

SECTION 10 26 00 WALL SURFACE PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Wall Protection Systems:
 - a. Wall Guards.
 - b. Crash Rails.
 - c. Corner Guards.
 - d. Bumper Guards.
 - e. Handrails.
 - f. Bed Locators.
 - g. Chair Rails.
 - h. Semi-rigid Protective Wallcoverings.
 - i. Extruded Corner Guards.
 - 2. Door Protection Systems:
 - a. Door Frame Protectors.
 - b. Kick/push Plates.
 - c. Door Knob Protectors.
 - d. Door Edge Protectors.
- B. Related Sections/Items:
 - 1. Steel angle and bent plate corner guard, refer to Section 05 50 00.
 - 2. Wood blocking and grounds, refer to Section 06 10 00.
 - 3. Stainless steel mop plates, kick plates, and armor plates, refer to Section 08 71 00.
 - 4. Sheet vinyl wall covering, refer to Section 09 95 00.
 - 5. Tack panel systems.

1.2 SUBMITTALS

- A. Comply with Section 01 33 00 [01 30 00].
- B. Product data indicating compliance with specified requirements.
- C. Shop drawings showing methods of attachment to substrate.
- D. Samples: For selection of color, pattern and surface texture.
 - 1. 12 inch (300 mm) long samples of each type of wall and corner guard required. Include examples of joinery, corners, and field splices.
 - 2. 7 x 9 inch (175 x 225 mm) samples of each rigid sheet or panel type wall surface protection material required.
 - 3. 6 inch long sample of wood handrail (chair rail).

1.3 QUALITY ASSURANCE

- A. Fire Performance Characteristics: Comply with ASTM E 84 for the fire performance characteristics indicated below. Identify components with markings from testing and inspection organization.
 - 1. Flame Spread: 25 or less.
 - 2. Smoke Developed: 450 or less.
- B. Single Source Responsibility: Obtain wall surface protection system components from a single source.

DELETE THE PARAGRAPHS BELOW IF DIVISION 1 REQUIREMENTS SATISFY PROJECT REQUIREMENTS.

- C. Deliver materials in original factory wrappings and containers, clearly labeled with manufacturer and brand name.
- D. Store materials in original undamaged packages and containers inside a well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and

humidity.

1. Maintain room temperature within the storage area between 60 deg F (16 deg C) and 80 deg F (27 deg C) during the period plastic materials are stored. Keep materials out of direct sunlight to avoid excessive surface temperatures.
2. Store rigid plastic corner guard, wall guard and handrail covers in a horizontal position for a minimum of 72 hours, or until the plastic material attains the ambient room installation temperature of between 65 deg F (18 deg C) and 75 deg F (24 deg C).

1.4 PROJECT CONDITIONS

- A. Maintain ambient temperature within building at not less than 65 deg F (18 deg C) or greater than 75 deg F (24 deg C) for a minimum 72 hours prior to beginning of installation.
- B. Do not install wall surface protection system components until the space is enclosed, weatherproof and climate controlled.
- C. Do not install semi-rigid wall protection systems until temperature is stable and permanent lighting is in place.

1.5 MAINTENANCE

- A. Maintenance Instructions: Include precautions against cleaning materials and methods that may be detrimental to finishes and performance.

ADJUST REPLACEMENT PERCENTAGE TO REFLECT PROJECT SIZE.

- B. Replacement Materials: Minimum 2 percent of each type, color, and pattern of wall surface protection materials and components. Include accessory components as required. Replacement materials shall be from the same production run as installed materials. Package with protective coverings and appropriate labels.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Nelplas®, RJF International Corporation, Muncy, PA (800) 628-0449.

2.2 MATERIALS

RETAIN THE NEXT PARAGRAPH IF THE PROJECT REQUIRES IMPACT-RESISTANT PLASTIC SHEET OR PANEL WALL COVERING MATERIAL.

- A. Plastic Sheet Wall Covering Material: Textured, chemical- and stain-resistant, high-impact, acrylic modified vinyl plastic sheets, thickness as indicated. Comply with specified requirements of ASTM D 256 for impact resistance and ASTM E 84 for flame spread and smoke developed characteristics.

RETAIN THE NEXT PARAGRAPHS FOR WALL SURFACE PROTECTION SYSTEMS USING RIGID IMPACT-RESISTANT PLASTIC PROFILE COVERS OVER ALUMINUM RETAINERS.

