



## Retrofit Safety Grates MSU Type RFSG – Aluminum

### Part 1- General

#### 1.1 Standards

- .1 Conform to CAN3-S157 Strength Design in Aluminum.
- .2 Conform to CSA W59.2 Welded Aluminum Construction and CSA W47.2 Certification of Companies for Fusion Welding of Aluminum.
- .3 Retrofit Safety Grates shall be MSU Mississauga Type RFSG as manufactured by MSU Mississauga Ltd. 2222 S. Sheridan Way, Mississauga, Ontario L5J 2M4, 1-800-268-5336, [www.msumississauga.com](http://www.msumississauga.com), [sales@msumississauga.com](mailto:sales@msumississauga.com).

#### 1.2 Quality Assurance

- .1 Welding shall only be undertaken by a company Certified by the Canadian Welding Bureau to the requirements of CSA Standard W47.2, Certification of Companies for the Fusion Welding of Aluminum.

#### 1.3 Shop Drawings

- .2 Submit shop drawings in accordance with Section 01300 - Submittals.
- .3 Indicate materials, thicknesses, reinforcement, details and accessories.
- .4 Manufacturer shall supply installation drawings and instructions.

### Part 2- Products

#### 2.1 Materials

- .5 Aluminum Extruded Shapes: to CSA HA.5, Alloy 6351-T6 and 6061-T6.
- .6 Aluminum Tread Plate to CSA HA.5 Alloy 6061-T6.
- .7 Fasteners, hinges, gas spring, and hold open arm in 316 stainless steel.

#### 2.2 Fabrication

- .8 Fabricate square, true, and accurate to required size, with joints closely fitted. Remove all burrs and sharp edges.
- .9 Ensure hinges are vandal proof - secure bolts with nylon insert lock nuts.
- .10 Countersink all fasteners - ensure hatch is flush.

#### 2.2 Fabrication (continued)

- .11 Paint all surfaces coming in contact with concrete with one thick coat of bituminous paint.



### **2.3 Retrofit Safety Grates**

- .12 Provide the appropriate frames and grates to the dimensions on the Contract Drawings. Ensure all grates are:
  - .a hinged,
  - .b equipped a retractable lifting handle,
  - .c equipped with a hold open bar to hold a grate open in a vertical position,,
  - .d grating reinforced to withstand a live load of 14.4KN/m<sup>2</sup>, and
  - .e highly visible; either safety orange if aluminum or red if fiberglass; aluminum grating to be powder coated, applied by electrostatic spray process; coating is a thermosetting epoxy powder coat finish minimum 2mm thick and baked at 180 degrees C until cured

## **Part 3- Execution**

### **3.1 Installation**

- .13 Install retrofit grates where indicated on the contract drawings.