

**| Suggested Specifications | Section 10 26 00  
CS Acrovyn® 4000 Models P-OAMN, P-RAMN and P-RAMNSS**

**Part 1 - General**

**1.01 Summary**

- A. This section includes the following types of wall protection systems:**
  - 1. Handrails**
- B. Related sections: The following sections contain requirements related to this section:**
  - 1. Corner Guards, Bumper Guards, Crash Rails, Accent Rails, Wall Covering, Wall Panels, Door Protection; refer to section 10 26 00 "Wall and Door Protection"**
  - 2. Blocking in walls for fasteners; refer to section 09 22 00 "Supports for Plaster and Gypsum Board"**

**1.02 References**

- A. National codes (IBC, UBC, SBCCI, BOCA, OSHA, Life Safety, OSHPD and ADA)**
- B. American Society for Testing and Materials (ASTM)**
- C. Underwriters Laboratories (UL)**

**1.03 Submittals**

**General: Submit the following in accordance with conditions of contract and Division 1 specification section 01 33 00 "Submittal Procedures":**

- A. Product data and detailed specifications for each system component and installation accessory required, including installation methods for each type of substrate.**
- B. Shop drawings showing locations, extent and installation details of handrails. Show methods of attachment to adjoining construction.**
- C. Samples for verification purposes: Submit the following samples, as proposed for this work, for verification of color, texture, pattern, finish and end cap attachment and alignment:**
  - 1. 12" (304.8mm) long sample of each model specified including end cap.**
- D. Product test reports from a qualified independent testing laboratory showing compliance of each component with requirements indicated.**
- E. Maintenance data for wall protection system components for inclusion in the operating and maintenance manuals specified in Division 1.**

**1.04 Quality Assurance**

- A. Installer qualifications: Engage an installer who has no less than 3 years experience in installation of systems similar in complexity to those required for this project.**
- B. Manufacturer's qualifications: Not less than 5 years experience in the production of specified products and a record of successful in-service performance.**
- C. Code compliance: Assemblies should conform to all applicable codes**

- including IBC, UBC, SBCCI, BOCA, OSHA, Life Safety, OSHPD and ADA.
- D. **Fire performance characteristics: Provide engineered PVC FREE wall protection system components with UL label indicating that they are identical to those tested in accordance with ASTM E84 for Class A/1 characteristics listed below:**
    - 1. Flame spread: 25 or less
    - 2. Smoke developed: 450 or less
  - D. **Fire performance characteristics: Provide metal components tested in accordance with ASTM E84 for Class A/1 fire characteristics.**
  - E. **Impact Strength: Provide wall protection components that have been tested for impact using a ram- type impact test in accordance with the applicable provisions of ASTM F476 -84**
  - F. **Chemical and stain resistance: Provide PVC FREE wall protection system components with chemical and stain resistance in accordance with ASTM D543.**
  - G. **Color match: Provide PVC FREE wall protection components that are color matched in accordance with the following:**
    - 1. Delta Ecmc of no greater than 1.0 using CIELab color space. (Specifier note: Construction Specialties' colors are matched under cool white fluorescent lighting and computer controlled within manufacturing tolerances. Color may vary if alternate lighting sources are present.)
  - H. **Single source responsibility: Provide all components of the wall protection system manufactured by the same company to ensure compatibility of color, texture and physical properties.**
- 1.05 Delivery, Storage and Handling**
- A. **Deliver materials to the project site in unopened original factory packaging clearly labeled to show manufacturer.**
  - B. **Store materials in original, undamaged packaging in a cool, dry place out of direct sunlight and exposure to the elements. A minimum room temperature of 40°F (4°C) and a maximum of 100°F (38°C) should be maintained.**
  - C. **Material must be stored flat.**
- 1.06 Project Conditions**
- A. **Materials must be acclimated in an environment of 65°-75°F (18°-24°C) for at least 24 hours prior to beginning the installation.**
  - B. **Installation areas must be enclosed and weatherproofed before installation commences.**
- 1.07 Warranty**
- A. **Acrovyn 5-year Limited Warranty**
    - Applies to Interior Wall Protection orders that do not include recommended components or accessories**
      - **Assemblies = Brackets, Hardware**
      - **Accessories = Primer, Adhesive, Caulk, Trims & Moldings**
  - B. **Limited Lifetime Systems Warranty**

- **Applies to CS Interior Wall Protection projects that include all recommended components and accessories related to CS Interior Wall Protection Products.**
  - **Assemblies = Brackets, Hardware**
  - **Accessories = Primer, Adhesive, Caulk, Trims & Moldings**

