

## SECTION 102600 - WALL AND DOOR PROTECTION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:

1. Corner guards; end wall guards.
2. **Wall bumper rails.**
3. Impact-resistant wall coverings.
4. Door lock protectors.

- B. Related Sections:

1. Division 08 Section "Door Hardware" for metal armor, kick, mop, and push plates; as well as for door to receive door lock protectors specified in this Section.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide handrails capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Uniform load of 50 lbf/ft. (0.73 kN/m) applied in any direction.
2. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
3. Uniform and concentrated loads need not be assumed to act concurrently.

#### 1.4 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, impact strength, fire-test-response characteristics, dimensions of individual components and profiles, and finishes for each impact-resistant wall protection unit.
- B. Shop Drawings: For each impact-resistant wall protection unit showing locations and extent. Include sections, details, and attachments to other work.

1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Samples for Initial Selection: For each type of impact-resistant wall protection unit indicated, manufacturer's color chips showing full range of colors and textures.
- D. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
  1. Wall and Corner Guards: 12 inches (300 mm) long. Include examples of joinery, corners, end caps, top caps, and field splices.
  2. Impact-Resistant Wall Covering: 6 by 6 inches (150 by 150 mm) square.
- E. Qualification Data: For qualified Installer.
- F. Material Certificates: For each impact-resistant plastic material, from manufacturer.
- G. Material Test Reports: For each impact-resistant plastic material.
- H. Maintenance Data: For each impact-resistant wall protection unit to include in maintenance manuals.
  1. Include recommended methods and frequency of maintenance for maintaining optimum condition of plastic covers under anticipated traffic and use conditions. Include precautions against using cleaning materials and methods that may be detrimental to plastic finishes and performance.
- I. Warranty: Sample of manufacturer's standard and special warranties.

## 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by manufacturer.
- B. Source Limitations: Obtain impact-resistant wall protection units from single source from single manufacturer.
- C. Product Options: Drawings indicate size, profiles, and dimensional requirements of impact-resistant wall protection units and are based on the specific system indicated. Refer to Division 01 Section "Quality Requirements."
  1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- D. Surface-Burning Characteristics: Provide impact-resistant, plastic wall protection units with surface-burning characteristics as determined by testing identical products per ASTM E 84, NFPA 255, or UL 723 by UL or another qualified testing agency.

- E. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines, and ICC/ANSI A117.1.
- F. Preinstallation Conference: Conduct conference at Project site.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store impact-resistant wall protection units in original undamaged packages and containers inside well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.
  - 1. Maintain room temperature within storage area at not less than 70 deg F (21 deg C) during the period plastic materials are stored.
  - 2. Keep plastic sheet material out of direct sunlight.
  - 3. Store plastic wall protection components for a minimum of 72 hours, or until plastic material attains a minimum room temperature of 70 deg F (21 deg C).
    - a. Store corner-guard covers in a vertical position.
    - b. Store wall-guard and handrail covers in a horizontal position.

#### 1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install impact-resistant wall protection units until building is enclosed and weatherproof, wet work is complete and dry, and HVAC system is operating and maintaining temperature at 70 deg F (21 deg C) for not less than 72 hours before beginning installation and for the remainder of the construction period.

#### 1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of impact-resistant wall protection units that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures.
    - b. Deterioration of plastic and other materials beyond normal use.
  - 2. Warranty Period: Five years from date of Substantial Completion.

#### 1.9 EXTRA MATERIALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Corner-Guard Covers: Full-size plastic corner guard covers and stainless steel corner guards of maximum length equal to 2 percent of each type, color, and texture of units installed, but no fewer than two, 4-foot- (1.2-m-) long units of each type.
- B. Include mounting and accessory components. Replacement materials shall be from same production run as installed units.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Vinyl Plastic: ASTM D 1784, Class 1, textured, chemical- and stain-resistant, high-impact-resistant (non-PVC) acrylic-modified vinyl plastic with integral color throughout; extruded and sheet material, thickness as indicated.
1. Impact Resistance: Minimum 25.4 ft-lbf/in. (1356 J/m) of notch when tested according to ASTM D 256, Test Method A.
  2. Chemical and Stain Resistance: Tested according to ASTM D 543.
  3. Self-extinguishing when tested according to ASTM D 635.
  4. Flame-Spread Index: 25 or less.
  5. Smoke-Developed Index: 450 or less.
- B. Aluminum Extrusions: Alloy and temper recommended by manufacturer for type of use and finish indicated, but with not less than strength and durability properties specified in ASTM B 221 (ASTM B 221M) for Alloy 6063-T5.
- C. Stainless-Steel Sheet: ASTM A 240/A 240M.
- D. Brass: ASTM B 249/B 249M for extruded shapes and ASTM B 36/B 36 M for sheet.
- E. Fasteners: Aluminum, nonmagnetic stainless-steel, or other noncorrosive metal screws, bolts, and other fasteners compatible with items being fastened. Use security-type fasteners where exposed to view.
- F. Adhesive: As recommended by impact-resistant plastic wall protection manufacturer and with a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

