**SECTION 08 56 53**

**TSS BR TRANSACTION WINDOW – HOLE AND BACKER TALK THRU**

(**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. REFERENCE
		+ - 1. Underwriters Laboratory UL 752-Standard for Bullet Resisting Equipment.
				2. ASTM A 666-Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate and Flat Bar.
				3. ASTM E119-98- Standard Test Methods for Fire Tests of Building Construction and Materials
	2. ACTION SUBMITTALS
1. Refer to Section **[01 33 00 Submittal Procedures] [Insert section number and title].**
2. Product Data: For each type of framing [**and glass**] including manufacturer recommended installation instructions.
3. Shop Drawings: Include plans, elevations, sections, details, attachment to other work.
4. Samples: For each exposed finish.
	1. INFORMATION SUBMITTALS
5. Product Test Reports: Indicating compliance with requirements, including current UL listing verification and test results provided by Underwriters Laboratories.
6. Manufacturer’s Instructions for installation and cleaning of assemblies. All required submittals shall be approved prior to installation.
7. Warranty: Sample of finish warranty
	1. CLOSEOUT SUBMITTALS
8. Refer to Section **[01 78 00 Closeout Submittals] [Insert section number and title].**
9. Maintenance data.
	1. DELIVERY, STORAGE AND HANDLING
10. Refer to Section **[01 60 00 Product Requirements] [Insert section number and title].**
11. Protect windows and accessories in accordance with AAMA CW-10 "Care and Handling of Architectural Aluminum from Shop to Site" until Substantial Completion.
12. Deliver materials to the project site with the manufacturer’s UL Listed Labels intact and legible. Handle the materials with care to prevent damage. Store materials inside and under cover, stack flat and off floor. Project conditions (temperature, humidity, and ventilation) shall be within the maximum limit recommendations provided by manufacturer. Do not install products stored in conditions outside manufacturer’s recommended limits.
	1. QUALITY ASSURANCE
13. Manufacturer shall be a company that specializes in manufacturing products of the specified type with a record of acceptable experience.
14. Installer shall be a company that specializes in product type specified and shall be certified for the installation by the manufacturer.
15. Manufacturer shall provide a mock-up, if required, for evaluation of surface preparation and application workmanship and color/finish to the Architect for approval prior to start of work.
	1. DELIVERY, STORAGE & HANDLING
16. Handle the materials with care to prevent damage.
17. Store materials inside and under cover, stack flat and off floor.
18. Project conditions (temperature, humidity, and ventilation) shall be within the maximum limit recommendations set by manufacturer.
19. Do not begin installation of products until inadequate conditions have been corrected.
	1. WARRANTY

(**Specifier Note**: The 5 year finish warranty applies to the Class I anodic finishes and the 10 year applies to the 70% PVDF coating finish.)

1. Workmanship Warranty: All materials shall be warranted against defects for a period of **[1]** year for the date of receipt at the project site. Provide certificates of manufacturer’s standard limited warranty with closeout documents.
2. Finish Warranty: Manufacturer’s warranty against deterioration of factory finishes for the period of [**5**] [**10**] years from the date of Substantial Completion.

**PART 2 - PRODUCTS**

* 1. ACCEPTABLE MANUFACTURERS
		+ - 1. Basis of Design:

Subject to compliance with requirements, provide products by the following:

* 1. 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).

Subject to compliance with [requirements, manufacturers of products of equivalent design may be acceptable if approved in accordance with **[Section 01 25 00 Substitution Procedures] [Insert section number and title].**

* 1. DESIGN PERFORMANCE
		+ - 1. Though the design, manufacturing techniques and material application the TSS Hole and Backer Transaction Window shall be of the “non-ricochet” type.

* + - * 1. The design is intended 1. to permit the capture and retention of an attacking projectile lessening the potential of a random injury or lateral penetration.
				2. The assembly shall provide single transaction positions utilizing an acrylic backer configuration.
				3. The design shall employ an acrylic voice port in transaction glazing to complete the Hole and Backer design.
				4. Each transaction position may have a stainless steel dip tray as shown on the drawings.
				5. Components shall be manufactured in strict accordance with the specifications, design, and details.
				6. All vision panels shall be cut to size with all exposed edges polished.
				7. Necessary holes shall be predrilled and tapped where required.
				8. Stainless Steel assembly screws and acrylic spacers shall be provided.
				9. Clear anodized angles and channels shall be provided.
				10. Anchor screws shall be provided by the installer.
				11. No field alterations to the construction of the units fabricated under the acceptable standards shall be allowed unless approved by the manufacturer and the architect.
				12. Standard manufacturing tolerances shall be +/- 1/16".
				13. Materials shall meet or exceed UL 752 requirements.
	1. BULLET RESISTANT HOLE AND BACKER TRANSACTION WINDOW
		+ - 1. Product shall be: TSS Hole and Backer Transaction Window.