1. Color and/or Pattern: As selected by Architect from the manufacturer's full range of standard colors and textures.
- B. Rigid Plastic Material: Extruded, textured, chemical- and stain-resistant, high-impact, acrylic modified vinyl plastic, thickness as indicated. Comply with specified requirements of ASTM D 256 for impact resistance and ASTM E 84 for flame spread and smoke developed characteristics.
 1. Color: As selected by Architect from the manufacturer's full range of standard

colors.

- B. Aluminum Extrusions: ASTM B 221 (ASTM B 221M) for 6063-T6.
- C. Fasteners: Provide non-corrosive metal screws, bolts, and other fasteners compatible with aluminum components, hardware, anchors, and other items being fastened. Use theft-proof fasteners where exposed to view.

2.3 WALL GUARDS

- A. Crash Rail Type Wall Guards:
 - 1. Cover:
 - a. Extruded, rigid, impact-resistant plastic, nominal 0.078 inch (1.9 mm) thick, in profile indicated.
 - b. Stainless steel, 16 gauge, type 304 with #4 Satin finish (Specify specific model number: C55F or C550).
 - 2. Retainer:
 - a. Continuous, one-piece, extruded aluminum retainer, minimum 0.062 inch (1.6 mm) thick, with continuous vinyl cushion(s) or bumper(s) centered in the extrusion.
 - b. 2 inch long extruded aluminum clips (*specify specific model number: 495, 695, or 840*).
 - c. Continuous vinyl cushion on aluminum retainer attached to 2 inch long extruded aluminum clips (*specify specific model number: 850*).
 - d. 2 inch long stainless steel clips (Specify specific model number: C55F or C550).

SELECT CRASH RAIL WALL GUARD MODEL

- 3. **470 Series:** 4 inch (100 mm) high, surface-mounted flush on wall.
- 4. **475 Series:** 4 inch (100 mm) high, surface-mounted on 1/8 inch (6 mm) cushion spacers.
- 5. **480 Series:** 4 inch (100 mm) high, surface-mounted on 1/2 inch (13 mm) cushion spacers.
- 6. **490 Series:** 4 inch (100 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
- 7. **485 Series:** 4 inch (100 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.
- 8. **495 Series:** 4 inch (100 mm) high, surface-mounted with 2 inch aluminum clips flush on wall, low to medium impact.
- 9. **670 Series:** 6 inch (150 mm) high, surface-mounted flush on wall.
- 10. **670AC Series:** 6 inch (150 mm) high, surface-mounted flush on wall, with solid color insert.
- 11. **675 Series:** 6 inch (150 mm) high, surface-mounted on 1/8 inch (6 mm) cushion spacers.
- 12. **680 Series:** 6 inch (150 mm) high, surface-mounted on 1/2 inch (13 mm) cushion spacers.
- 13. **690 Series:** 6 inch (150 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
- 14. **685 Series:** 6 inch (150 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.
- 15. **695 Series:** 6 inch (150 mm) high, surface-mounted with 2 inch aluminum clips flush on wall, low to medium impact.
- 16. **810 Series:** 8 inch (200 mm) high, surface-mounted flush on wall.
- 17. **820 Series:** 8 inch (200 mm) high, surface-mounted on 1/8 inch (6 mm) cushion spacers.
- 18. **830 Series:** 8 inch (200 mm) high, surface-mounted on 1/2 inch (13 mm) cushion spacers.
- 19. **800 Series:** 8 inch (200 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
- 20. **885 Series:** 8 inch (200 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.
- 21. **840 Series:** 8 inch (200 mm) high, surface-mounted with 2 inch aluminum

- clips flush on wall, low to medium impact.
- 22. **850 Series:** 8 inch (200 mm) high, surface-mounted with 2 inch aluminum clips and continuous vinyl cushion flush on wall.
- 23. **C55F Series:** 5-1/2 inch (140 mm) high with a flat face, cut to size only and surface-mounted with 2 inch stainless steel clips.
- 24. **C550 Series:** 5-1/2 inch (140 mm) high with a V-groove face, cut to size and surface-mounted with 2 inch stainless steel clips.
- 25. Accessories: Prefabricated, injection-molded or foam-molded (*670 Series*) end caps and inside and outside corners with concealed splices, cushions, and other accessories as required.
 - a. End caps and inside and outside corners shall match plastic cover color.
 - b. Provide self-adjusting connector plate to align end caps.
 - c. Factory installed stainless steel end plates (Specify specific model number: C55F or C550).
- 26. Color: As selected.
- B. Bumper Rail Type Wall Guards:
 - 1. Cover: Rigid, extruded, impact-resistant plastic, minimum 0.10 inch (2.5 mm) thick, in dimensions and profiles indicated.
 - 2. Retainer:
 - a. Continuous, one-piece, extruded aluminum retainer, minimum 0.08 inch (2 mm) thick.
 - b. Continuous, one-piece, extruded plastic retainer, minimum 0.08 inch (2 mm) thick (*specify specific model number: 300*).

