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Date:

## Addendum NO. 3

PROJECT: Phase 1 Part B

Wright Ave Jail September 4, 2025

To the General Contractor, Subcontractors and Suppliers:

The following items contain additions, deletions, or modifications to the Plans and Specifications. This Addendum forms a part of the Contract Documents and shall be bound inside the cover of the Project Manual.

General Contractor shall be responsible for contacting their sub-contractors as this addendum may affect them.

Bidders shall acknowledge receipt of this Addendum on the Contractor Bid Proposal.

### **GENERAL NOTES/QUESTIONS:**

1. Food pass as included in section 083463-2.15D shall be owner furnished contractor installed see attached spec.

# **SPECIFICATIONS MANUAL:**

Replace section 083463-2.15D

## Summary of Attachments to Addendum No. 3

(Bidders check to verify receipt of all attachments.)

# **SPECIFICATIONS**

**083463 DETENTION DOORS AND FRAMES** 

END OF ADDENDUM No. 3

# SECTION 083463 - DETENTION DOORS AND FRAMES

### PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. Section Includes:
  - 1. Swinging detention doors.
  - 2. Sliding detention doors
  - 3. Detention panels.
  - 4. Detention frames.

## B. Related Requirements:

Section 087163 "Detention Door Hardware" for door hardware for detention doors.

# 1.3 DEFINITIONS

- A. Minimum-Thickness Steel: Indicated as the specified minimum thicknesses for base metal without coatings, according to NAAMM-HMMA 803.
- B. Nominal-Thickness Stainless Steel: Indicated as the specified thicknesses for which over- and under-thickness tolerances apply, according to ASTM A480/A480M.

# 1.4 COORDINATION

A. Coordinate installation of anchorages for detention frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors that are to be embedded in adjacent construction. Deliver such items to Project site in time for installation.

### 1.5 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

# 1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, core descriptions, label compliance, fire-resistance rating, and finishes for each detention door and frame type specified.
- B. Shop Drawings: In addition to requirements below, provide a schedule using same reference numbers for details and openings as those on Drawings:
  - Elevations of each door type.
  - 2. Direction of swing.
  - 3. Inmate and non-inmate sides.
  - 4. Details of doors, including vertical and horizontal edge details, and metal thicknesses.
  - 5. Details of frames, including dimensioned profiles, and metal thicknesses.

- 6. Locations of reinforcement and preparations for hardware.
- 7. Details of each different wall opening condition.
- 8. Details of anchorages, joints, field splices, and connections.
- 9. Details of food-pass openings.
- 10. Details of moldings, removable stops, and glazing.
- 11. Details of conduits, junction boxes, and preparations for electrically operated door hardware.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Anchor inspection reports, documenting inspections of built-in and cast-in anchors.
- C. Field quality-control reports, documenting inspections of installed products.
  - 1. Field quality-control certification, signed by Contractor and Detention Specialist.

# 1.8 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Security Fasteners: Furnish not less than one box for every 50 boxes or fraction thereof, of each type and size of security fastener installed.
  - 2. Tools: Provide two sets of tools for installing and removing security fasteners.

# 1.9 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
  - 1. AWS D1.1/D1.1M, "Structural Welding Code Steel."
  - 2. AWS D1.3/D1.3M, "Structural Welding Code Sheet Steel."
  - 3. AWS D1.6/D1.6M, "Structural Welding Code Stainless Steel."

# 1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver detention hollow-metal work palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.
- B. Deliver detention frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store detention hollow-metal work vertically under cover at Project site with head up. Place on minimum 4-inch- (102-mm-) high wood blocking. Provide minimum 1/4-inch (6.3-mm) space between each stacked door to permit air circulation.

## PART 2 - PRODUCTS

# 2.1 MANUFACTURERS

- A. <u>Manufacturers: Subject to compliance with requirements, provide products by one of the</u> following:
  - 1. Ceco Door Products; an ASSA ABLOY
  - 2. Custom Products Division; Chief Industries, Inc.
  - 3.. Habersham Metal Products Co
  - 4. Sweeper Metal Fabricators Corp.
  - 5. Trussbilt; an ASSA ABLOY group company
- B. Source Limitations: Obtain detention doors and frames from single source from single manufacturer.

