SECTION 10 26 23.13 IMPACT-RESISTANT WALL PROTECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Wall guards (WG).
- A B. Corner guards (CG).
- **<u>B</u>**<u>C</u>. Rigid-sheet wall protection (WP-48).

1.02 RELATED REQUIREMENTS

A. Section 06 10 00 - Rough Carpentry: Wood blocking for corner-guard anchors.

1.03 REFERENCE STANDARDS

- A. Comply with applicable provisions of state/local building code. Comply with reference standards to the extent referenced in this Section.
 - 1. Exception: Where requirements that are more stringent are indicated on the Drawings or specified herein.
- B. ASTM D256 Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics; 2023, with Editorial Revision.
- C. ASTM D543 Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents; 2021.
- D. ASTM F476 Standard Test Methods for Security of Swinging Door Assemblies; 2023.
- E. ASTM G21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi; 2015, with Editorial Revision (2021).

1.04 ADMINISTRATIVE REQUIREMENTS

A. Sequencing: Install rigid-sheet wall protection before installing resilient flooring with integral base and resilient wall base.

1.05 SUBMITTALS - GENERAL

A. See Section 01 30 00 - Administrative Requirements for submittal procedures.

1.06 SUBMITTALS FOR REVIEW

- A. Product Data:
 - 1. General: Manufacturer's current data sheets, marked-up and/or highlighted in sufficient detail to indicate what is included and what is NOT included. Identify:
 - a. Physical dimensions.
 - b. Features.
 - c. Anchorage details.
 - d. Rough-in measurements.
 - 2. Rigid-Sheet Wall Protection: Include the following for each component indicated.
 - a. Durability.
 - b. Resistance to fading.
 - c. Resistance to flame spread.
- B. Shop Drawings: Provide plans at 1/8 inch = 1'- 0" scale (minimum). Show elevations and sections at larger scale.
 - 1. General: Show locations, extent, and installation details of each component of wall protection systems. Show methods of attachment to adjoining construction.
 - 2. Wall Protection Systems:
 - a. Show required heights.

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- b. Show where protection stops and starts at faceplates, cabinets, and other equipment.
- c. Show locations for splices.

1.07 SUBMITTALS FOR INFORMATION

- A. Manufacturer's Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- B. Qualification Statements: Names and contact information for installer's previous three projects documenting installer's experience with successful installation of rigid-sheet wall protection, caulking, and associated trim.

1.08 SUBMITTALS FOR CLOSEOUT

A. Maintenance Data: Manufacturer's instructions for care and cleaning of each type of product. Include information about both recommended and potentially detrimental cleaning materials and methods.

1.09 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed installation of high-impact panels similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction of at least three projects with successful in-service performance.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver wall and door protection items in original, undamaged protective packaging. Label items to designate installation locations.
- B. Protect work from damage due to moisture.
- C. Keep components of wall protection systems and especially sheet material out of direct sunlight to avoid fading, color change, or surface distortion from ultraviolet radiation.
- D. Do not deliver products to Project site until areas for storage and installation are fully enclosed, and interior temperature and humidity are in compliance with manufacturer's recommendations for each type of item.
- E. Store wall-protection components 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 at not less than 70 degrees Fahrenheit during the period that plastic materials are stored.
 - 2. Store the following for a minimum of 72 hours, or until the plastic material attains the minimum room temperature of 70 degrees Fahrenheit:
 - a. Store rigid plastic corner guards and rigid-sheet wall protection in a fully supported horizontal position.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Source Limitations: Obtain each color, grade, finish, and type of wall-protection components from a single source with resources to provide components of consistent quality in appearance and physical properties.

2.02 PERFORMANCE CRITERIA

- A. Impact Strength: Unless otherwise noted, provide protection products and assemblies that have been successfully tested for compliance with applicable provisions of ASTM D256 and/or ASTM F476.
- B. Chemical and Stain Resistance: Unless otherwise noted, provide protection products and assemblies with chemical and stain resistance complying with applicable provisions of ASTM D543.

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C. Fungal Resistance: Unless otherwise noted, provide protection products and assemblies which pass ASTM G21 testing.

