|  |  |  |
| --- | --- | --- |
| Version | Date | Description of Revisions |
| 1 | August 30, 2006 | Approved final document. |
| 2 | November 13, 2009 | Modified ‘Related Section’ |
| 3 | June 12, 2012 | Addition of References and Replacement Parts sections on this page |
| 4 | July 9, 2012 | Reformatted to Reduce White Space |
| 5 | April 23, 2015 | General formatting |
| 6 | September 15, 2015 | First draft Phase 1 review (AV) |
| **7** | **December 14, 2015** | **Updated, Finalized Specification – Legal Reference eDOCS #6295417 v4 (AV)** |

NOTE:

This is a CONTROLLED Document. Any documents appearing in paper form are not controlled and should be checked against the on-line file version prior to use.

**Notice:** This Document hardcopy must be used for reference purpose only.

**The on-line copy is the current version of the document.**

# GEneral

## Related Sections

### *[Under "Related Sections", identify other Sections that are related to, and/or dependent on, the work results or information specified elsewhere. The list should be limited to Sections with specific information that the reader might expect to find in this Section, but is specified elsewhere. For example, if hardware for aluminum entrances is specified in the aluminum entrance Section, a cross-reference would be appropriate in the finish hardware Section. The purpose of this cross-referencing is for information only, to aid in finding those other requirements—not to define the scope of the Section.*

### *Cross-referencing here may also be used to coordinate assemblies or systems whose components may span multiple Sections and which must meet certain performance requirements as an assembly or system.*

### *Contractor is responsible for coordination of the Work.*

### *This Section is to be completed/updated during the design development by the Consultant. If it is not applicable to the section for the specific project it may be deleted.]*

### *[List Sections specifying installation of products supplied but not installed under this Section and indicate specific items.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Execution requirements for ...[item]... specified under this Section.

### [List Sections specifying products installed but not supplied under this Section and indicate specific items.]

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Product requirements for ...[item]... for installation under this Section.

### [List Sections specifying related requirements.]

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: [Optional short phrase indicating relationship].

## References

### Comply with the latest edition of the following statutes, codes, standards, and all amendments thereto:

#### ASTM A653/A653M-15, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot Dip Process.

#### ASTM A276/A276M-15, Standard Specification for Stainless Steel Bars and Shapes.

#### ASTM A653/A653M-15, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

#### DAF 45 Aluminum Association Designation System for Aluminum Finishes.

#### CGSB 510GP-21 Thermal Insulation, Urethane and Isocyanurate, Unfaced.

#### CAN/CCGSB 1.123-92; Vinyl Antifouling Paint for Ships’ Bottoms.

#### CAN/CGSB 12.1-M90, Tempered or Laminated Safety Glass.

#### CAN4 S104-10 Standard Method for Fire Tests of Door Assemblies.

#### CAN4 S105-09, Standard Specification for Fire Door Frames Meeting the Performance Required by CAN/ULC-S104.

#### National Hardwood Lumber Association (NHLA) *[Consultant to amend and insert applicable NHLA standards]*.

#### ANSI/NFPA 80, Standard for Fire Doors and Fire Windows.

## Requirements of Regulatory Agencies

### Overhead coiling doors: labelled and listed by an organization accredited by Standards Council of Canada in conformance with CAN4 S104-15 and CAN4 S105-09 for ratings specified or indicated.

### Fabricate and install overhead coiling doors to NFPA 80, 2016 edition to suit fire protection rating required.

## Design Criteria

### Design rolling door curtain and assembly to withstand wind load of 960 Pa within door opening area.

### Calculated insulation value: *[Consultant to provide details].*

## Submittals

### Submit samples in accordance with Section 01300 - Submittals.

### Submit shop drawings in accordance with Section 01300 - Submittals. Indicate each type of door, arrangement of hardware, required clearances, electrical characteristics including voltage, size of motors, auxiliary controls and wiring diagrams. Indicate assembly details and dimensions of fabrication, required clearances and electrical connections.

### Maintenance Data:

#### Provide operation and maintenance data for overhead coiling doors, and hardware for incorporation into the O&M manual.

## Measurement and Payment

*[Choose one of the following payment language provisions that best suits the individual project.*

*If this Section is not specifically referenced by an item in the Bid Form, please use the following language:*

### The work of this Section will not be measured separately for payment. All costs associated with the work of this Section shall be included in the Contract Price.

*OR If this Section is specifically referenced in the Bid Form, use the following language and identify the relevant item in the Bid Form:*

### All costs associated with the work of this Section shall be included in the price(s) for Item No(s). \_\_\_ in the Bid Form.

*If the work of this Section is to be measured and paid for by several different methods, please amend the standard wording given above to reflect the different methods of measurement and payment.*]

# PRODUCTS

## Materials

### Rolling doors:

#### Acceptable material: [Aluminum], [Steel].

#### [Galvanized steel sheet: lock-forming quality to Coating Designation Z001 or ZF001, locations \_\_\_\_\_\_.]

#### Galvanized steel sheet: commercial quality to ASTM A653/A653M-15, with Coating Designation Z180 or Z275 mill phosphatized.