SELECT BUMPER RAIL WALL GUARD MODEL
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- 3. **300 Series:** 2 inch (50 mm) high, surface-mounted flush on wall, plastic retainer, low to medium impact.
- 4. **410 Series:** 3-1/2 inch (89 mm) high, surface-mounted on 1/8 inch (6 mm) cushion spacers.
- 5. **400 Series:** 3-1/2 inch (89 mm) high, surface-mounted on 1/2 inch (13 mm) cushion spacers.
- 6. **430 Series:** 3-1/2 inch (89 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
- 7. **420 Series:** 3-1/2 inch (89 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.
- 8. **700 Series:** 1-1/2 inch (38 mm) high flexible extruded PVC bumper, surface mounted.
- 3. Accessories: Prefabricated, injection molded end caps and corners with concealed splices, cushions, mounting hardware, and other accessories as required.
 - a. End caps and outside corners: Match plastic cover color.
- 4. Color: As selected.

2.4 HANDRAILS

- A. Bumper Rail Type Handrails: Comply with requirements of ANSI A117.1.
 - 1. Covers:
 - a. Rigid, extruded, impact-resistant plastic, minimum 0.078 inch (2.0 mm) thick, in dimensions and profiles indicated.
 - b. Three-part, rigid, extruded, impact-resistant plastic, nominal 0.060 inch (1.5 mm) thick, in dimensions and profiles indicated (Specify specific model number: 600).
 - 2. Retainer: Continuous, one-piece, extruded aluminum retainer, minimum 0.080 inch (2.0 mm) thick with continuous vinyl bumper cushion centered in the extrusion.

SELECT BUMPER RAIL HANDRAIL MODEL

3. **200 Series:** 5-1/2 x 1-1/2 inch (140 x 38 mm), extended mounting on high-impact, injection-molded plastic mounting brackets.
4. **200AC Series:** 5-1/2 x 1-1/2 inch (140 x 38 mm), extended mounting on high-impact, injection-molded plastic mounting brackets with two-color vinyl cover.
5. **550 Series:** 5-1/2 x 1-1/2 inch (140x38 mm), extended mounting on high-impact, injection-molded plastic mounting brackets.
6. **550AC Series:** 5-1/2 x 1-1/2 inch (140x38 mm), extended mounting on high-impact, injection-molded plastic mounting brackets with solid color accent strip.
7. **600 Series:** 6-1/8 x 1-1/2 inch (156 x 38 mm), three-part covers mounted over continuous aluminum retainer with mounting brackets.
8. Accessories: Prefabricated, injection-molded or foam-molded end caps and inside and outside corners with concealed splices, cushions, and other accessories as required.
 - a. End caps and inside and outside corners:
 - (1) Match plastic cover color.
 - (2) Self-aligning connector plate.
9. Color: As selected.

2.5 BED LOCATORS

- A. Bed Locators: Snap-on-type, aluminum retainer, two molded-plastic bed locator end caps, and two molded-plastic mounting brackets. Mount assemblies at height indicated.
 1. Cover: Rigid, impact-resistant plastic, minimum 0.100 inch (2.5 mm) thick, in dimensions and profiles indicated.
 2. Retainer: Continuous, one-piece, extruded aluminum retainer, minimum 0.08 inch (2.0 mm) thick.

SELECT BED LOCATOR MODEL

3. **430 Series:** 3-1/2 inch (89 mm) high, extended mounting on 1-1/2 inch (38 mm) bell flange mounting brackets.
4. **420 Series:** 3-1/2 inch (89 mm) high, extended mounting on 2 inch (50 mm) bell flange mounting brackets.
5. Accessories: Two prefabricated, injection-molded plastic bed locator end caps with concealed splices, cushions, mounting hardware, and other accessories as required.
 - a. End caps: Match plastic cover color.
6. Color: As selected.

2.6 CORNER GUARDS

- A. Surface-Mounted, Resilient Plastic Corner Guards:
 1. Cover: Rigid, impact-resistant plastic, minimum 0.078 inch (1.9 mm) thick, in dimensions and profiles indicated.
 2. Retainer:
 - a. Continuous, one-piece, extruded aluminum retainer, minimum 0.062 inch (1.6 mm) thick.
 - b. Continuous, one-piece, extruded plastic retainer, minimum 0.062 inch (1.6 mm) thick (*specify specific model number: ARN10PL*).