### 2.2 CORNER GUARDS

- A. Flush-Mounted, (a.k.a. Recess-Mounted), Resilient, Plastic Corner Guards: Assembly consisting of snap-on plastic cover that is flush with adjacent wall surface, installed over continuous retainer; including mounting hardware; fabricated with standard 90- or 135-degree and other angled turns, as required, to match wall condition; full wall height.

1. Basis-of-Design Product: Subject to compliance with requirements, provide SM-20E Series Recess-Mounted Corner Guards by Construction Specialties (C/S), Inc., or comparable product by one of the following:
  - a. American Floor Products Co., Inc.
  - b. Arden Architectural Specialties, Inc.
  - c. Balco, Inc.
  - d. IPC Door and Wall Protection Systems; Division of InPro Corporation.
  - e. Korogard Wall Protection Systems; a division of RJF International Corporation
  - f. Pawling Corporation.
  - g. WallGuard.com.
  
2. Cover: Extruded rigid plastic, minimum 0.078-inch (2.0-mm) wall thickness; as follows:
  - a. Profile: Nominal 3-inch- (75-mm-) long leg and 1/4-inch (6-mm) corner radius.
  - b. Height: 8 feet (2.4 m); 4 feet (1.2 m) where indicated.
  - c. Color and Texture: As selected by Architect from manufacturer's full range.
  
3. Retainer: Minimum 0.060-inch- (1.5-mm-) thick, one-piece, extruded aluminum.
4. Retainer Clips: Manufacturer's standard impact-absorbing clips.
5. Aluminum Base: Nominal 4 inches (100 mm)
  
- B. Fire-Rated, Resilient, Plastic Corner Guards: Similar to above assembly, consisting of snap-on plastic cover that is flush with adjacent wall surface, installed over continuous retainer and intumescent fire barrier; including mounting hardware; fabricated with standard 90- or 135-degree and other angled turns, as required, to match wall condition; full wall height.
  1. Basis-of-Design Product: Subject to compliance with requirements, provide C/S Inc.'s SM-20E Series specified above with manufacturer's integral fire barrier material.
  2. Fire Rating: Same rating as wall in which corner guard is installed; UL listed and labeled according to UL 2079.

### 2.3 END-WALL GUARDS

- A. Flush-Mounted, (a.k.a. Recessed-Mounted), Resilient, Plastic End-Wall Guard: Customized guard assembly consisting of snap-on plastic cover that is flush with adjacent wall surface and that covers entire end of wall, installed continuous retainer at each corner, with end of wall covered by semirigid, impact-resistant sheet cover; including mounting hardware.
  1. Basis-of-Design Product: Subject to compliance with requirements, provide modified version of **SSSS** Series, Recess-Mounted Partition End Guards by

Construction Specialties (C/S), Inc., or comparable product by one of the following:

- a. American Floor Products Co., Inc.
  - b. Arden Architectural Specialties, Inc.
  - c. Balco, Inc.
  - d. IPC Door and Wall Protection Systems; Division of InPro Corporation.
  - e. Korogard Wall Protection Systems, a division of RJF International Corporation
  - f. Pawling Corporation.
  - g. WallGuard.com.
2. Cover: Extruded rigid plastic, minimum 0.078-inch (2.0-mm) wall thickness; as follows:
- a. Profile: Nominal 3-inch- (75-mm-) long leg and 1/4-inch (6-mm) corner radius.
  - b. Height: 8 feet (2.4 m).
  - c. Color: As selected by Architect from manufacturer's full range.
3. Retainer: Minimum 0.060-inch- (1.5-mm-) thick, one-piece, extruded aluminum.
4. Aluminum Base: Nominal 4 inches (100 mm) high.
- B. Fire-Rated, Resilient, Plastic End-Wall Guard: Similar to above assembly, consisting of snap-on plastic cover that is flush with adjacent wall surface and that covers entire end of wall, installed over continuous retainer and intumescent fire barrier; including mounting hardware; full wall height.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Korogard R110 Series Partition End Guard assembly with manufacturer's integral fire barrier materials:
  2. Fire Rating: Same rating as wall in which end guard is installed; UL listed and labeled according to UL 2079.