# 2.2 REGULATORY REQUIREMENTS

- A. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.
  - Smoke- and Draft-Control Assemblies: Provide an assembly with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.
  - 2. Oversize Fire-Rated Assemblies: For units exceeding sizes of tested assemblies, provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.
- B. Fire-Rated, Borrowed-Light Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing and inspecting agency acceptable to authorities having jurisdiction for fire protection ratings indicated, based on testing according to NFPA 257 or UL 9.

# 2.3 DETENTION DOOR AND FRAME ASSEMBLIES

- A. Detention Door and Frame Assemblies: Provide detention door and frame assemblies that comply with the following, based on testing manufacturer's standard units in assemblies similar to those indicated for this Project:
  - 1. Security Grade: Assemblies pass testing requirements in ASTM F1450 for security grades specified.
  - 2. Tool-Attack Resistance: Small-tool-attack-resistance rated when tested according to UL 437 and UL 1034.
- B. Detention Frames: Provide sidelight and borrowed-light detention frames that comply with ASTM F1592 and removable stop test according to NAAMM-HMMA 863, based on testing manufacturer's standard units in assemblies similar to those indicated for this Project.

## 2.4 DETENTION DOORS

- A. General: Provide flush-design detention doors of seamless hollow construction, 2 inches (51 mm) thick unless otherwise indicated. Construct detention doors with smooth, flush surfaces without visible joints or seams on exposed faces or stile edges.
  - 1. For single-acting swinging detention doors, bevel both vertical edges 1/8 inch in 2 inches (3 mm in 51 mm).
  - 2. For sliding detention doors, square both vertical edges.
- B. Core Construction: Provide the following core construction of same material as detention door face sheets, welded to both detention door faces:
  - Steel-Stiffened Core: 0.042-inch- (1.0-mm-) thick, steel vertical stiffeners extending full door height, with vertical webs spaced not more than 4 inches (102 mm) apart, spot welded to face sheets a maximum of 3 inches (76 mm) o.c. Fill spaces between stiffeners with insulation.
  - 2. Truss-Stiffened Core: 0.013-inch- (0.3-mm-) thick, steel, truncated triangular stiffeners extending between face sheets and for full height and width of door; with stiffeners welded to face sheets not more than 3 inches (76 mm) o.c. vertically and 2-3/4 inches (70 mm) horizontally. Fill spaces between stiffeners with insulation.
- C. Vertical Edge Channels: 0.123-inch- (3.1-mm-) thick, continuous channel of same material as detention door face sheets, extending full-door height at each vertical edge; welded to top and bottom channels to create a fully welded perimeter channel. Noncontiguous channel is permitted to accommodate lock-edge hardware only if lock reinforcement is welded to and made integral with channel.
- D. Top and Bottom Channels: 0.123-inch- (3.1-mm-) thick metal channel of same material as detention door face sheets, spot welded, not more than 4 inches (102 mm) o.c., to face sheets.
  - 1. Reinforce top edge of detention door with 0.053-inch- (1.3-mm-) thick closing channel, welded so channel web is flush with top door edges.
- E. Hardware Reinforcement: Fabricate reinforcing plates from same material as detention door face sheets to comply with the following minimum thicknesses:
  - 1. Full-Mortise Hinges and Pivots: 0.187 inch (4.7 mm) thick.
  - 2. Maximum-Security Surface Hinges: 0.250 inch (6.3 mm) thick.
  - 3. Strike Reinforcements: 0.187 inch (4.7 mm) thick.
  - 4. Slide-Device Hanger Attachments: As recommended by device manufacturer.
  - 5. Lock Fronts, Concealed Holders, and Surface-Mounted Closers: 0.093 inch (2.3 mm) thick.
  - 6. All Other Surface-Mounted Hardware: 0.093 inch (2.3 mm) thick.
  - 7. Lock Pockets: 0.123 inch (3.1 mm) thick at non-inmate side, welded to face sheet.
- F. Hardware Enclosures: Provide enclosures and junction boxes for electrically operated detention door hardware of same material as detention door face sheets, interconnected with UL-approved, 1/2-inch- (12.7-mm-) diameter conduit and connectors.

