SECTION 102113.14 – STAINLESS-STEEL TOILET COMPARTMENTS

Revise this Section by deleting and inserting text to meet Project-specific requirements.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

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:

Stainless steel toilet compartments configured as [**toilet enclosures**] [**entrance screens**] [**and**] [**urinal screens**].

* + - * 1. Related Requirements:

Retain Subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.

Steel overhead support is generally required for ceiling-hung units; wood construction does not provide adequate support.

Section 055000 "Metal Fabrications" for supports that attach [**ceiling-hung compartments**] [**floor-and-ceiling-anchored compartments**] [**and**] [**post-to-ceiling screens**] to overhead structural system.

Wood may provide adequate overhead support for floor-and-ceiling-anchored compartments and post-to-ceiling screens but is inadequate for supporting ceiling-hung compartments. Consult manufacturers for recommendations.

[**Section 061000 "Rough Carpentry"**] [**Section 061053 "Miscellaneous Rough Carpentry"**] for [**blocking**] [**overhead support of floor-and-ceiling-anchored compartments**] [**and**] [**overhead support of post-to-ceiling screens**].

Section 102800 "Toilet, Bath, and Laundry Accessories" for toilet tissue dispensers, grab bars, purse shelves, and similar accessories mounted on toilet compartments.

* + - 1. SUBMITTALS
				1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer’s installation instructions shall be provided along with product data.
				3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
				4. Product Data: For each type of product.

Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.

* + - * 1. Sustainable Design Submittals:
				2. Shop Drawings: For toilet compartments.

Include plans, elevations, sections, details, and attachment details.

Retain first Subparagraph below if required or revise to suit Project.

Show locations of cutouts for compartment-mounted toilet accessories.

Retain first Subparagraph below if required for metal units; see "Stainless Steel Toilet Compartments" Article in the Evaluations.

Show locations of reinforcements for compartment-mounted grab bars and locations of blocking for surface-mounted toilet accessories.

Show locations of centerlines of toilet fixtures.

Show locations of floor drains.

Show[**ceiling grid, ceiling-mounted items, and**] overhead support or bracing locations.

Retain "Samples for Initial Selection" and "Samples for Verification" Paragraphs below for two-stage Samples.

* + - * 1. Samples for Initial Selection: For each type of toilet compartment material indicated.

Include Samples of hardware and accessories involving material and color selection.

* + - * 1. Samples for Verification: For the following products, in manufacturer's standard sizes unless otherwise indicated:

Each type of material, color, and finish required for toilet compartments, prepared on 6-inch- square Samples of same thickness and material indicated for Work.

Each type of hardware and accessory.

Retain "Product Schedule" Paragraph below for Project if multiple installations with multiple selected colors or patterns are required and Contractor verification is advisable.

* + - * 1. Product Schedule: For toilet compartments, prepared by or under the supervision of supplier, detailing location and selected colors for toilet compartment material.

Retain "Product Certificates" Paragraph below to require submittal of product certificates from manufacturers.

* + - * 1. Product Certificates: For each type of toilet compartment.
			1. CLOSEOUT SUBMITTALS
				1. Maintenance Data: For toilet compartments to include in maintenance manuals.
			2. MAINTENANCE MATERIAL SUBMITTALS
				1. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

Door Hinges: Two hinge(s) with associated fasteners.

Latch and Keeper: Two latch(es) and keeper(s) with associated fasteners.

Door Bumper: Two door bumper(s) with associated fasteners.

Door Pull: Two door pull(s) with associated fasteners.

Fasteners: Ten fasteners of each size and type.

* + - 1. PROJECT CONDITIONS
				1. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

Insert article for warranty requirements if required. Availability varies among manufacturers and by type of unit.

1. PRODUCTS

Manufacturers and products listed in SpecAgent and MasterWorks Paragraph Builder are neither recommended nor endorsed by the AIA or Deltek. Before inserting names, verify that manufacturers and products listed there comply with requirements retained or revised in descriptions and are both available and suitable for the intended applications.

