

PART 1 GENERAL

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| 1.1 | RELATED<br>SECTIONS  | .1<br>.2<br>.3<br>.4<br>.5                   | Section 01 33 00 - Submittal Procedure.<br>Section 04 05 12 – Mortar and Masonry Grout.<br>Section 07 92 10 - Joint Sealing<br>Section 08 11 14 – Metal Doors and Frames<br>Section 09 91 23 - Painting.   |
| 1.2 | REFERENCES           | .1<br>.1<br>.2<br>.3<br>.2<br>.1<br>.2<br>.3 | American Society for Testing and Materials International, (ASTM)<br>ASTM A53/A53M-12, Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.<br>ASTM A269-10 Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.<br>ASTM A307-10, Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.<br>Canadian Standards Association (CSA International)<br>CAN/CSA-G40.20/G40.21-04 (R2009), General Requirements for Rolled or Welded Structural Quality Steel.<br>CSA W48-06 (R2011), Filler Metals and Allied Materials for Metal Arc Welding (Developed in co-operation with the Canadian Welding Bureau).<br>CSA W59-03 (R2008), Welded Steel Construction (Metal Arc Welding) (Imperial Version). |
| 1.3 | QUALITY<br>ASSURANCE | .1   | Fabricator: Company specializing in welded structural building components with 10 years documented experience and approved under CSA W47 and CSA W55.3.  |
| 1.4 | SUBMITTALS           | .1<br>.1<br>.2<br>.1<br>.2                   | Product Data:<br>Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.<br>Submit two copies of WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittal Procedures. Indicate VOC's:<br>For finishes, coatings, primers and paints.<br>Shop Drawings<br>Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.<br>Indicate construction details, sizes of steel sections and thickness of steel sheet, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.  |

		.3	Submit shop drawing bearing stamp of a qualified professional engineer registered in Province of New Brunswick.
		.4	Provide written documentation currently dated from the Canadian Welding Bureau confirming the current qualifications of the steel contractor to perform the work requirements of CSA W47.1. This letter to be signed by an authorized representative of the Canadian Welding Bureau and countersigned by an authorized representative of the steel contractor.
1.5	COORDINATION	.1	Coordinate installation of anchorages for metal fabrications.
		.2	Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry.
		.3	Deliver such items to Project site in time for installation.
1.6	DELIVERY, STORAGE, AND HANDLING	.1	Packing, Shipping, Handling and Unloading:
		.1	Deliver, store, handle and protect materials in accordance with Section 01 61 00 - Common Product Requirements.
		.2	Storage and Protection:
		.1	Cover exposed stainless steel surfaces with pressure sensitive heavy protection paper or apply strippable plastic coating, before shipping to job site.
		.2	Leave protective covering in place until final cleaning of building. Provide instructions for removal of protective covering.
PART 2 PRODUCTS			
2.1	MATERIALS	.1	Steel sections and plates: to CAN/CSA-G40.20/G40.21, Grade 300W.
		.2	Steel tubing: to ASTM A500, Grade 345W, square and round, as indicated, sizes and dimensions as indicated.
		.3	Welding materials: to CSA W59.
		.4	Welding electrodes: to CSA W48 Series.
		.5	Bolts and anchor bolts: to ASTM A307.
		.6	Grout: non-shrink, non-metallic, to Section 04 05 12
		.7	Zinc Rich (ZRC) Cold Galvanizing Compound: premixed, UL recognized, liquid organic zinc compound, containing minimum 92% metallic zinc by weight in the dried film, solids content between 65% and 69% by weight.
		.8	Primer: SSPC 15 Type 1, grey, for shop application and

			field touch-up.
2.2	FABRICATION	.1	Fabricate work square, true, straight and accurate to required size, with joints closely fitted and properly secured.
		.2	Use tamperproof flat, round headed screws on items requiring assembly by screws or as indicated.
		.3	Where possible, fit and shop assemble work, ready for erection.
		.4	Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.
		.5	Supply components required for anchorage of metal fabrications.
2.3	FINISHES	.1	Galvanizing: hot dipped galvanizing with zinc coating 600g/m2 to CAN/CSA-G164.
		.2	Shop coat primer: to MPI Product # 76 or 79.
		.3	Finish Paint: in accordance with Section 09 91 23.
2.4	FRONT WALL AND STEEL ANGLE FRAMING	.1	Supply and install 90 x 90 x 6 mm galvanized steel angle framing full height of wall at each side of door/transom framing, fasten to existing concrete walls using non-shrink grout and 19 mm bolted connections at 300 mm o/c. Between door/transom screens supply and install 6 mm thick steel plate panels with 25 mm square bar stops, fasten stops to metal frames using Torx tamper proof screws at 300 mm on centre.
2.5	METAL CASEWORK	.1	Fabricate and install 3.2 mm thick (11Ga.) sheet metal storage cubicles, shelves sloped top and desk. Wrap skin and continuously weld around 3.2 mm thick (11 Ga.) framing. Fasten to existing concrete wall using 19 mm Torx tamper proof screws at 600 mm o/c. Provide 3.2 mm thick (11 Ga). Sheet metal closure trim at vertical and horizontal ends that abut to adjacent walls. Use pick proof caulking specified in section 07 92 10 to seal units to walls.
2.6	BED MODIFICATIONS	.1	On all existing cell beds
		.1	Remove outside corner at door end on platform and provide 45 degree corner and reinforce platform frame.
		.2	Weld all hinges in place so bed platform cannot be raised.
		.3	Remove existing floor anchors and weld new angles to bed frame for anchoring to floor and walls with 19 mm Torx tamper proof screws.
		.2	On existing cell beds noted
		.1	Cut off top of end rails flush with bed platform, cap weld and grind smooth.

PART 3 EXECUTION

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| 3.1 | 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 | Provide components for building by other sections in accordance with shop drawings and schedule.   |
|     |          | .6 | Make field connections with tamper proof bolts to CAN/CSA-S16.1, or weld.  |
|     |          | .7 | Hand items over for casting into concrete or building into masonry to appropriate trades together with setting templates.  |
|     |          | .8 | Touch-up rivets, field welds, bolts and burnt or scratched surfaces after completion of erection with primer.  |
|     |          | .9 | Touch-up galvanized surfaces with zinc rich primer where burned by field welding.  |
| 3.5 | CLEANING | .1 | Perform cleaning after installation to remove construction and accumulated environmental dirt.   |
|     |          | .2 | Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.  |

END