- 1. Access Plates: Where indicated for wiring installation, provide access plates to junction boxes, fabricated from same material and thickness as face sheet and fastened with at least four security fasteners spaced not more than 6 inches (152 mm) o.c.
- G. Interior Detention Doors: Construct interior doors to comply with materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances indicated in NAAMM-HMMA 863 and as specified.
  - 1. Security Grade 2: Provide doors with face sheets of 12 gauge minimum thickness, cold-rolled steel.
  - 2. Security Grade 3: Provide doors with face sheets of 14 gauge minimum thickness, cold-rolled, steel.
  - 3. Security Grade 4: Provide doors with face sheets of 16 gauge minimum thickness, cold-rolled, steel.

# 2.5 DETENTION FRAMES

- A. General: Provide fully welded detention frames with integral stops, of seamless construction without visible joints or seams. Fabricate detention frames with contact edges closed tight and corners mitered, reinforced, and continuously welded full depth and width of detention frame.
- B. Stop Height: Provide minimum stop height of 0.625 inch (16 mm) for detention door openings and minimum stop height of 1-1/4 inches (32 mm) in security glazing or detention panel openings unless otherwise indicated.
  - C. Interior Detention Frames: Construct interior frames to comply with materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances indicated in NAAMMHMMA 863 and as specified.
  - 1. Security Grade 2: Provide frames fabricated from 12 gauge minimum thickness, cold-rolled steel.
  - 2. Security Grade 3: Provide frames fabricated from 14 gauge minimum thickness, cold-rolled steel.
  - 3. Security Grade 4: Provide doors with face sheets of 16 gauge minimum thickness, cold-rolled, steel.
- D. Hardware Reinforcement: Fabricate reinforcing plates from same material as detention frame to comply with the following minimum thicknesses:
  - 1. Hinges and Pivots: 0.187 inch (4.7 mm) thick by 1-1/2 inches (38 mm) wide by 10 inches (254 mm) long.
  - 2. Strikes, Flush Bolts, and Closers: 0.187 inch (4.7 mm) thick.
  - 3. Surface-Mounted Hardware: 0.093 inch (2.3 mm) thick.
  - 4. Lock Pockets: 0.123 inch (3.1 mm) thick at non-inmate side, welded to face sheet. Provide 0.123-inch- (3.1-mm-) thick, lock protection plate for attachment to lock pocket with security fasteners.

- E. Hardware Enclosures: Provide enclosures and junction boxes for electrically operated detention door hardware, interconnected with UL-approved, 1/2-inch- (12.7-mm-) diameter conduit and connectors.
  - Access Plates: Where indicated for wiring installation, provide access plates to junction boxes, fabricated from same material and thickness as face sheet and fastened with at least four security fasteners spaced not more than 6 inches (152 mm) o.c.
- F. Mullions and Transom Bars: Provide closed or tubular mullions and transom bars where indicated. Fasten mullions and transom bars at crossings and to jambs by butt welding. Reinforce joints between detention frame members with concealed clip angles or sleeves of same metal and thickness as detention frame.
- G. Jamb Anchors: Weld jamb anchors to detention frames near hinges and directly opposite on strike jamb or as required to secure detention frames to adjacent construction.
  - 1. Number of Anchors: Provide two anchors per jamb plus the following:
    - a. Detention Door Frames: One additional anchor for each 18 inches (457 mm), or fraction thereof, above 54 inches (1372 mm) in height.
    - b. Detention Frames with Security Glazing or Detention Panels: One additional anchor for each 18 inches (457 mm), or fraction thereof, above 36 inches (914 mm) in height.
  - 2. Masonry Anchors: Adjustable, perforated, strap-and-stirrup anchors to suit detention frame size; formed of same material and thickness as detention frame; with strap not less than 2 inches (51 mm) wide by 10 inches (254 mm) long.
- H. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, formed of same material and thickness as detention frame, and as follows:
  - Monolithic Concrete Slabs: Clip anchors, with two holes to receive fasteners, welded to bottom of jambs and mullions with at least four spot welds per anchor.
  - Separate Topping Concrete Slabs: Adjustable anchors with extension clips, allowing not less than 2-inch (51-mm) height adjustment, welded to jambs and mullions with at least four spot welds per anchor. Terminate bottom of detention frames at finish floor surface.
- I. Rubber Door Silencers: Except on weather-stripped detention doors, drill stops in strike jambs to receive three silencers on single-detention-door frames and drill head jamb stop to receive two silencers on double-detention-door frames. Keep holes clear during construction.
- J. Grout Guards: Provide factory-installed grout guards of same material as detention frame, welded to detention frame at back of hardware cutouts, silencers, and glazing-stop screw preparations to close off interior of openings and prevent mortar or other materials from obstructing hardware operation or installation.