* + - 1. PERFORMANCE REQUIREMENTS

Verify accessibility requirements of authorities having jurisdiction. Some projects may require compliance with multiple accessibility regulations.

* + - * 1. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for toilet compartments designated as accessible.
			1. STAINLESS STEEL TOILET COMPARTMENTS <**Insert drawing designation**>

Copy this article and re-edit for each product.

Insert drawing designation. Use these designations on Drawings to identify each product.

* + - * 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

All American Metal Corp.

Flush Metal Partition, LLC.

Knickerbocker Partition Corporation.

Metpar Corp.

Approved equivalent.

Retain and revise "Toilet-Enclosure Style," "Entrance-Screen Style," and "Urinal-Screen Style" Paragraphs below to suit Project.

* + - * 1. Toilet-Enclosure Style: [**Overhead braced**] [**Floor anchored**] [**Ceiling hung**] [**Floor and ceiling anchored**].
				2. Entrance-Screen Style: [**Overhead braced**] [**Floor anchored**] [**Ceiling hung**] [**Floor and ceiling anchored**].
				3. Urinal-Screen Style: [**Wall hung flat panel**] [**Wall hung with integral flanges**] [**Wall hung, wedge shaped**] [**Floor anchored**] [**Overhead braced**] [**Post to ceiling**].

Some manufacturers weld face sheets together at corners; others do not. Revise "Door, Panel, and Pilaster Construction" Paragraph below to suit Project. Before retaining option, verify availability with manufacturers. See the Evaluations.

* + - * 1. Door, Panel, and Pilaster Construction: Seamless, metal facing sheets pressure laminated to core material; with continuous, interlocking molding strip or lapped-and-formed edge closures; corners secured by welding or clips and exposed welds ground smooth.[**Provide with no-sightline system.**] Exposed surfaces shall be free of pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections.

Revise "Core Material," "Grab-Bar Reinforcement," and "Tapping Reinforcement" Subparagraphs below to suit Project. See the Evaluations.

Core Material: Manufacturer's standard sound-deadening honeycomb of resin-impregnated kraft paper in thickness required to provide finished thickness of 1 inch for doors and panels and 1-1/4 inches for pilasters.

Grab-Bar Reinforcement: Provide concealed internal reinforcement for grab bars mounted on units of size and material adequate for panel to withstand applied downward load on grab bar of at least 250 lbf, when tested according to ASTM F446, without deformation of panel.

If necessary, insert requirements for internal reinforcement where small compartment-mounted accessories, such as toilet tissue dispensers, are attached; see "Stainless Steel Toilet Compartments" Article in the Evaluations.

Tapping Reinforcement: Provide concealed reinforcement for tapping (threading) at locations where machine screws are used for attaching items to units.

* + - * 1. Urinal-Screen Construction:

Retain one or more of "Flat-Panel Urinal Screen," "Integral-Flange, Wall-Hung Urinal Screen," and "Wedge-Shaped, Wall-Hung Urinal Screen" Subparagraphs below; if retaining more than one, indicate locations of each type on Drawings or by inserts. Retain second Subparagraph for government-style metal screens; coordinate with manufacturers.

Flat-Panel Urinal Screen: Matching panel construction.

Integral-Flange, Wall-Hung Urinal Screen: Similar to panel construction, with integral full-height flanges for wall attachment, and maximum 1-1/4 inches thick.

Wedge-Shaped, Wall-Hung Urinal Screen: Similar to panels, V-shaped, fabricated for concealed wall attachment, and maximum 6 inches wide at wall and minimum 1 inch wide at protruding end.

* + - * 1. Facing Sheets and Closures: Stainless-steel sheet of nominal thicknesses as follows:

Pilasters, Overhead Braced or Floor-and-Ceiling Anchored: Manufacturer's standard thickness, but not less than 0.038 inch (20 ga).