## 2.4 IMPACT-RESISTANT WALL COVERINGS

- A. Impact-Resistant Sheet Wall Covering: Fabricated from plastic sheet wall-covering material.
1. Basis-of-Design Product: Subject to compliance with requirements, provide **PPPPP** Protective Wallcovering by Construction Specialties (C/S), Inc, or comparable product by one of the following:
    - a. American Floor Products Co., Inc.
    - b. Arden Architectural Specialties, Inc.
    - c. Balco, Inc.
    - d. IPC Door and Wall Protection Systems; Division of InPro Corporation.

- e. Korogard Wall Protection Systems, a division of RJF International Corporation
  - f. Kwalu, LLC.
  - g. Pawling Corporation.
  - h. Tepromark International, Inc.
  - i. WallGuard.com.
2. Size: 48 by 96 inches (1219 by 2438 mm) for sheet.
  3. Sheet Thickness: 0.030 inch (0.76 mm).
  4. Color and Texture: As selected by Architect from manufacturer's full range.
  5. Height: Wainscot as indicated on Drawings.
  6. Trim and Joint Moldings: Extruded rigid plastic that matches sheet wall covering color.
  7. Mounting: Adhesive.

## 2.5 DOOR PROTECTION SYSTEMS

- A. General: Comply with BHMA A156.6.
  1. For fire-rated doors, provide door protection systems that are UL listed and labeled.
- B. Door Lock Protector: Fabricated from injection-molded plastic, minimum 0.060-inch (1.5-mm) wall thickness with matte finish pebblett grain surface.
  1. Basis-of-Design Product: Subject to compliance with requirements, provide Universal Door Lever Protector Model 413 by IPC Door and Wall Protection Systems; Division of InPro Corporation, or comparable product by one of the following:
    - a. American Floor Products Co., Inc.
    - b. Construction Specialties, Inc.
    - c. Korogard Wall Protection Systems; a division of RJF International Corporation.
    - d. Pawling Corporation.
    - e. WallGuard.com.
  2. Location: Refer to Door Schedule in Division 08 Section "Door Hardware."
  3. Color: As selected by Architect from manufacturer's full range.
  4. Mounting: Countersunk screws through factory-drilled mounting holes.

## 2.6 FABRICATION

- A. Fabricate impact-resistant wall protection units to comply with requirements indicated for design, dimensions, and member sizes, including thicknesses of components.
- B. Assemble components in factory to greatest extent possible to minimize field assembly. Disassemble only as necessary for shipping and handling.

- C. Fabricate components with tight seams and joints with exposed edges rolled. Provide surfaces free of wrinkles, chips, dents, uneven coloration, and other imperfections. Fabricate members and fittings to produce flush, smooth, and rigid hairline joints.
- D. Radius corners and ends of wood handrails for returns.

## 2.7 METAL FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
  - 1. Remove tool and die marks and stretch lines, or blend into finish.
  - 2. Grind and polish surfaces to produce uniform finish, free of cross scratches.
  - 3. Run grain of directional finishes with long dimension of each piece.
  - 4. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
- B. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and wall areas, with Installer present, for compliance with requirements for installation tolerances, fire rating, and other conditions affecting performance of work.
- B. Examine walls to which impact-resistant wall protection will be attached for blocking, grounds, and other solid backing that have been installed in the locations required for secure attachment of support fasteners.
  - 1. For impact-resistant wall protection units attached with adhesive or foam tape, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Complete finishing operations, including painting, before installing impact-resistant wall protection system components.
- B. Before installation, clean substrate to remove dust, debris, and loose particles.

### 3.3 INSTALLATION

- A. General: Install impact-resistant wall protection units level, plumb, and true to line without distortions. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished Work.
  - 1. Install impact-resistant wall protection units in locations and at mounting heights indicated on sheet entitled "Typical Mounting Heights Schedule" of the Drawings.
  - 2. Provide splices, mounting hardware, anchors, and other accessories required for a complete installation.
    - a. Provide anchoring devices to withstand imposed loads.
    - b. Where splices occur in horizontal runs of more than 20 feet (6.1 m), splice aluminum retainers and plastic covers at different locations along the run, but no closer than 12 inches (305 mm).
    - c. Adjust end and top caps as required to ensure tight seams.
- B. Impact-Resistant Wall Covering: Install top and edge moldings, corners, and divider bars as required for a complete installation.

### 3.4 CLEANING

- A. Immediately after completion of installation, clean plastic covers and accessories using a standard, ammonia-based, household cleaning agent.
- B. Remove excess adhesive using methods and materials recommended in writing by manufacturer.

END OF SECTION 102600