2.03 PRODUCT TYPES

- A. Product Options:
 - 1. Drawings indicate size, profiles, and dimensional requirements of wall-protection components and are based on the specific system indicated.
 - 2. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval.
- B. <u>Wall Guards (WG): De-mount, cut, and re-mount existing wall guards to accommodate</u> <u>new openings.</u>

1. Supplement with additional end caps to match existing.

- **B**<u>C</u>. Corner Guards Surface- Mounted(CG1 and CG2):
 - 2. Manufacturer:
 - a. Inpro; 150 and 160D: www.inprocorp.com/#sle.
 - b. Substitutions: See Section 01 60 00 Product Requirements.
 - 3. Material: High-impact polyvinyl-chloride (PVC).
 - 4. Width of Wings: Per model selected in the Finish Legend.
 - 5. Height: To 96 inches above finished floor.
 - 6. Corner: Square, 1/4 inch radius.
 - 7. Color: As indicated in Finish Legend.
 - 8. Nominal Projection from Wall to Outside of Guard: Between 5/16 and 3/8 inch.
 - 9. Length: One piece.
 - 10. Accessories:
 - a. Aluminum retainer with concealed splices, mounting hardware, and other accessories as required.
 - b. <u>Preformed Top Caps: Field-adjustable for close alignment with snap-on plastic covers. Match color of plastic cover.</u>
 - 11. Wall Protection between Corner Guards at End of Wall: Use rigid-sheet wall protection specified later in this article.
 - **C**<u>D</u>. Rigid-sheet wall protection (WP-48): Semi-rigid plastic; resistant to common cleaning chemicals and stains.
 - 12. Manufacturer and Product:
 - a. Basis-of-Design: Inpro; Palladium Rigid Sheet: www.inprocorp.com/#sle.
 - b. Substitutions: See Section 01 60 00 Product Requirements.
 - 13. Material: High-impact polyvinyl-chloride (PVC).
 - 14. Sheet Size: 48 by 96 inches.
 - 15. Thickness: 0.040 inch.
 - 16. Height: From wall base to 48 inches above finished floor.
 - 17. Color: As indicated in Finish Legend.
 - 18. Texture: Velvet.
 - 19. Vertical Joints (Other Than Internal Corners): Infill with wall-panel manufacturer's pick-resistant color-matched caulk.
 - 20. Moldings and Trim:
 - a. Internal Corners: Wall-protection manufacturer's standard beveled, coved, or filleted inside corner trim with anchoring leg.
 - b. Do NOT provide divider bar between high-impact panels not at a corner.
 - c. Provide manufacturer's standard J-shaped molding along top.
 - d. Color of moldings and trim shall match panels.

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21. Mounting Adhesive: Type(s) recommended by manufacturer for use with material(s) on substrate(s) indicated.

2.04 FABRICATION

- A. General:
 - 1. Fabricate wall-protection systems to comply with requirements indicated for design, dimensions, details, finish, and member sizes, including thicknesses of components.
 - 2. Pre-assemble components in the shop to greatest extent possible to minimize field assembly.
 - a. Disassemble only as necessary for shipping and handling.
 - 3. Fabricate components with tight joints, corners and seams, with exposed edges rolled.
 - 4. Pre-drill holes for attachment.
 - 5. Form end trim closure by capping and finishing smooth.
 - 6. Provide surfaces free of wrinkles, chips, dents, uneven coloration, and other imperfections.
 - 7. Fabricate members and fittings to produce flush, smooth, and rigid hairline joints.
- B. Fittings and Anchors:
 - 1. Fabricate anchoring devices to withstand imposed loads.
 - 2. Coordinate anchoring devices with the supporting structure.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine areas and conditions in which wall-protection components will be installed.
 - 1. Verify that rough openings, concealed blocking, and anchors are correctly sized and located.
 - 2. Verify that field measurements are as indicated on drawings.
- B. Complete finishing operations, including painting, before installing wall-protection components.
- C. Verify that substrate surfaces for adhered items are clean and smooth.
 - 1. Surfaces to receive protection materials shall be dry and free from dirt, grease, loose paint, and scale.
 - 2. Test painted surfaces for adhesion in inconspicuous area, as recommended by manufacturer.
 - a. Where adhesion test's results are unsatisfactory, follow adhesive manufacturer's recommendations for remedial measures at locations and/or application conditions.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.
- E. Start of installation constitutes acceptance of project conditions.