The Hole and Backer System shall consist of custom prefabricated bullet resistant panels with secure air passage as required for voice transmission.

System shall include aluminum frame with a plastic laminate base and recessed cash tray.

All accessories required for installation shall be included.

* + - * 1. Factory-applied finish:

(**Specifier Note**: SELECT the project specific finish from the following. Baked Enamel may also be available but may require minimum quantities.)l

[Clear Anodic Finish]: Architectural Class I, clear coating AA-M10C22A41 Mechanical Finish Chemical Finish: etched, medium matte; 0.70 mils minimum complying with AAMA 611 "Voluntary Specification for Anodized Architectural Aluminum"

[Color Anodic Finish]: Architectural Class I, color coating AA-M10C22A42/A44 Mechanical Finish Chemical Finish: etched, medium matte; 0.70 mils minimum complying with AAMA 611 "Voluntary Specification for Anodized Architectural Aluminum".

* + - * 1. Color: Dark Bronze.
1. Glazing Panels shall be in sizes as indicated on Drawings.
2. Bullet-Resisting Glazing Material:
	1. Bullet Resistant Level 1
	3/4" LP 750 Laminated

3/4" All Poly 750
3/4" GCP 750 Glass Clad
1 1/4" Uncoated Acrylic
1 1/4" AR Coated Acrylic

* 1. Bullet Resistant Level 2

1" LP 1000 Laminated

1" All Poly 1000
1 3/8” Uncoated Acrylic
1 3/8" AR Coated Acrylic
1.00” TSS-002 L/S Glass Clad

* 1. Bullet Resistant Level 3

1 1/4" LP 1250 Laminated

1 1/4" All Poly 1250
1 1/4” TSS-003 L/S Glass Clad

* 1. Bullet Resistant Levels 4 and 5

TSS-004 L/S, TSS-005 L/S

1. Cash tray: Provide Brushed Stainless Steel [Counter Mounted] [Recessed].
	* + 1. Cash tray shall be constructed of 18 gauge stainless steel, # 4 finish.
			2. Size: 16" x 8" from the outside edge of flanges with a clear opening.
2. Provide a shelf 1 1/2" thick with recessed cash tray.
	* + 1. Shelf shall be full width of window by 18" deep, centered under glazing and covered with **[black high pressure laminate] [stainless steel 18 ga. #4 finish].**
3. Aluminum sections shall be manufactured in accordance with ASTM B209 and shall be extruded aluminum alloy 6063 T5 **[anodized] [powder coated]** finish and be free of sharp edges or burrs when in place.
4. Glazing Channel shall be a U-Channel specifically designed for securing glazing tightly in place.
5. Angles and shall only be acceptable for top attachment.
6. Frame shall be **[anodized aluminum] [18 ga. primed steel] [18 ga. stainless steel]**.
7. The bottom of the glazing shall be capped with corresponding material on the frame.

**PART 3 – EXECUTION**

3.1 PREPARATION

1. Prior to installing bullet resistive material, contractor shall verify that all supports have been installed as required by the contract documents, architectural drawings, and approved shop/CAD drawings.
2. Installer shall notify architect of any unsatisfactory preparation that is responsibility of another installer.
3. Clean and prepare all surfaces per manufacturers recommendations for achieving the best results for the substrate under the project conditions.

3.2 INSTALLATION

1. Do not begin installation until openings have been verified and surfaces properly prepared in accordance with drawings.
2. Install in accordance with manufacturer’s instructions and UL 752.
3. Set all equipment plumb.
4. TSS Hole and Backer Transaction Window: shall arrive on site as a completed unit. Unit shall be installed in provided opening (wall/door), secured to structure (anchors by others).

3.3 POST-INSTALLATION

1. TSS Hole and Backer Transaction Window shall be installed in accordance with manufacturer’s printed recommendations, including adhering to anchoring and finishing details.
2. Inspection and Cleaning: Verify installation is complete and complies with manufacturer’s requirements. Clean product and accessories, removing excess sealant, labels and protective covers.

**END OF SECTION**