

## **OVERVIEW**

SCOPE OF WORK: PROVIDE PREFABRICATED MODULAR ALUMINUM ACCESS RAMPS & STEPS

### **1. SUBMITTALS**

- 1.1 Product Literature must be submitted with bid.
- 1.2 Warranty must be submitted with bid.
- 1.3 Shop Drawings: Include detailed shop drawings upon receipt of purchase order.
- 1.4 Engineering: Provide sealed professional engineering drawings or empirical independent test results upon request.

### **2. QUALITY ASSURANCE**

- 2.1 Manufacturer: EZ-ACCESS, a division of Homecare Products, Inc., 700 Milwaukee Ave. N, Algona, WA 98001-7408. Toll free: (800) 258-8503 or Fax (877) 877-6671. Website: [www.ezaccess.com](http://www.ezaccess.com). Any alternate manufacturer must be approved prior to bid opening.
- 2.2 All components shall be universal as well as reusable. Components shall be easy to disassemble and reassemble so that a ramp system can be relocated and assembled into many different configurations.
- 2.3 Design of all aluminum members shall conform to the 2012 edition of the International Building Codes (IBC).
- 2.4 All exposed surfaces shall be smooth and free of sharp or jagged edges.
- 2.5 Warranty: EZ-ACCESS, a division of Homecare Products, Inc., warrants its products to be free from defects in material and workmanship in the course of manufacturing for a period of three years beginning at date of delivery of product. This warranty excludes any defects resulting from abnormal use in installation, service, accidental or intentional damage or any occurrences beyond the manufacturer's control.

### **3. PRODUCTS**

#### **3.1 RAMP SECTIONS**

##### **3.1.1 Engineering**

- 3.1.1.1 Ramp Sections shall be designed for a minimum uniform live load of 100 pounds per square foot and a concentrated vertical load of 300 pounds distributed uniformly over an area of 1 square foot.

##### **3.1.2 Materials**

- 3.1.2.1 Ramp Sections shall be constructed using 6000 series aluminum alloy with 6061-T6 or 6005-T5 being used for primary structural components.

##### **3.1.3 Design**

- 3.1.3.1 Ramp sections shall be prefabricated in 2', 3', 4', 5' and 6' lengths in addition to a special 6' starter ramp section.
- 3.1.3.2 All ramp sections shall be designed for a 1:12 slope.
- 3.1.3.3 Ramp walking surface shall be 48" or 54" clear width & have a 2" tall (minimum) curb.
- 3.1.3.4 The walking surface of the ramp shall be continuous, without gaps, and shall be approximately 1-1/4" x 6" self-mating aluminum deck with extruded slip resistant surface.

- 3.2 LANDINGS
  - 3.2.1 Engineering
    - 3.2.1.1 Landings shall be designed for a minimum uniform live load of 100 pounds per square foot and a concentrated static vertical load of 500 pounds distributed uniformly over an area of 1 square foot.
  - 3.2.2 Materials
    - 3.2.2.1 Landings shall be constructed of 6000 series aluminum alloy with 6061-T6 or 6005-T5 for primary structural components.
  - 3.2.3 Design
    - 3.2.3.1 Landings shall be prefabricated in typical 64-5/16" square, 72-3/8" square or 64-5/16" x 88-9/16" rectangular sections.
    - 3.2.3.2 Landings shall be designed for variable heights.
    - 3.2.3.3 The walking surface of the landing shall be continuous, without gaps, and shall be comprised of approximately 1-1/4" x 6" high self-mating aluminum deck with extruded slip resistant surface.
- 3.3 STEPS
  - 3.3.1 Engineering
    - 3.3.1.1 Step Systems shall be designed for a minimum uniform live load of 100 pounds per square foot and a concentrated vertical load of 300 pounds distributed uniformly over an area of 4 square inches.
  - 3.3.2 Materials
    - 3.3.2.1 Step Systems shall be constructed using 6000 series aluminum alloy with 6061-T6 or 6005-T5 being used for primary structural components.
  - 3.3.3 Design
    - 3.3.3.1 Step risers shall be between 7" maximum and 4" minimum (6" typical) high and shall be closed.
    - 3.3.3.2 Step treads shall be 11" minimum deep (12-1/2" typical) x 44" minimum wide (50-1/2" typical).
    - 3.3.3.3 The walking surface of the step shall be without gaps and shall be composed of self-mating aluminum treads and riser closures with an extruded slip resistant surface.
- 3.4 LEGS
  - 3.4.1 Engineering
    - 3.4.1.1 The legs shall be designed to support the ramp and landing sections. (See sections 3.1.1.1 & 3.2.1.1.)
  - 3.4.2 Materials
    - 3.4.2.1 Legs shall be all aluminum construction alloy 6061-T6 or 6005-T5.
    - 3.4.2.2 All fasteners shall be corrosion resistant.
  - 3.4.3 Design
    - 3.4.3.1 The legs shall telescope and allow for height and slope adjustments. Legs shall be designed so that they will be perpendicular to the ground and vertical loads are transmitted axially through them, regardless of slope.
    - 3.4.3.2 All legs shall have through bolted polymer 7-3/8" x 7-3/8" footpads to ensure maximum load distribution.

### 3.5 GUARDRAILS AND HANDRAILS

#### 3.5.1 Engineering

- 3.5.1.1 Guardrails and handrails shall be designed to resist a single concentrated load of 200 pounds applied at any point and in any direction at the top of the guardrail or handrail and to transfer this load through the supports to the structure.
- 3.5.1.2 Guardrails shall be designed and constructed to resist a load of 50 pounds per linear foot applied horizontally at the required guardrail height and a simultaneous load of 100 pounds per linear foot applied vertically downward at the top of the guardrail.
- 3.5.1.3 Guardrail infill (pickets, balusters, etc) shall be designed and constructed to resist a 50 pound concentrated horizontal load applied over a one square foot area at any point in the system. Note: The loading of 3.5.1.1, 3.5.1.2 and 3.5.1.3 shall not be applied simultaneously.
- 3.5.1.4 Handrails shall be designed and constructed to resist a load of 50 lbs per linear foot applied in any direction. Note: The loading conditions of 3.5.1.1 and 3.5.1.4 shall not be applied simultaneously.

#### 3.5.2 Materials

- 3.5.2.1 All guardrails, handrails and handrail brackets shall be aluminum construction alloy 6061-T6, 6063-T5 or 6005-T5.

#### 3.5.3 Design

- 3.5.3.1 Handrail gripping surface shall be smooth and continuous throughout ramp sections, steps and landings, return to a guard or return to a wall that is not more than 1/4" from the end of the handrail termination.
- 3.5.3.2 The upper handrail shall be 1-1/2" diameter tubing. The top of the upper handrail shall be 36" above the walking surface. Per 2012 IBC Sec. 1012.2 the height of the handrail above the finish surface "shall be uniform, not less than 34" (864 mm) and not more than 38" (965 mm)."
- 3.5.3.3 Optional lower handrail shall be 1-1/2" diameter tubing. The top of the lower handrail shall be 25" above the walking surface.
- 3.5.3.4 Guardrails shall form a protective barrier of a minimum of 42" high. Guardrails shall be designed such that a 4" sphere cannot pass through any opening.
- 3.5.3.5 Handrails and guards shall have a mill finish.