Pilasters, Floor-Anchored or Ceiling-Hung: Manufacturer's standard thickness, but not less than 0.050 inch (18 ga).

Panels: Manufacturer's standard thickness, but not less than 0.031 inch (22 ga).

Doors: Manufacturer's standard thickness, but not less than 0.031 inch (22 ga).

Retain "Flat-Panel Urinal Screens," "Integral-Flange, Wall-Hung Urinal Screens," or "Wedge-Shaped, Wall-Hung Urinal Screens" Subparagraph below if required. Retain second Subparagraph for government-style metal screens; coordinate with manufacturers.

Flat-Panel Urinal Screens: Thickness matching the panels.

Integral-Flange, Wall-Hung Urinal Screens: Manufacturer's standard thickness, but not less than 0.031 inch (22 ga).

Wedge-Shaped, Wall-Hung Urinal Screens: Manufacturer's standard thickness, but not less than 0.038 inch (20 ga).

* + - * 1. Pilaster [**Shoes**] [**and**] [**Sleeves (Caps)**]: Stainless steel sheet, not less than 0.031-inch nominal thickness and 3 inches high, finished to match hardware.

Retain "Urinal-Screen Post" Paragraph below for floor-anchored, overhead-braced, and post-to-ceiling urinal screens.

* + - * 1. Urinal-Screen Post: Manufacturer's standard post design of [**material matching the thickness and construction of pilasters**] [**or**] [**1-3/4-inch- square, aluminum tube with satin finish**]; with shoe[**and sleeve (cap)**] matching that on the pilaster.
				2. Brackets (Fittings):

Retain one of or both "Stirrup Type" and "Full-Height (Continuous) Type" Subparagraphs below; if retaining both, indicate locations of each type of fitting on Drawings or by inserts. If necessary, revise to indicate fitting requirements for specific applications (e.g., "heavy-duty" urinal-screen brackets). See the Evaluations.

Stirrup Type: Ear or U-brackets; [**chrome-plated zamac**] [**clear-anodized aluminum**] [**stainless steel**] [**chrome-plated brass**].

Full-Height (Continuous) Type: Manufacturer's standard design; [**stainless steel**] [**aluminum**].

Textured finishes are available from some manufacturers, but textures vary.

* + - * 1. Stainless Steel Finish: [**ASTM A480 No. 4 bright, directional polish**] [**Manufacturer's standard textured finish**] on exposed faces. Protect exposed surfaces from damage by application of strippable, temporary protective covering before shipment.
			1. HARDWARE AND ACCESSORIES

Retain one of two "Hardware and Accessories" Paragraphs below based upon suitability of standard or heavy-duty hardware for Project applications. Before revising first Paragraph, verify requirements of authorities having jurisdiction for accessible toilet facilities.

* + - * 1. Hardware and Accessories: Manufacturer's standard operating hardware and accessories.

Retain "Material," "Hinges," "Latch and Keeper," "Coat Hook," "Door Bumper," and "Door Pull" Subparagraphs below, or revise to suit Project.

Material: [**Chrome-plated zamac**] [**Clear-anodized aluminum**] [**Stainless steel**] [**Chrome-plated brass**].

Hinge types vary in availability among manufacturers; most offer paired hinges listed below. Paired hinges can be either preset or adjustable; for preset, insert requirements in "Hinges" Subparagraph below for hold-open angle.

Hinges: Manufacturer's standard [**paired, self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees**] [**continuous, cam type that swings to a closed or partially open position**] [**continuous, spring-loaded type**], allowing emergency access by lifting door.

Recessed latch-operating devices that are accessible to people with disabilities are available. Verify requirements of authorities having jurisdiction.

Latch and Keeper: Manufacturer's standard [**recessed**] [**surface-mounted**] latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible.

Delete Paragraph below in inmate (DOCS or OCFS) or patient (OMH or OMRDD) occupied areas.

Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories.