# 2.6 DETENTION PANELS

A. Provide fixed detention panels of same materials, construction, and finish as specified for adjoining detention door.

# 2.7 MOLDINGS AND STOPS

- A. Provide fixed moldings on inmate side of glazed openings and removable stops on non-inmate side.
  - 1. Height: As required to provide minimum 1-inch (25-mm) glass engagement, but not less than 1-1/4 inches (32 mm).
  - 2. Fixed Moldings: Formed from same material as detention door and frame face sheets, but not less than 0.093-inch (2.3 mm) thick, and spot welded to face sheets a maximum of 5 inches (127 mm) o.c.
  - 3. Removable Stops: Formed from 0.123-inch- (3.1-mm-) thick angle, of same material as detention door face sheets. Secure with button head security fasteners spaced uniformly not more than 6 inches (152 mm) o.c. and not more than 2 inches (51 mm) from each corner, and as necessary to satisfy performance requirements. Form corners with notched or mitered hairline joints.
- B. Coordinate rabbet width between fixed and removable stops with glass or panel type and installation type indicated.

### 2.8 MATERIALS

- A. Hot-Rolled Steel Sheet: ASTM A1011/A1011M, CS (Commercial Steel), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- B. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, CS (Commercial Steel), Type B.
- C. Metallic-Coated Steel Sheet: ASTM A653/A653M, CS (Commercial Steel), Type B; with G60 (Z180) zinc (galvanized) or A60 (ZF180) zinc-iron-alloy (galvannealed) coating designation.
- D. Stainless-Steel Sheet: ASTM A240/A240M, austenitic stainless steel, Type 304.
- E. Steel Plates, Shapes, and Bars: ASTM A36/A36M.
- F. Concealed Bolts: ASTM A307, Grade A unless otherwise indicated.
- G. Masonry Anchors: Fabricated from same steel sheet as door face.
- H. Embedded Anchors: Fabricated from mild steel shapes and plates, hot-dip galvanized according to ASTM A153/A153M.
- I. Post-Installed Anchors: Torque-controlled expansion anchors.
  - 1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, unless otherwise indicated.
- J. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- K. Glazing: Comply with Section 088853 "Security Glazing" and 088813 "Fire-Rated Glazing".

- L. Grout: Comply with ASTM C476, with a slump of not more than 4 inches (102 mm) as measured according to ASTM C143/C143M.
- M. Insulation: Slag-wool-fiber/rock-wool-fiber or glass-fiber blanket insulation. ASTM C665, Type I (unfaced); with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E136 for combustion characteristics. Minimum 1.5-lb/cu. ft. (24-kg/cu. m) density.
- N. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

# 2.9 FABRICATION

- A. Fabricate detention doors and frames rigid, neat in appearance, and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for metal thickness. Weld exposed joints continuously; grind, fill, dress, and make smooth, flush, and invisible. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
- B. Tolerances: Fabricate detention doors and frames to comply with manufacturing tolerances indicated in NAAMM-HMMA 863.
- C. Removable Jamb Faces: Provide removable jamb faces where required for access to embedded anchors. Fabricate to allow secure reattachment of removable face with security fasteners.
- D. Fabricate multiple-opening detention frames with mullions that have closed tubular shapes and with no visible seams or joints.
- E. Exterior Detention Doors: Provide weep-hole openings in bottoms of detention doors to permit entrapped moisture to escape. Seal joints in top edges of detention doors against water penetration.
- F. Hardware Preparation: Factory prepare detention doors and frames to receive mortised hardware, including cutouts, reinforcement, mortising, drilling, and tapping, according to final Door Hardware Schedule and templates provided by detention door hardware supplier.
  - 1. Reinforce detention doors and frames to receive surface-mounted door hardware. Drilling and tapping may be done at Project site.
  - 2. Locate door hardware according to NAAMM-HMMA 863.
- G. Factory cut openings in detention doors.
- H. Weld components to comply with referenced AWS standard. Weld before finishing components to greatest extent possible. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.