SELECT SURFACE MOUNTED CORNER GUARD MODEL

3. **ARN10 Series:** 2 inch (50 mm); Corner Radius: 1/4 inch (6.35 mm).
4. **ARN10PL Series:** 2 inch (50 mm); Corner Radius: 1/4 inch (6.35 mm), plastic retainer, low to medium impact.

5. **ARN10PE Series:** End wall condition with two ARN10 corner guards with high impact filler between.
 6. **ARN20 Series:** 3 inch (75 mm); Corner Radius: 1/4 inch (6.35 mm).
 7. **S350 Series:** 2-11/16 inch (70 mm); Corner Radius: 1-1/4 inches (27.8 mm).
 8. **S350PE Series:** End wall condition with two S350 corner guards with high impact filler between.
 9. Accessories: Prefabricated aluminum retainer with concealed splices, mounting hardware, and other accessories as required.
 - a. End caps:
 - (1) Match plastic cover color.
 - (2) Field adjustable for close alignment with snap-on plastic covers.
 10. Color: As selected.
- B. Flush-Mounted, Resilient Plastic Corner Guards:
1. Cover: Rigid, impact-resistant plastic, minimum 0.078 inch (2.0 mm) thick, in dimensions and profiles indicated.
 2. Retainer: Continuous, one-piece, extruded aluminum retainer, minimum 0.062 inch (1.6 mm) thick.

SELECT FLUSH MOUNTED CORNER GUARD MODEL

3. **170 Series:** 2 inch (50 mm); Corner Radius: 1/4 inch (6.35 mm).
4. **170PE Series:** 2 inch (50 mm) end of wall type; Corner Radius: 1/4 inch (6.35 mm).
5. **180 Series:** 2 inch 2-hour Fire Barrier mounted on aluminum retainer.
6. **270 Series:** 3 inch (74 mm); Corner Radius: 1/4 inches (27.8 mm).
7. **270-135 Series:** 3 inch (74 mm) 135 degree type; Corner Radius: 1/4 inches (27.8 mm).
8. **280 Series:** 3 inch 2-hour Fire Barrier mounted on aluminum retainer.
9. Accessories: Aluminum base with concealed splices, mounting hardware, and other accessories as required.

NOTE: END CAP IS ONLY USED WITH SURFACE-MOUNTED CORNER GUARDS.
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10. Color: As selected.
- C. Surface-Mounted Plastic Corner Guards: Thermoformed, embossed, resilient plastic acrylic modified vinyl sheet corner guards, height as indicated. Provide 90-degree turn, unless otherwise indicated, and formed edges.
1. Wing Size: As indicated.

COORDINATE WING SIZE ON DRAWINGS

2. Mounting Method: Recommended contact cement, construction adhesive, or double-faced self-adhesive foam tape.
 3. Color: As selected.
 4. Coordinating Design: As selected.
- D. Extruded Corner Guards: Adhered 90-degree high impact extruded vinyl acrylic corner guards, nominal 0.078 inch (2 mm) thick. ASTM E84 Class I fire rating. Corner radius 1/4 inch (6 mm).
1. **X875 Series:** 3/4 inch (19 mm).
 2. **X815/X915 Series:** 1-1/2 inch (38 mm).
 3. Adhesive and Primer: As recommended by manufacturer.

2.7 IMPACT-RESISTANT WALLCOVERINGS

- A. Semi-rigid, Integrally-colored Sheet Wallcovering: Semi-rigid, embossed, impact-resistant plastic sheets or roll stock. Comply with fire performance characteristics specified and be chemical- and stain-resistant.

DETERMINE TYPE AND SELECT SHEET OR ROLL AND WALLCOVERING THICKNESS

1. **Nelplas 500 Series:** Solid colors.
 - a. Sheet/Roll Thickness: 0.028 inch (0.7 mm) thick, Class I/A Fire-Rated.
 - b. Sheet/Roll Thickness: 0.040 inch (1.0 mm) thick, Class I/A Fire-Rated.
 - c. Sheet Thickness: 0.060 inch (1.5 mm) thick, Class I/A Fire-Rated.
 - d. Sheet Thickness: 0.080 inch (2.0 mm) thick, Class II/B Fire-Rated.
 - e. Sheet Thickness: 0.125 inch (3.2 mm) thick, Class II/B Fire-Rated.
2. **Nelplas 600 Series:** Solid colors.
 - a. Sheet Thickness: 0.080 inch (2.0 mm) thick, Class I/A Fire-Rated.
 - b. Sheet Thickness: 0.125 inch (3.2 mm) thick, Class I/A Fire-Rated.
4. Color: As selected.

