
Part 1 General

1.1 REFERENCES

- .1 ASTM International
 - .1 ASTM A307-07b, Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
- .2 CSA International
 - .1 CSA G40.20/G40.21-04(R2009)], General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
 - .2 CSA W48-06, Filler Metals and Allied Materials for Metal Arc Welding (Developed in co-operation with the Canadian Welding Bureau).
 - .3 CSA W59-M03(R2008), Welded Steel Construction (Metal Arc Welding).
- .3 The Master Painters Institute (MPI)
 - .1 Architectural Painting Specification Manual - [current edition].

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop Drawings:
 - .1 Indicate materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.
- .3 Samples:
 - .1 Submit duplicate 300 x 300 mm samples of siding material, of colour and profile specified.
- .4 Mock-ups
 - .1 Erect mock-ups in accordance with 01 45 00 - Quality Control.

1.3 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Replace defective or damaged materials with new.

Part 2 Products

2.1 MATERIALS

- .1 Steel plates: to CSA G40.20/G40.21.
- .2 Welding materials: to CSA W59.
- .3 Welding electrodes: to CSA W48 Series.
- .4 Chemical Bolts and anchor bolts: to ASTM A307, dimensions as indicated on drawings.

2.2 FABRICATION

- .1 Fabricate work square, true, straight and accurate to required size, with joints closely fitted and properly secured.
- .2 Where possible, fit and shop assemble work, ready for erection.
- .3 Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.

2.3 SHOP PAINTING

- .1 All surfaces should be thoroughly cleaned by sandblasting process.
- .2 All metal components to be coated with a primer and a topcoat shop applied by electrostatic process and baked.
- .3 Use primer and paint unadulterated, as prepared by manufacturer. Paint on dry surfaces, free from rust, scale, grease. Do not paint when temperature is lower than 7 degrees C.
- .4 Surface finishes shall be smooth, uniform, without smudge and dust. Finish steel according to the recommendations of steel manufacturer. All surfaces to be painted.

2.4 METALLIC GUARDS

- .1 Elements made of perforated and foled steel plates:
 - .1 Thickness: 3 mm (11 gauge);
 - .2 Perforations:
 - .1 Hole size: 15.8mm
 - .2 Pattern: staggered, 12.7mm offset centers;
 - .3 Open area: 50% ;
 - .4 Reference product:
 - .1 such as No. 108 of Russel Metals or # 1638121141 of McNichols;
 - .2 Alternative products approved by addendum in accordance with the Instructions to Bidders.
 - .3 Edge: 38mm width without perforation;
 - .4 Dimensions and folding: as shown on the drawings.

- .5 Configurations: as indicated on the drawings. Verify thoroughly all the different curtain walls stiffeners arrangements. Several types of plates shall be produced in order to complete the project, perfectly adjusted to existing configurations. Plan preliminary stages to test component adjustments on site prior to final production.
- .6 Finish:
 - .1 Primer:
 - .1 Epoxy powder coating, compatible with the paint finish;
 - .2 Shop applied by electrostatic process and baked.
 - .3 Reference product:
 - .1 such as Zinc Gray EFH-615-P6 de DuPont.
 - .2 Alternative products approved by addendum in accordance with the Instructions to Bidders.
 - .2 Oven Baked Finish:
 - .1 Polyester based powder, shop applied by electrostatic process, baked and cured (thermoset) after forming;
 - .2 Finish: smooth matte;
 - .3 Color: gray as the existing curtain walls stiffeners. Provide a sample for final approval.
 - .4 Acceptable Products:
 - .1 Series 09 from Tiger Drylac;
 - .2 As manufactured by Protech;
 - .3 As manufactured by Akzo Nobel
 - .4 Alternative products approved by addendum in accordance with the Instructions to Bidders.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for metal fabrications installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied [and after receipt of written approval to proceed from Departmental Representative.

3.2 ERECTION

- .1 Do welding work in accordance with CSA W59 unless specified otherwise.
- .2 Erect metalwork square, plumb, straight, and true, accurately fitted, with tight joints and intersections.
- .3 Provide suitable means of anchorage acceptable to Departmental Representative such as dowels, anchor clips, bar anchors, expansion bolts and shields, and toggles.
- .4 Exposed fastening devices to match finish and be compatible with material through which they pass.
- .5 Supply components for work by other trades in accordance with shop drawings and schedule.
- .6 Touch-up scratched surfaces after completion

3.3 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials for reuse/recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.4 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by metal fabrications installation.

END OF SECTION