**PART 1 – GENERAL**

1.1 SECTION INCLUDES

1.1.1 Steel channel door frames and reinforcing steel. Section 05500.

1.2 DESIGN CRITERIA

1.2.1 Rolling door to have NEWGEN® Guide and Curtain Lok™ system to provide a near airtight seal and knock-away feature for easy reassembly upon impact.

1.2.2 After accidental impact, door must be capable of reset from ground level without the use of ladders, tools or lift equipment.

1.2.3 Rolling door SBR curtain for service temperature range of -40°C to +85°C (-40°F to +180°F).

1.3 SAMPLES

1.3.1 Submit samples in accordance with Section 01340 [Division 1 - General Requirements] - Shop Drawings, Product Data, Samples and Mock-Ups.

1.4 SHOP DRAWINGS

1.4.1 Submit shop drawing in accordance with Section 01340 [Division 1 - General Requirements] - Shop Drawings, Product Data, Samples and Mock-Ups.

1.4.2 Indicate each type of door arrangement of hardware, required clearances, electrical characteristics including voltages, size of motors, auxiliary controls and wiring diagrams.

1.4.3 Indicate assembly details and dimensions of fabrication, required clearances and electrical connections.

1.5 MAINTENANCE DATA

1.5.1 Provide operation and maintenance data for the Model HD-M 1500 door and hardware for incorporation into manual specified in Section 01730 [Division 1 - General Requirements] – Operation and Maintenance Manual.

1.5.2 Maintenance data shall include:

* a complete description of operation in order of task
* a list of parts requiring replacement
* a parts list with illustrations and identifications
* identification numbers for each door

1.6 QUALITY ASSURANCE

1.6.1 Installer with factory-approved qualifications.

**PART 2 – PRODUCTS**

2.1 PRODUCTS

2.1.1 The acceptable rubber roll-up door is to be the Model HD-M 1500 spring counterbalanced design as manufactured by Hörmann.

2.1.2 Substitutions will not be accepted.

2.2 CURTAIN

2.2.1 Two (2) layers of Styrene Butadiene Rubber (SBR) each 3.2 mm (⅛ in) thick, 70 durometer, reinforced with 1-ply, 50 kg (110 lb) polyester cord centre. Overall thickness is 6.4 mm (1/4 in). Material provides normal resiliency and flexibility at temperatures ranging from -40°C to +85°C (-40°F to +180°F).

2.2.2 Complete with molded Curtain Loks™ that are mechanically attached to the vertical edges of the curtain material. This retention system maintains and holds the curtain in guides under heavy windload conditions.

2.2.3 Continuous glued SBR windlock or moulded in place Teflon windlock designs will not be accepted.

2.2.4 Standard Color: Black. Also available in Blue or Grey EPDM, Black nitrile, flame-retardant self-extinguishing Black MSHA rated.

2.3 GUIDES

2.3.1 Side curtain retention: NEWGEN® 5 inch Guides shall be one-piece extruded aluminum to form a slot of sufficient depth to allow the Curtain Lok™ to move freely in the guides at all times. Aluminum members are to be of sufficient thickness and rigidity to maintain the Curtain Lok™ within the guides during normal operation while enabling the Curtain Lok™ to release during accidental impact.

2.3.2 Steel guides (bolted or spring-loaded) will not be accepted.

2.3.3 Side frame: Galvanized steel (10 gauge) mounting angles with reinforcement brackets are provided for installation directly onto concrete or steel door framing. Additional customization of door frame is not required.

2.4 BOTTOM RAIL

2.4.1 Bottom bar shall extend the full width of the curtain, sufficient to maintain the bottom edge of the curtain parallel to the door threshold at all times. The bottom bar shall be constructed of aluminum extrusion and shall have a pivoting knock-away bottom bar arm on each end to reduce the risk of damage during accidental impacts.

2.4.2 Knock-away bottom bar to be reset without the need to open side frames. Single angle design will not be accepted.

2.5 ROLL-UP DOOR SYSTEM

2.5.1 The curtain is to be rolled on a barrel of sufficient size to carry the door load with a deflection of not more than 2.5 mm/m (.03 inch per foot) of opening width. Drive shaft in the barrel is to be constructed of minimum 63.5 mm (2½ in) C1018 cold rolled steel shafts.

2.5.2 Door shall be designed to operate safely with the use of a spring counterbalance system (i.e. – sprung design).

2.5.3 The Idler Barrel shall be constructed of 159 mm (6.259 in) OD galvanized round HSS structural tubing with a minimum wall thickness of 4 mm (0.157 in) and supported by 50.8 mm (2 in) C1018 cold rolled steel shafts at either end. Idler must be guide mounted not end bracket mounted for proper tracking of curtain into NEWGEN® Guides.

2.5.4 End brackets are constructed of 6 mm (¼ in) hot rolled, zinc coated steel plate c/w sealed heavy-duty, self-aligning bearings with cast iron housings to support the drive barrel. Drive shaft bearing shall be load rated at 3405 kg (7490 lb) dynamic and 2555 kg (5620 lb) static.

2.5.5 Welded Truss shall brace endplates together at the top and bottom with C3 x 4.1 channel and 2 in x ¼ in flatbar diagonal bracing.

2.6 ACCESSORIES

2.6.1 Various accessories are available, for example: guide guards, hoods

2.7 CONSTRUCTION

2.7.1 Doors: constructed of steel, aluminum and SBR rubber/woven curtain.

2.7.2 Structural elements: assembled by welding or by mechanical fasteners.

2.8 OPERATION OF DOOR

2.8.1 Doors shall be equipped for operation by a manual chain hoist.

2.9 MANUAL OPERATION

2.9.1 Chain hoist shall be of sufficient capacity to operate a door at a maximum pull requirement of 9 to 14 kg (20 to 30 lb). The static load on the hand chain to hold the door in any position must not exceed 5 kg (11 lb).

**PART 3 – EXECUTION**

3.1 INSTALLATION

3.1.1 Install doors in accordance with manufacturer’s printed instructions.

3.1.2 Upon completion of the door installation, the door installer must make necessary adjustments to the door to ensure smooth operation.