COORDINATE ACCESSORY MOLDINGS WITH DRAWING DETAILS, IF ANY

- B. Color Matched or Complimentary Accessory Moldings: Manufacturer's standard.
 1. J-molding: #82.
 2. Divider Bar: #87/88
 3. Inside Corner: #83
 4. Outside Corner: #85
 5. Color: As selected.
- C. Color Matched Caulk: Manufacturer's standard.
- D. Adhesive and Primer: As recommended by manufacturer.

COORDINATE WITH SECTION 08 71 00 DOOR HARDWARE. SELECT SIZES SHOWN BELOW OR INDICATE CUSTOM SIZE REQUIRED.

2.8 DOOR PROTECTION SYSTEMS

- A. Door Surface Protection: Comply with requirements of ANSI A156.6. 0.040 inch thick (0.028, 0.060, 0.080). Provide the following standard sizes or custom sizes as indicated:
 1. Kick Plate: 8 inches (200 mm) high by 1 inch (25 mm) less than door width.
 2. Kick Plate: 10 inches (250 mm) high by 1 inch (25 mm) less than door width.
 3. Kick Plate: 12 inches (300 mm) high by 1 inch (25 mm) less than door width.
 4. Armor Plate: 32 inches (800 mm) high by 1 inch (25 mm) less than door width
 5. Armor Plate: 48 inches (1200 mm) high by 1 inch (25 mm) less than door width.
 6. Push Plate: 12 inches (300 mm) high by 3 inches (75 mm) wide.
 7. Push Plate: 15 inches (375 mm) high by 3-1/2 inches (89 mm) wide.
 8. Push Plate: 16 inches (400 mm) high by 4 inches (100 mm) wide.
 9. Color: As selected.
- B. Door Frame Protection: 0.040 (0.060) rigid, impact-resistant, thermoformed vinyl plastic with return legs. Comply with fire performance characteristics specified and be chemical- and stain-resistant.
 1. Color: As selected.
- C. Door Frame Guard: Door frame guard mounted on continuous aluminum retainer. High-impact vinyl extrusion locked in place, nominal 0.10 inch (2.5 mm) thick. ASTM E84 Class I fire rating.
 1. Extrusion: Pebble grain finish.
 2. Retainer: Continuous 6063-T6 aluminum retainer behind entire height of door frame guard, minimum 0.060 (1.5 mm) thick.
 2. **360 Series:** 2-11/16 inch (70 mm); Corner Radius: 1-1/4 inches (27.8 mm).
 3. End Caps: Injection molded unit of color and texture similar to profile extrusion.

2.9 FABRICATION

- A. Comply with requirements indicated for design, dimensions, details, finish, and member sizes, including wall thicknesses of components.
- B. Shop-assemble components to the greatest extent possible. Disassemble only as necessary for shipping and handling.
- C. Fabricate components with tight seams and joints with exposed edges rolled. Provide surfaces free of evidence of wrinkling, chipping, uneven coloration, dents, and other imperfections. Fabricate members and fittings to produce flush, smooth, and rigid hairline joints.
- D. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors for interconnection of members to other construction.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions in which wall surface protection components and wall protection systems will be installed.
- B. Complete finishing operations, including painting, before beginning installation of wall surface protection system materials.
- C. Wall surfaces to receive impact-resistant wall covering materials shall be dry and free from dirt, grease, loose paint, and scale.
- D. Do not proceed with installations until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Properly prepare substrate and clean to remove dust, debris, and loose particles.

3.3 INSTALLATION

- A. Install wall surface protection units plumb, level, and true to line without distortions.
- B. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished work.
- C. Install aluminum retainers, mounting brackets, and other accessories in strict accordance with the manufacturer's instructions.
- D. Where splices occur in horizontal runs of over 20 feet (6 m), splice aluminum retainer and plastic cover at same locations along the run.

3.4 CLEANING

- A. Clean plastic covers and accessories using a standard non-ammonia based household cleaning agent.
- B. Clean metal components in accordance with the manufacturer's recommendations.
- C. Remove excess adhesive using methods and materials recommended by manufacturer.

END OF SECTION