### 2.10 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM-NOMMA 500, "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish detention doors and frames after assembly.

### 2.11 METALLIC-COATED STEEL SHEET FINISHES

- A. Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a conversion coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas and apply galvanizing repair paint, complying with SSPC-Paint 20, to comply with ASTM A780/A780M.
- B. Factory Priming for Field-Painted Finish: Apply shop primer specified in "Shop Primer" Subparagraph below immediately after surface preparation and pretreatment. Apply a smooth coat of even consistency to provide a uniform dry film thickness of not less than 0.7 mil (0.02 mm).
  - Shop Primer: Manufacturer's or fabricator's standard, fast-curing, lead- and chromate
    free primer complying with SDI A250.10 acceptance criteria; recommended by primer
    manufacturer for zinc-coated steel; compatible with substrate and field-applied finish
    paint system indicated; and providing a sound foundation for field-applied topcoats
    despite prolonged exposure.

# 2.12 STAINLESS-STEEL FINISHES

- A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- B. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.
  - 1. Run grain of directional finishes with long dimension of each piece.
  - 2. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
  - 3. Directional Satin Finish: No. 4.

## 2.13 SECURITY FASTENERS

- A. Operable only by tools produced by fastener manufacturer or other licensed fabricator for use on specific fastener type. Provide drive-system type, head style, material, and protective coating as required for assembly, installation, and strength, and as follows:
  - Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, but are not limited to, the following:
    - a. Acument Global Technologies North America
    - b. Bryca Fastener
    - c. Safety Socket LLC
    - d. Tamperproof Screw Co
    - e. Tamper-Pruf Screws
  - 2. Drive-System Type: Pinned Torx-Plus or [Pinned Torx.
  - 3. Fastener Strength: 120,000 psi (827 MPa).

- 4. Protective Coatings for Heat-Treated Alloy Steel:
  - a. Zinc phosphate with oil, ASTM F1137, Grade I, or black oxide unless otherwise indicated.

### 2.14 SEALANTS

- A. Epoxy Security Sealants: Manufacturer's standard, nonsag, tamper-resistant sealant for joints with no movement.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the work include, but are not limited to, the following:
    - a. BASF Construction Chemicals LLC, Building Systems; Epolith-G
    - b. Eucli Company (The) an RPM Company; Euco Model No 452-P
    - c. Pecora Corporation; Dnyapoxy EP-1200
  - 2. Security Sealant shall have a VOC content of 250 g/l or less when calculated according to 40 CFR 59, subpart D (EPA Method 24)

# 2.15 ACCESSORIES

- A. Concealed Bolts: ASTM A307, Grade A unless otherwise indicated.
- B. Embedded Plate Anchors: Fabricated from mild steel shapes and plates, minimum 3/16-inch (4.8 mm) thick; with minimum 1/2-inch- (12.7-mm-) diameter, headed studs welded to back of plate.
- C. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- D. Pass-Through Openings: Prepare doors for 30 Airteq 917 Food Pass / Cuff Port. Food Pass / Cuff Port shall be Owner Furnished.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations of detention frame connections before detention frame installation.
- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- D. Inspect embedded plate installations before installing detention frames to verify that plate installations comply with requirements. Prepare inspection reports.
  - 1. Remove and replace plates where inspections indicate that they do not comply with specified requirements. Reinspect after repairs or replacements are made.

- 2. Perform additional inspections to determine compliance of replaced or additional work.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory.
- B. Before installation and with shipping spreaders removed, adjust detention frames for squareness, alignment, twist, and plumbness to the following tolerances:
  - 1. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb and perpendicular to frame head.
  - 2. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of face.
  - 3. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of door rabbet.
  - 4. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a perpendicular line from head to floor.

