

3-Part CSI Specifications CG11HA – Hinged Floodgate with Mechanical Seals

These specifications are intended to be used as guidelines for architects and engineers as they establish the requirements for a particular project, and may be modified by them as deemed appropriate.

Part 1 - General

- 1.01 Description
 - A. **Work Included:** Provide flood barrier(s) factory assembled with frame(s) and hardware in accordance with the contract documents.
- 1.02 Standards
 - A. Comply with the provisions of (as applicable).
 1. AWS Structural Welding Code D1.
 2. ASME Structural Welding Code Section 1X.
- 1.03 Submittals
 - A. **Manufacturers Data:** Submit installation and maintenance instructions for flood barriers.
 - B. **Shop Drawings:** Submit shop drawings for flood barriers including dimensioned plans and elevations, sections, connections and anchorage, and parts list.
 - C. **Calculations (Optional):** Submit calculations, approved by a qualified engineer, to verify the barrier's ability to withstand the design pressure loading.
- 1.04 Qualifications
 - A. **Experience:** The manufacturer of the flood barrier(s) shall present evidence attesting to at least 5 years of successful experience in the design and manufacture of both the flood barrier and flood barrier seal of the type specified.

Part 2 - Products

- 2.01 Flood barrier shall be Model CG11HA as manufactured by Presray Corporation.
- 2.02 Materials
 - A. **Structural Steel Plates and Shapes:** ASTM A36 (options available are type 304 stainless steel, type 316 stainless steel, and type 6061 aluminum).
 - B. **Finish:** brush-off blast clean per SSPC-SP7, primed with one coat Sherwin Williams Kem Flash rust inhibitive, lead free, red primer E6I-R-26, or equivalent (options available include aluminum and HRAP

stainless steel).

- C. **Door Gasket:** Presray type PRS1200 25 durometer neoprene molded rather than extruded, with fully molded corners, no mitered joints allowed. (Optional materials include Viton[®], consult Presray in cases of unusual environmental conditions).
 - D. Hardware
Hinges: Presray type PRS804. Lower hinge to include bronze oil-impregnated thrust bearing. Hinges shall include stainless steel hinge pins, stainless steel mounting bolts, and slotted hinge blades to protect the hinges from the pressure load.
 - E. **Compression Handles:** Presray type stainless steel rollers and provisions for adjusting sail compression after installation. Standard design, handles one side as illustrated bellow, optional, both sides. A removable sill is available for trip-free threshold.
- 2.03 Design
 - A. Flood barrier(s) shall be designed with a minimum 2:1 factor of safety based on material yield strength, and shall provide an effective seal against the design flood level.
 - B. Frame shall include suitable anchors for imbedment in concrete (options available include epoxy anchors for mounting in new masonry block walls, gaskets, bolts, and inserts for attachment to existing concrete or block walls, or frame ready for welding to existing steel structure).
 - 2.04 Fabrication
 - A. The edge coaming contracting the door gasket shall be machined, rather than as rolled, to maximize sealing.
 - 2.05 Inspection and Test
 - A. All steel material welds in he potential “leak path” shall be liquid penetrant inspected in accordance with Appendix VIII of section VIII Div. of ASME Code.

Part 3 — Execution

- 3.01 Installation
 - A. Install flood barriers in accordance with manufacturer’s instructions and approved shop drawings.