

PART I – GENERAL

WORK SPECIFIED HEREIN

- All labor, materials, equipment and services necessary to furnish and install all exterior hollow metal frames as indicated or specified. **This is a Required Vendor.**

SUBMITTALS

- Unless otherwise noted, the contractor shall prepare all shop drawings, product literature, etc. only as required to properly coordinate and construct the project.
- Review of submittals by the Professional of Record is limited to specific shop drawings as called for in the Project Manual.

QUALITY ASSURANCE

All frames to meet specified requirements and SDI-100 for unit welded frames and the CSDMA “Canadian Steel Door Manufacturers Association”.

PRODUCT DELIVERY, STORAGE AND HANDLING

Upon delivery to the job, store frames in vertical positions covered on 100 mm (4”) wood sills in a manner to prevent rust and damage. Provide wood slats between doors to avoid any metal-to-metal contact. Leave doors in stored position until ready to hang. Identify each door and frame per shop drawings.

SUPPLIER

Per a Required Vendor Agreement, all material in this Section shall be purchased by the General Contractor from National Vendor, see drawing A0.1.

PART II – PRODUCTS

HOLLOW METAL FRAMES

- Frames to be pressed steel to profile indicated, 1.5 mm (16 gauge) (unless otherwise noted) cold rolled, pickled, annealed steel, unity type welded construction, with angles, modes, returns and miters neatly welded and weld beads ground smooth.
- Prepare frames to receive mortised type hardware. Spot weld reinforcing plates to inner surface of jambs at hinge, lock, latch, and other hardware locations. Hinge reinforcements shall be 3.4 mm (10 gauge) steel for lightweight core doors, 4.2 mm (7 gauge) steel for others. All other hardware reinforcements shall conform to Table IV, SDI-100. Spot weld 0.58 mm (24 gauge) galvanized steel plaster guards over hardware from templates furnished to frame manufacturer by hardware supplier. Provide suitable reinforcements for surface applied hardware. Punch door stops to receive rubber silencers as required.
- Provide frames with fixed insert anchors welded to face and flange returns 300 mm (12”) down from top, then 610 mm (24”) on center.

Provide frames with minimum 1.9 mm (14 gauge) floor clips welded to each jamb, face and flanges punched for anchoring to floor. All anchors to be suitable for wall conditions. All door openings wider than 1070 mm (42”) and at multiple openings, reinforce head members full length with 2.7 mm (12-gauge) steel channel. Brace door frames with temporary wood or metal spreaders to insure maintaining square and true shapes in shipping. Any frames damaged in any way shall not be installed.

- Provide frames with ULC labels as required or as indicated.

PRIMING

Frames are to receive one shop coat of rust inhibitive primer. Primer shall be smooth surface, ready to receive finish coats at time of delivery and when installed. No runs, over spray, dust or other defects will be allowed. Primer shall be bonded to metal sufficiently that upon again it will not chip or flake when scraped through.

HOLLOW METAL DOORS

- Construct hollow metal doors, flush type, 45 mm (1-3/4”) thick, of 2 sheets of finest grade 1.5 mm (16-gauge) cold rolled steel. Reinforce top and bottom of doors horizontally by steel channels, full width spot welded to each face of door at least 100 mm (4”) o.c. Manufacturer’s mechanical interlocking edge on hinge and lock edge.
- Doors shall have polystyrene core for insulation.
- Provide double doors with one-piece astragals of 2.7 mm (12-gauge) steel. Provide solid drip cap at top of all exterior out-swinging doors.
- Accurately mortise doors for locks and hinges. Provide adequate reinforcement in accordance with Table IV SDI-100 and CSDMA.
- Provide louver doors as scheduled. Provide sight proof louvers either pierced into the panels of the doors or inserted into the panels. Form louver frames of minimum 0.84 mm (20-gauge) steel. Weld or tenon minimum 0.58 mm (24 gauge) blades to frame and fasten the entire assembly to the door with moldings. The moldings, when used, shall be an integral part of the louver.

PRIMING

- Doors to be thoroughly cleaned, bonderized and primed with shop coat of light gray zinc chromate rust inhibitive primer, baked on.
- Primer shall be smooth surface, ready to receive finish coats at time of delivery and when installed. No runs, overspray, dust or other defects will be allowed. Primer shall be bonded to the metal sufficiently that upon aging it will not chip or flake when scraped through.

PART III – EXECUTION

FRAME INSTALLATION

- In concrete walls: Provide adjustable T-strap type anchors, of not less than 1.5 mm (16 gauge) steel or 0.396 mm (0.156") diameter steel wire. Provide a minimum of four anchors per jamb for frames up to 2440 mm (8'-0") in height. For frames over 2440 mm (8'-0"), provide one additional anchor for each 610 mm (2'-0") or fraction thereof in height.
- At each jamb of frames in masonry walls, provide at least 3 "T" type loose masonry anchors fabricated from 1.2 mm (18 ga.) steel up to 2440 mm (8'-0") high.
- Floor anchor clips shall be fabricated from 1.9 mm (14 ga.) steel and shall be welded between the door frame flanges. Anchor clips to floor with at least two power driven anchors or equivalent per clip to prevent twist.

DOOR INSTALLATION

Fit hollow metal doors accurately in frames with clearances as follows:

- Between door and frame at head and jamb: 3 mm (1/8")
- At doorsill without threshold: 10 mm (3/8") max.
- At doorsill with threshold: 6 mm (1/4") max.
- Between meet edges of pairs of doors: 3 mm (1/8")

Note: No hardware to be visible on hollow metal doors at building exterior.

Place fire-rated doors with clearance as specified in NFPA Std. No. 80.

Install doors completely and accurately, complete with all finish hardware. Install finish hardware in a neat workmanlike manner in accordance with the hardware schedule using only mechanics skilled in this type of work. Do not install hardware until painting is completed. Keep all hardware free from scratches, dents or other defacements.

Adjust and Clean - Prime Coat Touch-Up:

Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

Final Adjustments:

Check and re-adjust operating finish hardware items, leaving metal doors and frames undamaged and in complete and proper operating condition.

INSPECTION

Installer must examine substrates and conditions under which metal door and frames are to be installed and must notify Contractor in writing of any conditions detrimental to proper and timely completion of work.

Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to installer.

General:

Install metal doors, frames, and accessories in accordance with approved shop drawings and manufacturer's data, and as herein specified.

Placing Frames:

Except for frames located at in-place concrete or masonry and at drywall installations, place frames prior to construction of enclosing walls and ceilings.

Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set.

Remove temporary spreaders before setting frames (spreader bars are for shipping only).

Use temporary braces to set frames as per SDI-100.

END OF SECTION