**SECTION \_\_\_\_\_\_\_\_\_\_\_ ALUMINUM FLAP GATES**

GENERAL

1. The flap gates for this project shall be provided as specified and as shown in the Contract Documents.

PERFORMANCE REQUIREMENTS

1. Leakage for the flap gates shall be restricted to 0.1 gpm/ft or less of the seal perimeter at the design seating head.

SUBMITTALS

1. Submittals shall include, at a minimum, detailed custom drawings of the gate assembly with dimensional and mounting information and a listing of the materials of construction. General arrangement drawings and cut sheets are not considered acceptable drawings.

QUALITY ASSURANCE

1. The basis for the design of the flap gates is the Model RW5000-A as manufactured by RW Gate Company, Troy, NY.
2. All gates shall be shop inspected for proper operation prior to shipment.
3. Welds shall be performed by welders with ASME Section IX or AWS D1.2 certification.
4. The gate manufacturer shall be ISO 9001:2015 certified.

MATERIALS OF CONSTRUCTION

1. All aluminum referenced in this specification shall be alloy 6061-T6, ASTM B308/308M.
2. All stainless steel referenced in this specification shall be Type 304 or Type 304L, ASTM A240 or ASTM A276 unless otherwise indicated herein.
   1. All non-welded stainless steel components, excluding anchor bolts and assembly bolts, shall be Type 304 or Type 304L stainless steel.
   2. Anchor bolts and assembly bolts shall be Type 316 stainless steel.

FLAP

1. The flap shall consist of an aluminum plate that is reinforced with stiffeners to withstand the specified head conditions.
   1. The flap shall be reinforced with plates or channel shaped members to restrict deflection to 1/16-inch or less at the design head.
   2. The stiffeners shall be welded to the flap.
   3. A lifting lug shall be provided on the lower portion of the flap.

FRAME

1. The frame shall be constructed of aluminum and shall be reinforced to withstand the specified operating conditions.
   1. The frame shall be a rigid, one-piece assembly of the configuration shown on the Contract Documents.
   2. The frame shall be outfitted with a resilient seal around the perimeter of the opening.
   3. Aluminum hinge arms shall connect the flap to the frame.
   4. Hinge bushings shall be UHMWPE or bronze.

SEALS

1. The seal shall consist of a continuous rubber lip seal mounted around the perimeter of the opening.
   1. J-bulb seals, P-seals and D-seals are not acceptable in lieu of lip-type seals.
   2. All seals shall be secured with assembly bolts. All seals shall be field removable and field replaceable without the need to remove the gate frame from the wall.

ANCHORAGE

1. Anchor bolts shall be 316 stainless steel, fully threaded and shall have a minimum diameter of 1/2-inch.
   1. Anchor bolts shall be of the epoxy type.

FINISH

1. All aluminum shall be mill finish.
2. Aluminum in contact with concrete shall be field coated by the Contractor.

INSTALLATION

1. Installation shall be performed in accordance with the gate manufacturer’s installation instructions and the approved installation drawings.
2. Installation instructions and installation drawings shall be found in the O&M manual.
3. Non-shrink grout or a resilient gasket shall be applied, by the Contractor, between the frame and the wall to ensure that there is no leakage around the gate.