Include the Paragraph below to include inmate (DOCS or OCFS) or patient (OMH or OMRDD) occupied areas.

Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors.

Door Pull: Manufacturer's standard unit at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.

Before revising "Hardware and Accessories" Paragraph below, verify requirements of authorities having jurisdiction for accessible toilet facilities.

* + - * 1. Hardware and Accessories: Manufacturer's heavy-duty operating hardware and accessories.

Retain "Hinges," "Latch and Keeper," "Coat Hook," "Door Bumper," and "Door Pull" Subparagraphs below, or revise to suit Project.

Hinge types vary in availability among manufacturers; most offer paired hinges listed below. Paired hinges can be either preset or adjustable; for preset, insert requirements in "Hinges" Subparagraph below for hold-open angle.

Hinges: Manufacturer's minimum 0.062-inch (16 ga)- thick stainless steel [**paired, self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees**] [**continuous, cam type that swings to a closed or partially open position**] [**continuous, spring-loaded type**], allowing emergency access by lifting door. Mount with through-bolts.

Recessed latch-operating devices that are accessible to people with disabilities are available. Verify requirements of authorities having jurisdiction.

Latch and Keeper: Manufacturer's heavy-duty surface-mounted cast-stainless steel latch unit designed to resist damage due to slamming, with combination rubber-faced door strike and keeper, and with provision for emergency access. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible. Mount with through-bolts.

Coat Hook: Manufacturer's heavy-duty combination cast-stainless steel hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories. Mount with through-bolts.

Door Bumper: Manufacturer's heavy-duty rubber-tipped cast-stainless steel bumper at out-swinging doors. Mount with through-bolts.

Door Pull: Manufacturer's heavy-duty cast-stainless steel pull at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible. Mount with through-bolts.

Retain "Overhead Bracing" Paragraph below for overhead-braced units. Revise if specific finish is required. Generally, clear-anodized finish is provided.

* + - * 1. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile and in manufacturer's standard finish.

Revise "Anchorages and Fasteners" Paragraph below to suit Project.

* + - * 1. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized-steel, or other rust-resistant, protective-coated steel anchors compatible with related materials.

Retain Paragraph below if special cutouts are required to accommodate heating units, pipes, etc.

* + - * 1. Provide cut-outs, with concealed reinforcing, as required for convector covers, pipes, and other obstructions which interfere with pilasters or panels. Edge cut-outs and finish exposed edges to match remaining uncut edges.

Retain Subparagraph below for DOCCS, OCFS, OMH, and DOT rest areas unless otherwise directed.

* + - * 1. Fabricate panels for thru bolt fastening at fittings, brackets, stops and keepers, channels, and other locations indicated on the Drawings.
			1. MATERIALS

In this article, retain only materials that are referenced in other articles under specific units and accessories required.

* + - * 1. Aluminum Castings: ASTM B26.
				2. Aluminum Extrusions: ASTM B221.
				3. Brass Castings: ASTM B584.
				4. Brass Extrusions: ASTM B455.

Retain "Stainless Steel Sheet" and "Stainless Steel Castings" Paragraphs below for stainless steel brackets (fittings). Manufacturers make brackets (fittings) from either material and often do not state which is used.

* + - * 1. Stainless Steel Sheet: ASTM A240 or ASTM A666, Type 304, stretcher-leveled standard of flatness.
				2. Stainless Steel Castings: ASTM A743.

Insert specific zamac-alloy number in "Zamac" Paragraph below if required. Zamac alloys are termed "traditional" in ASTM B86 and have a range of mechanical properties. Some manufacturers designate particular zamac-alloy numbers in their specifications.

* + - * 1. Zamac: ASTM B86, commercial zinc-alloy die castings.
			1. FABRICATION
				1. Fabrication, General: Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories and solid blocking within panel where required for attachment of toilet accessories.