#### Doors:

##### Door face sheets to interior doors [\_\_\_\_\_] mm base thickness.

##### Door face sheets to exterior doors [\_\_\_\_\_]mm base thickness.

### Aluminum sheet metal: mill finish utility sheet.

### Aluminum sheet metal: mill finish plain.

### Aluminum extrusions: Aluminum Association alloy AA6063-T5.

### Primer: to [CGSB-1.123-92, as amended]*[Consultant to confirm]*.

### Safety glass: to [CAN/CGSB-12.1-M90, Type [1] [2], Class [A] [B]]*[Consultant to confirm]*, of thickness indicated.

## Doors

### Fabricate metal fire doors in accordance with NFPA 80, 2016 edition, with [     ] hours fire rating [as indicated in the Door and Hardware Schedule found in the Contract Documents. *[Consultant to ensure Door Schedule and Hardware Schedule are part of the Contract Documents]*

### Coiling door curtain interlocking slat sections:

#### Roll formed steel, [\_\_\_\_\_\_] mm base metal thickness x [ \_\_\_\_\_\_] mm wide, prime painted.

#### Extruded aluminum, [\_\_\_\_\_\_ mm thick x \_\_\_\_\_\_] mm wide.

#### Insulated, [ \_\_\_\_\_\_] mm thick.

#### Profile: [flat][curved].

### Rivet continuous end locks to slat ends.

### Rivet continuous wind locks to slat ends*. [Note: Delete 2.2.4 if not required by door size or wind load. Continuous end locks can be used only when wind locks not required, similarly with wind locks. Usually end locks are attached to alternate slats with wind locks between. Wind locks required for exterior doors only]*

### Provide bottom bar of [extruded aluminum section] [double equal weight steel angles] equipped with [tubular neoprene] [flexible vinyl] weatherstrip. *[Note: Delete weatherstrip for fire doors and interior doors.]*

### Form guides of metal angles of sections of 5 mm minimum thickness for face of wall installation. Equip guides with tubular neoprene flexible vinyl weatherstrip.

### Construct counterbalance assembly of heat treated torsion spring with 25% overload factor. Enclose spring in steel pipe to support door curtain and counterbalance mechanism with maximum deflection of 1/360th of opening width. Provide ball bearings at rotating points. Provide spring tension adjusting wheel, accessible for setting.

### Support counterbalance assembly on 5 mm minimum thickness steel plate brackets, forming end enclosures.

### Enclose counterbalance assembly with [(galvanized steel) (aluminum)] sheet formed hood, equipped with weatherstripping.

### Attach to hood sheet metal flame and smoke baffle to drop in place automatically when activated by temperature rise and melting of fusible link.

### Equip door for locking from [inside] [outside] [both sides] with [slide bolt and padlocking] [lockset]. *[Note: Include 2.2.11 for fire doors only]*

## Aluminum Finishes

### Finish exposed surfaces of aluminum components in accordance with the Aluminum Association Designation System for Aluminum Finishes.

#### As fabricated or [plain] [patterned] [mill] finish: designation AA-*[Consultant to provide details]*.

#### Clear anodic finish: designation AA- *[Consultant to provide details on clear anodic finish].*

#### Integral colour anodic finish: designation AA-*[Consultant to provide details on integral colour anodic finish ]*, colour to match the Consultant’s sample.

#### Impregnated colour anodic finish: designation AA-*[Consultant to provide details on impregnated colour anodic finish]*, colour to match the Consultant’s sample.

#### Electrolytically deposited colour anodic finish: designation AA*-[Consultant to provide details on electrolytically deposited colour anodic finish]*, colour to match Consultant’s sample.

## Operation

### Equip door for operation by:

*[Note: Specify 2.4.1.1 or 2.4.1.2 or 2.4.1.3 or 2.4.1.4. Use chain operator for doors over 2100 mm high and/or 8 m2.]*

#### [hand, install two lift handles at door bottom on inside outside face of door.]

#### [chain operator with continuous hand chain with gear reduction.]

#### [crank operator with removable hand crank.]

#### [electric motor operator.]

## Electrical Operator

*[Note: Include this subsection only when electrically operated overhead doors or grilles specified and detailed. Ensure that fire detection system will override electrical operation.]*

### Electrical motors, controller units, remote pushbutton stations, relays and other electrical components: to CSA and ULC *[Consultant to provide details references to CSA and UL/ULC standards]* approval with EEMAC *[Consultant to replace EEMAC standards with appropriate NEMA equivalent standards]* enclosures Class [\_\_\_\_\_\_, group \_\_\_\_\_\_].

### Power supply: [ \_\_\_\_\_\_] [hp] [W].

### Motor: high starting torque, instant reversing, capacity to operate grille at 200 mm per second, removable without affecting emergency chain device or setting of limit switches. Equip motor with overload protection, centrifugal clutch and electric brake.

### Motor size matching gear reducer with gears running in oil bath.

### Controller units with integral motor reversing starter, 3 heater elements for overload protection, including *[Consultant to provide details]* pushbuttons and control relays as applicable.

### Operation:

#### Remote push button stations: [flush] [surface] mounted, in [\_\_\_\_\_\_ ] locations, with [OPEN-STOP-CLOSE push buttons] [OPEN-CLOSE key switch key operated].

#### Cable control: pendant hung control to open and [electric eyes] [time limit switch] to close.

### Design brake to stop and hold doors in any position.

### Include hand [chain] [crank] interlocked auxiliary operator to disconnect motor mechanically and electrically when engaged and allow manual operation of door.

### Safety switch: electro mechanical or electro pneumatic device full length of bottom rail of bottom section of door, to reverse door to open position when coming in contact with object on closing cycle.

### Door speed: [\_\_\_\_\_\_] mm/s.

### Mounting brackets: galvanized steel, size and thickness to suit conditions.

### Control circuit: 24 VAC.

# EXECUTION

## Installation

### Install doors in accordance with the manufacturer's printed instructions.

### Install electrical motors, controller units, pushbutton stations, relays and other electrical equipment required for door operation.

### Installation includes electric wiring from power supply located near door.

### Install master keyed cylinder specified in Section 08710 - Door Hardware.

### Adjust door operating components to ensure smooth opening and closing of doors.

### Test labelled coiling doors for proper operation by activating fusible link. Test coiling door in presence of the Consultant.

**END OF SECTION**