**SECTION 12 36 23.13**

**TSS BR COUNTERTOP – PLASTIC LAMINATE CLAD**

(**Specifier Note**: The purpose of this guide specification is to assist the Specifier in correctly specifying bullet resistant aluminum framing assemblies with their installation as security windows.

The Specifier must edit this guide specification to fit the needs of each specific project. References have been made within the text of the specification to MasterFormat section numbers and titles. The Specifier must coordinate these numbers and titles with sections included for the specific project.

Throughout the guide specification, there are Specifier Notes to assist in the editing of the file. Brackets have been used to indicate when a selection is required. Contact a TSS representative for further assistance with appropriate product selections.)

**PART 1 – GENERAL**

* + - 1. RELATED DOCUMENTS
				1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
			2. SUMMARY
				1. Section Includes

Plastic-laminate-clad countertops.

* + - 1. ACTION SUBMITTALS
				1. Product Data: For each type of product.
				2. Shop Drawings: For plastic-laminate-clad countertops.

Include plans, sections, details, and attachments to other work. Detail fabrication and installation, including field joints.

Show locations and sizes of cutouts and holes for items installed in plastic-laminate-clad countertops.

* + - * 1. Samples: Plastic laminates in each type, color, pattern, and surface finish required in manufacturer's standard size.
				2. Samples for Initial Selection: For plastic laminates.
				3. Samples for Verification: As follows:

Plastic Laminates: For each type, color, pattern, and surface finish required, 8 by 10 inches (200 by 250 mm) in size.

* + - 1. QUALITY ASSURANCE
				1. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
			2. DELIVERY, STORAGE, AND HANDLING
				1. Deliver countertops only after casework and supports on which they will be installed have been completed in installation areas.
				2. Store countertops in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.
				3. Keep surfaces of countertops covered with protective covering during handling and installation.
			3. FIELD CONDITIONS
				1. Environmental Limitations: Do not deliver or install countertops until building is enclosed, wet-work is complete, and HVAC system is operating and maintaining temperature and relative humidity at levels planned for building occupants during the remainder of the construction period.
				2. Field Measurements: Where countertops are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
				3. Established Dimensions: Where countertops are indicated to fit to other construction, establish dimensions for areas where countertops are to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

**PART 2 – PRODUCTS**

* 1. FABRICATORS
		+ - 1. Fabricators: Subject to compliance with requirements, provide products by the following: Total Security Solutions, Inc., 935 Garden Lane, Fowlerville, MI 48836, 866 734-6277. Attn: Sales Department, sales@tssbulletproof.com. Web: [www.tssbulletproof.com](http://www.tssbulletproof.com).

2.2 PLASTIC-LAMINATE-CLAD COUNTERTOPS FOR BALLISTIC WINDOWS

* + - * 1. Grade: Custom.
				2. High-Pressure Decorative Laminate: NEMA LD 3, Grade HGL.
				3. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:

As selected by Architect from manufacturer's full range in the following categories:

Solid colors, matte finish.

Color: [Black] [\_\_\_\_\_\_\_\_\_\_\_\_\_].

* + - * 1. Edge Treatment: Same as laminate cladding on horizontal surfaces.
				2. Core Material: Particleboard or MDF.
				3. Core Thickness: 1-1/8 inch (29 mm).

Build up countertop thickness to 1-1/2 inches (38 mm) at front, back, and ends with additional layers of core material laminated to top.

* + - * 1. Backer Sheet: Provide plastic-laminate backer sheet, NEMA LD 3, Grade BKL, on underside of countertop substrate.
				2. Paper Backing: Provide paper backing on underside of countertop substrate.

2.3 MISCELLANEOUS MATERIALS

* + - * 1. Adhesive for Bonding Plastic Laminate: Unpigmented contact cement.
				2. Adhesive for Bonding Edges: Hot-melt adhesive.
	1. FABRICATION
		+ - 1. Fabricate countertops to dimensions, profiles, and details indicated. Provide front and end overhang of 1 inch (25 mm) over base cabinets. Ease edges to radius indicated for the following:
				2. Complete fabrication, including assembly, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

Notify Architect seven days in advance of the dates and times countertop fabrication will be complete.

Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended, and check measurements of assemblies against field measurements before disassembling for shipment.

* + - * 1. Shop cut openings to maximum extent possible to receive appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately, and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

**PART 3 – EXECUTION**

* 1. PREPARATION
		+ - 1. Before installation, condition countertops to average prevailing humidity conditions in installation areas.
				2. Before installing countertops, examine shop-fabricated work for completion and complete work as required, including removal of packing.

3.2 INSTALLATION

* + - * 1. Grade: Install countertops to comply with same grade as item to be installed.
				2. Assemble countertops and complete fabrication at Project site to the extent that it was not completed in the shop.

Provide cutouts for appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately, and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

Seal edges of cutouts by saturating with varnish.

* + - * 1. Field Jointing: Where possible, make in the same manner as shop jointing, using dowels, splines, adhesives, and fasteners recommended by manufacturer. Prepare edges to be joined in shop so Project-site processing of top and edge surfaces is not required. Locate field joints where shown on Shop Drawings.

Secure field joints in countertops with concealed clamping devices located within 6 inches (150 mm) of front and back edges and at intervals not exceeding 24 inches (600 mm). Tighten according to manufacturer's written instructions to exert a constant, heavy-clamping pressure at joints.

* + - * 1. Scribe and cut countertops to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
				2. Countertop Installation: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.

Install countertops level and true in line. Use concealed shims as required to maintain not more than a 1/8-inch-in-96-inches (3-mm-in-2400-mm) variation from a straight, level plane.

Secure backsplashes to tops with concealed metal brackets at 16 inches (400 mm) o.c. and to walls with adhesive.

Seal joints between countertop and backsplash, if any, and joints where countertop and backsplash abut walls with mildew-resistant silicone sealant or another permanently elastic sealing compound recommended by countertop material manufacturer.

3.3 ADJUSTING AND CLEANING

* + - * 1. Repair damaged and defective countertops, where possible, to eliminate functional and visual defects. Where not possible to repair, replace countertops. Adjust joinery for uniform appearance.
				2. Clean countertops on exposed and semi exposed surfaces.
				3. Protection: Provide Kraft paper or other suitable covering over countertop surfaces, taped to underside of countertop at a minimum of 48 inches (1220 mm) o.c. Remove protection at Substantial Completion.

**END OF SECTION**