Retain applicable mounting styles in "Overhead-Braced Units," "Floor-Anchored Units," "Ceiling-Hung Units," and "Floor-and-Ceiling-Anchored Units" Paragraphs below; coordinate with mounting styles in "Stainless Steel Toilet Compartments" Article.

* + - * 1. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.
				2. Floor-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.
				3. Ceiling-Hung Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for connection to structural support above finished ceiling. Provide assemblies that support pilasters from structure without transmitting load to finished ceiling. Provide sleeves (caps) at tops of pilasters to conceal anchorage.
				4. Floor-and-Ceiling-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at tops and bottoms of pilasters. Provide shoes and sleeves (caps) at pilasters to conceal anchorage.
				5. Urinal-Screen Posts: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at[**tops and**] bottoms of posts. Provide shoes[**and sleeves (caps)**] at posts to conceal anchorage.

Retain "Door Size and Swings" Paragraph below and revise to suit Project if door sizes and swings are not shown on Drawings; verify requirements of authorities having jurisdiction.

* + - * 1. Door Size and Swings: Unless otherwise indicated, provide 24-inch- wide in-swinging doors for standard toilet compartments and 36-inch- wide out-swinging doors with a minimum 32-inch- wide clear opening for compartments designated as accessible. Provide 34-inch wide out-swinging doors with a minimum 32-inch wide clear opening for compartments designated as ambulatory accessible.

Retain Paragraph below if special cutouts are required to accommodate heating units, pipes, etc.

* + - * 1. Provide cut-outs, with concealed reinforcing, as required for convector covers, pipes, and other obstructions which interfere with pilasters or panels. Edge cut-outs and finish exposed edges to match remaining uncut edges.

Retain Subparagraph below for DOCCS, OCFS, OMH, and DOT rest areas unless otherwise directed.

* + - * 1. Fabricate panels for thru bolt fastening at fittings, brackets, stops and keepers, channels, and other locations indicated on the Drawings.
1. EXECUTION
	* + 1. EXAMINATION
				1. Examine areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.

Confirm location and adequacy of blocking and supports required for installation.

* + - * 1. Proceed with installation only after unsatisfactory conditions have been corrected.
			1. INSTALLATION
				1. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.

Maximum Clearances:

Pilasters and Panels: 1/2 inch.

Panels and Walls: 1 inch.

Retain applicable bracket types in "Stirrup Brackets" and "Full-Height (Continuous) Brackets" Subparagraphs below.

Stirrup Brackets: Secure panels to walls and to pilasters with no fewer than [**two brackets attached**] [**three brackets attached at midpoint and**] near top and bottom of panel.

Locate wall brackets so holes for wall anchors occur in masonry or tile joints.

Align brackets at pilasters with brackets at walls.

Full-Height (Continuous) Brackets: Secure panels to walls and to pilasters with full-height brackets.

Locate bracket fasteners so holes for wall anchors occur in masonry or tile joints.

Align brackets at pilasters with brackets at walls.

Retain applicable mounting styles in "Overhead-Braced Units," "Floor-Anchored Units," "Ceiling-Hung Units," and "Floor-and-Ceiling-Anchored Units" Paragraphs below.

* + - * 1. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.
				2. Floor-Anchored Units: Set pilasters with anchors penetrating not less than 2 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Level, plumb, and tighten pilasters. Hang doors and adjust so tops of doors are level with tops of pilasters when doors are in closed position.
				3. Ceiling-Hung Units: Secure pilasters to supporting structure and level, plumb, and tighten. Hang doors and adjust so bottoms of doors are level with bottoms of pilasters when doors are in closed position.
				4. Floor-and-Ceiling-Anchored Units: Secure pilasters to supporting construction and level, plumb, and tighten. Hang doors and adjust so doors are level and aligned with panels when doors are in closed position.
				5. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.
			1. ADJUSTING

Revise hinge adjustment requirements in this article to suit Project. Verify accessibility requirements of authorities having jurisdiction.

* + - * 1. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION 102113.14