2 ASTM A240/A240M-11a, Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
 - .3 ASTM B32-08, Standard Specification for Solder Metal.

1.4 QUALITY ASSURANCE

- .1 Mock-ups:
 - .1 Submit mock-ups in accordance with Section 01 45 00 - Quality Control.
 - .2 Prepare roofing and roofing component mock-ups from deck to metal roofing based on approximate surfaces indicated on drawings A-115a, A-115b and A-115c, using intended roofing materials and methods; surface mock-ups must show typical assemblies.
 - .3 Mock-up will be used.
 - .1 To judge workmanship, substrate preparation, operation of equipment and material application.
 - .4 Locate as indicated on drawings A-115a, A-115b and A-115c.
 - .5 Allow 24 hours for inspection of mock-up by Departmental Representative before proceeding with sheet metal flashing work.
 - .6 When accepted, mock-up will demonstrate minimum standard of quality required for this Work.
 - .7 Approved mock-up may not remain as part of finished Work.

Add. No 6 1.5

DESIGN REQUIREMENTS – WALL COVERING

- .1 **Wall system must be designed to support:**
 - .1 **Positive or negative wind loads expected in Quebec area (NBCC climate data, probabilities of 50 years).**
- .2 **The wall deformation system must not exceed 1/180 of the span for the wind loads based on the limits of functionality.**
- .3 **Thermal Movements: It must allow for thermal movement due to changes in ambient and surface temperatures by preventing buckling, the component overload, failure of connections and other harmful effects. The calculations should be based on the surface temperature of the materials due to solar heat gain and heat loss night.**
 - .1 **Temperature variation range: 20 ° C, ambient; 40 ° C, surface materials.**
- .4 **Design expansion joints to adapt to the movements of the wall covering and movements between the wall covering and the structure to avoid permanent distortion or damage to the wall covering.**
- .5 **Design the wall system to maintain the following mounting tolerances:**
 - .1 **Maximum variation from the plan or from the location shown on the shop drawings: 20 mm / 10 m:**
 - .2 **Maximum offset with the actual alignment between two adjacent elements juxtaposed end to end and online: 1 mm.**

- Add. No 6 .4 Wall covering steel system:**
- .1 Sub-girts: Minimum 1.21 mm (0.048 inch) thick galvanized steel formed according to ASTM A653M for grade 230 with Z275 zinc coating. Full depth of the wall system, notched and preformed to match the inner panel.**
 - .2 Steel covering:**
 - .1 Profile : corrugated 14 mm**
 - .2 Made of galvanized steel sheet Z275 conforms to ASTM A653M shade 230, having a nominal thickness of the core 0.55 mm**
 - .3 Fasteners: Galvanized with exposed fasteners, color-keyed to the facing.**
 - .4 Finish:**
 - .1 Coated inner face painting process with weather X.**
 - .2 Outer side coated paint process with series 10000.**
 - .3 Color choice by the Departmental Representative in the range of standard colors.**
 - .5 Flashings: In accordance with section 07 62 00. The material must harmonize the facing in all exposed faces. Galvanized material in concealed spots. If necessary, custom manufacture to reflect architectural details. Only use preformed corner pieces. Double back exposed edges.**
 - .6 Closures: Metal closures adapted to the chosen profile, according to the manufacturer's recommendations.**
 - .7 Sealing materials:**
 - .1 Hidden: Butyl rubber compound or ribbon, not forming film and non-drying.**
 - .2 Exposed: Silicone component according to CGSB CAN2-19.13.**

2.2 ACCESSORIES

- .1 Battens: white pine, No. 1 and No. 2, tapered, 38 mm x 45 mm x 38 mm.**
- .2 Ridges: white pine, No. 1 and No. 2, shape and size as indicated on plan.**
- .3 Hips: white pine, No. 1 and No. 2, shape and size as indicated on plan.**
- .4 Framing and ornamental moulding: white pine, No. 1 and No. 2, shape and size as indicated on plan.**
- .5 Sealant: bituminous antibase paint.**
- .6 Underlay: self-adhering air and vapour barrier, asphalt free and waterproof, 0.6 mm thick, 3-ply polypropylene top, removable silicon sheet bottom.**
 - .1 Application: -7 °C to 40°C.**
 - .2 CAN/CGSB 51.32-M89, ASTM 3330.**
- .7 Sealant: Asbestos-free sealant, compatible with systems materials, recommended by system manufacturer. See Section 07 92 00 - Joint Sealants.**
 - .1 Application temperature: 4 °C to 38°C.**
 - .2 To CAN/ONGC 19.13-M87, classification MCG-2-40-B-N.**

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| Add. No 1 | 3.44 | PREPAINTED STEEL CLADDING (ventilation intakes/vents) |
| | .1 | Include base coat under metal sheeting. |
| | .1 | Ensure full contact and overlap joints minimum 100 mm and seal. |
| | .2 | Place intermediate sheet over asphalt base coat to separate metal sheet from felt. |
| | .1 | Attach with anchors and overlap joints over minimum 50 mm in the direction of the water flow. |
| | .3 | Install metal roof sheeting, fastened maximum every 200 mm centre. |
| | .4 | Stagger cross joints of contiguous sheets. |
| | .5 | Around protruding elements, install flashing of same characteristics as sheeting and make penetrations watertight. |
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| Add. No 6 | 3.45 | STEEL COVERING WALL SYSTEM INSTALLATION |
| | .1 | Structural system for sub-girts: |
| | .1 | Install sub-girts. Install a framework for all openings in the cladding. |
| | .2 | Flashings : |
| | .1 | Install the start flashing, the drip edge and other flashings, corners, edges and flashing windows and doors, as shown on the drawings. |
| | .3 | Wall covering: |
| | .1 | Install siding according to manufacturer's standard installation procedures, ensuring laps and cut so that the surface is weatherproof; |
| | .2 | Install finish flashing and counterflashing. |
| | .4 | Sealing materials: |
| | .1 | Install sealant on junctions of adjacent structures as well as the locations indicated on drawings, in accordance with section 07 92 00. |
| Add. No 1 | 3.46 | PORCH ROOF (guard quarters) |
| | .1 | Level all metal structure. |
| | .2 | Coordinate all elements penetrating soffit with electrical and mechanical contractors. |
| | .3 | Screw wood strips to metal structure (do not use treated wood). |
| | .4 | Fabricate sheets with folded edges as indicated on plan and secure with U shapes fastened with copper screws. |
| | .5 | Do not allow contact between galvanized steel and copper components. |
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| | 3.47 | FINISH |
| | .1 | Let copper roof weather through 2 heavy rains minimum after final cleaning. |
| | .2 | Rub exposed surfaces with clean rags soaked in boiled linseed oil until desirable shade of brown is obtained. |