3.02 PREPARATION

A. General: Before installation, clean substrate to remove dust, debris, and loose particles.

3.03 INSTALLATION

- A. Install components in accordance with the respective manufacturer's instructions, level, plumb, and true-to-line, without distortions, secured rigidly in position to supporting construction.
- B. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished Work.
- C. Install retainers, mounting brackets, and other accessories according to the manufacturer's written instructions.
 - 1. Where splices occur in horizontal runs of more than 20 feet, splice aluminum retainers and plastic covers at different locations along the run.

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- D. Rigid-Sheet Wall Protection:
 - 1. Do NOT install sheet material in direct sunlight or in areas of elevated temperature. Excessive heat can cause bubbles and/or otherwise distort the sheet.
 - 2. Wainscot Installation: Establish a level line at the specified height for entire length of run. Install by aligning top of edge of covering with this line.
 - a. Do not omit from knee space under intervening counters (if any).
 - b. Continue under windows (where encountered).
 - 3. Splice at equal spacing between doors and/or partitions.
 - 4. Apply adhesive with 1/8 inch V-notch trowel to an area of wall surface that can be completed within cure time of the adhesive.
 - 5. Install specified trim pieces as required for a complete installation. Allow tolerance for thermal movement.
 - a. Minimally oversize openings in the sheet for pipes, rough-in boxes, and the like.
 - 1) Fill gaps with wall-panel manufacturer's pick-resistant color-matched caulk.
 - 2) Where cover plates and escutcheons will be used, do not oversize the opening to the extent that it will be exposed to view.
 - 6. At Joints Indicated to Be Caulked:
 - a. Allow for a minimum 1/16 inch wide gap (the width of a penny) between individual sheets and between individual sheets and the following:
 - 1) Door casings.
 - 2) Window casings.
 - 3) Fixed baseboards.
 - (a) Exception at Wall Base: Stop rigid-sheet wall protection short of floor so that they are overlapped approximately 1/2 inch by integral coved base and resilient wall base (applied later).
 - b. Gaps are required to be of consistent width throughout the Project.
 - c. Infill vertical joints with wall-panel manufacturer's pick-resistant color-matched caulk.
 - 1) Use of pick-resistant joint sealants from *other* sources will NOT be acceptable.
 - 7. Cut sheet material with a metal straight edge and a sharp utility knife.
 - a. Multiple cuts could be required.
 - 8. Use a roller to ensure maximum contact with adhesive.
 - 9. At inside and outside corners cut covering sheets to facilitate installation of trim pieces.

3.04 TOLERANCES

- A. Maximum Variation from Required Height: 1/4 inch.
- B. Maximum Variation from Level or Plane for Visible Length: 1/4 inch.

3.05 ADJUSTING

- A. Inspect components for proper fit.
- B. Adjust, repair, or replace components not conforming to requirements.
- C. Adjust installed end caps as necessary to ensure tight seams.
- D. Repair or replacement of an individual unit shall be as directed by Architect.

3.06 CLEANING

- A. Immediately upon completion of installation, clean plastic surfaces and accessories using a standard ammonia-based household-cleaning agent.
- B. Clean wall and door protection items of excess adhesive, dust, dirt, and other contaminants.
 1. Use methods and materials recommended by adhesive and substrate manufacturers.
- C. Clean metal components according to the manufacturer's written instructions.

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D. On completion of work, remove surplus materials, rubbish, and debris resulting from installation. Leave installation areas in a neat, clean condition.

3.07 PROTECTION

- A. Protect finished work from damage during remainder of construction period.
 - 1. Damaged work shall be repaired at no additional cost to the Owner.
- B. Finished units shall be without damage at Substantial Completion.

END OF SECTION