# 3.3 INSTALLATION

- A. General: Install detention doors and frames plumb, rigid, properly aligned, and securely fastened in place, complying with Drawings, schedules, and manufacturer's written instructions.
- B. Anchorage: Set detention frame anchorage devices according to details on Shop Drawings and according to anchorage device manufacturer's written instructions.
  - 1. Masonry Anchors: Coordinate frame installation to allow for solidly filling space between frames and masonry with grout.
  - 2. Embedded Anchors: Install embedded plates in wall surrounding frame openings to match frame angle locations.
  - 3. Postinstalled Anchors: Drill holes in existing construction at locations to match bolt locations, and install bolt expansion shields or inserts.
- C. Where detention frames are fabricated in sections due to shipping limitations, assemble frames and install angle splices at each corner, of same material and thickness as detention frame, and extend at least 4 inches (102 mm) on both sides of joint.
  - 1. Field splice only at approved locations. Weld, grind, and finish as required to conceal evidence of splicing on exposed faces.
  - 2. Continuously weld and finish smooth joints between faces of abutted, multipleopening, detention frame members.
  - 3. Field Welding: Comply with the following requirements:
    - a. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
    - b. Obtain fusion without undercut or overlap.
    - c. Remove welding flux immediately.

- d. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- D. Placing Detention Frames: Install detention frames of sizes and profiles indicated. Set detention frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
  - 1. Embedded Anchors: Remove jamb faces from detention frames and set detention frames into opening. Weld steel connector angle to frame angle and to embedded plate with 1- inch- (25-mm-) long welds at each end of connector angle to form a rigid frame assembly that is solidly anchored. Reinstall jamb faces using security fasteners.
  - 2. Postinstalled Anchors: Install bolt. After bolt is tightened, weld bolt head to provide nonremovable condition. Grind, dress, and finish smooth welded bolt head.
  - 3. At fire-rated openings, install detention frames according to NFPA 80.
  - 4. Install detention frames with removable stops located on non-inmate side of opening.
- E. Grout: Fully grout detention frame jambs and heads. Completely fill space between frames and adjacent substrates. Hand trowel grout and take other precautions, including bracing detention frames, to ensure that frames are not deformed or damaged by grout forces.
- F. Security Sealant: Apply epoxy security sealant at all exposed gaps between detention frames and adjacent substrates.
- G. Swinging Detention Doors: Fit non-fire-rated detention doors accurately in their frames, with the following clearances:
  - 1. Between Doors and Frames at Jambs and Head: 1/8 inch (3.2 mm).
  - 2. Between Edges of Pairs of Doors: 1/8 inch (3.2 mm).
  - 3. At Door Sills with Threshold: 3/8 inch (9.5 mm).
  - 4. At Door Sills without Threshold: 3/4 inch (19 mm).
  - 5. Between Door Bottom and Nominal Surface of Floor Covering: 1/2 inch (12.7 mm).
- H. Sliding Detention Doors: Fit sliding detention doors in their frames according to manufacturer's written instructions and as required to allow doors to slide without binding.
- I. Fire-Rated Detention Doors: Install with clearances as specified in NFPA 80.
- J. Smoke-Control Detention Doors: Install according to NFPA 105.
- K. Installation Tolerances: Comply with installation tolerances indicated in NAAMM-HMMA 863.
- L. Glazing: Comply with installation requirements in Section 088853 "Security Glazing" unless otherwise indicated.
- 3.4 FIELD QUALITY CONTROL

- A. Inspect installed products to verify compliance with requirements. Prepare inspection reports and indicate compliance with and deviations from the Contract Documents.
- B. Detention work will be considered defective if it does not pass tests and inspections.
- C. Perform additional inspections to determine compliance of replaced or additional work.
- D. Prepare field quality-control certification endorsed by Detention Specialist that states installed products comply with requirements in the Contract Documents.
- E. For verification that construction complies with requirements, select one detention door at random from detention doors delivered to Project and have it cut in half or otherwise taken apart.
  - 1. Test Method: Verify weld strength by prying or chiseling door apart at edge seams, end channels, or stiffeners. Not more than 5 percent of welds may fail test.
    - a. If tested door fails, replace, or rework all detention doors to bring them into compliance at Contractor's expense.
    - b. If tested door passes, replace tested door at Contractor's expense.
- F. Prepare test and inspection reports.

# 3.5 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including detention doors and frames that are warped, bowed, or otherwise unacceptable.
- B. Clean grout and other bonding material off detention doors and frames immediately after installation.
- C. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas, and repair galvanizing to comply with ASTM A780/A780M.
- D. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying primer.
  - 1. After finishing smooth field welds, apply air-drying primer.

**END OF SECTION**