## Part 2 - Products

### 2.01 Manufacturers

- A. **I Interior surface protection products specified herein and included on the submittal drawings shall be manufactured by Construction Specialties, Inc., 3 Werner Way, Lebanon, NJ 08833 USA 800-233-8493; email: [cet@c-sgroup.com](mailto:cet@c-sgroup.com)**
- B. **Drawings and specifications are based on manufacturer's literature from Construction Specialties, Inc. drawings and specifications unless otherwise indicated. Other manufacturers must be approved equal by Architect/Owner.**

### 2.02 Materials

- B. **Engineered PVC FREE: Extruded material should be high-impact Acrovyn 4000 with Shadowgrain texture, nominal .078" (1.98mm) thickness. Chemical and stain resistance should be per ASTM D543 standards as established by the manufacturer. Colors to be indicated in the finish schedule from one of manufacturer's available colors and patterns.**
- C. **Aluminum: Extruded aluminum should be 6063-T6 alloy. Oval handrail retainer to be nominal .075" (1.91mm) thickness. Round handrail retainer to be nominal .090" (2.29mm) thickness. Crash rail to be nominal .080" (1.98mm) thickness. Minimum strength and durability properties as specified in ASTM B221.**
- A. **Stainless Steel: Cast brackets to be type 304 alloy with #4 satin finish. Minimum strength and durability properties as specified in ASTM A240.**
- D. **Fasteners: All fasteners to be non-corrosive and compatible with aluminum retainers. All necessary fasteners to be supplied by the manufacturer.**

### 2.03 Handrails

- A. **Handrails to be CS Acrovyn: Surface mounted handrail and crash rail configuration with mounting brackets spaced as indicated on installation instructions. Attachment hardware shall be appropriate for wall construction.**
  - 1. **Model P-OAMN 6" (152.4mm) high configuration consisting of an oval engineered PVC FREE handrail, aluminum crash rail and matching end caps returning to the wall. Select from one of Acrovyn solid colors, Acrovyn™ Woodgrains or Acrovyn™ Brushed Metals simulated patterns. Crash rail to be powder coated aluminum; select from standard powder coat finishes. Dual cantilevered mounting to be stainless steel available with optional**

**powder coat; select from standard powder coat finishes. (Specifier note: This product is *Cradle to Cradle Certified™* Silver. *Cradle to Cradle Certified™* is a certification mark licensed by the Cradle to Cradle Products Innovation Institute.)**

- 2. Model P-RAMN 6 3/8" (161.9mm) high configuration consisting of an oval engineered PVC FREE handrail, aluminum crash rail and matching end caps returning to the wall. Select handrail from one of Acrovyn solid colors or Acrovyn simulated patterns. Crash rail to be powder coated aluminum; select from standard powder coat finishes. Dual cantilevered mounting to be stainless steel available. For optional stainless steel end caps specify P-RAMNSS. Optional 90 degree stainless steel outside corners and 3" (76.2mm) splices available. All stainless steel components available with optional powder coat; select from standard powder coat finishes. [Specifier note: This product is *Cradle to Cradle Certified™* Silver (exceptions: stainless steel end caps, corners and splices). *Cradle to Cradle Certified™* is a certification mark licensed by the Cradle to Cradle Products Innovation Institute.]**

#### **2.04 Finishes**

- A. General: Comply with NAAMM "Metal Finishes Manual" for recommendations relative to applications and designations of finishes.**

#### **2.05 Fabrication**

- A. General: Fabricate wall protection systems to comply with requirements indicated for design, dimensions, detail, finish and member sizes.**

### **Part 3 - Execution**

#### **3.01 Examination**

- A. Verification of conditions: Examine areas and conditions under which work is to be performed and identify conditions detrimental to proper or timely completion.**
  - 1. Do not proceed until unsatisfactory conditions have been corrected.**

#### **3.02 Preparation**

- A. Surface preparation: Prior to installation, clean substrate to remove dirt, debris and loose particles. Perform additional preparation procedures as required by manufacturer's instructions.**
- B. Protection: Take all necessary steps to prevent damage to material during installation as required in manufacturer's installation instructions.**

#### **3.03 Installation**

- A. Install the work of this section in strict accordance with the manufacturer's recommendations using only approved mounting hardware and locating all components firmly into position, level and**

**plumb.**

- B. Temperature at the time of installation must be between 65°-75°F (18°-24°C) and be maintained for at least 48 hours after the installation.**
- C. Where splices occur in horizontal runs, splice retainer and rail at different locations along the run.**

### **3.04 Cleaning**

- A. General: Immediately upon completion of installation, clean rails and accessories in accordance with manufacturer's recommended cleaning method.**
- B. Remove surplus materials, rubbish and debris resulting from installation as work progresses and upon completion of work.**

### **3.05 Protection**

- A. Protect installed materials to prevent damage by other trades. Use materials that may be easily removed without leaving residue or permanent stains.**