SECTION 125500 - DETENTION FURNITURE

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. SUMMARY
          1. Section Includes:

Detention bunks.

Detention mattresses.

Detention desks.

Detention tables.

Detention seating.

Refer to sections listed below for cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections. Sections listed below are for spec editor’s and design team coordination and are to remain as Editor’s Notes. Remove referenced specification sections within the body of the specification if not applicable to the project.

Section 102813.63 "Detention Toilet Accessories" for detention toilet and bath accessories.

Section 111916 "Detention Gun Lockers" for detention gun lockers.

* + - 1. COORDINATION

Retain "Detention Specialist" Paragraph below if retaining Detention Specialist for Project. If Detention Specialist is retained, some of requirements of this Section are responsibility of Detention Specialist rather than Contractor.

* + - * 1. Coordinate installation of anchorages for detention furniture. 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.
        2. Coordinate size and location of recesses in wall construction to receive detention furniture.
      1. PREINSTALLATION MEETINGS

Retain "Preinstallation Conference" Paragraph below if Work of this Section is extensive or complex enough to justify a conference.

* + - * 1. Preinstallation Conference: Conduct a conference at Project site.
      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).

Submit Field Quality Control reports and certifications after installation is complete.

* + - * 1. Quality Control Submittals:

Retain "Welding certificates" Paragraph below if retaining "Welding Qualifications" Paragraph in "Quality Assurance" Article.

Welding certificates.

Examination reports, documenting inspections of substrates, areas, and conditions.

Anchor inspection reports, documenting inspections of built-in and cast-in anchors.

Field quality-control reports, documenting inspections of installed products.

* + - * 1. Product Data: For each type of product.

Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for detention furniture.

Include manufacturer’s installation instructions.

* + - * 1. Sustainable Design Submittals:
        2. Shop Drawings: For detention furniture.

Include plans, elevations, sections, and attachment details.

Indicate locations, dimensions, and profiles of wall and floor reinforcements.

Indicate locations and installation details of built-in anchors.

Show elevations of detention furniture and indicate dimensions of furniture, preparations for receiving anchors, and locations of anchorage.

Show details of attachment of detention furniture to built-in anchors.

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

* + - * 1. Samples for Initial Selection: For detention furniture with factory-applied color finishes.
        2. Samples for Verification: For each type of detention furniture indicated.

Furniture: Full-size units. Approved Samples may become part of the completed Work.

Detention Mattresses: Not less than 6 inches square by full depth, including core and cover fabric.

* + - * 1. Closeout Submittals:

Maintenance Data: For detention mattresses to include in maintenance manuals.

* + - * 1. Maintenance Material Submittals:

Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

Security Fasteners: Furnish not less than one box for every 50 boxes or fraction thereof, of each type and size of security fastener installed.

Tools: Provide [**two**] <**Insert number**> sets of tools for installing and removing security fasteners.

* + - 1. QUALITY ASSURANCE

Retain "Welding Qualifications" Paragraph below if shop or field welding is required. If retaining, also retain "Welding certificates" Paragraph in "Informational Submittals" Article.

* + - * 1. Welding Qualifications: Qualify procedures and personnel in accordance with the following:

AWS D1.1, "Structural Welding Code - Steel."

AWS D1.3, "Structural Welding Code - Sheet Steel."

AWS D1.6, "Structural Welding Code - Stainless Steel."

* + - * 1. Mockups: Build mockups to set quality standards for fabrication and installation.

Retain first subparagraph below for large-scale mockup. Indicate cell represented by mockup on Drawings or draw mockup as separate element.

Build mockup of typical detention cell with furniture as shown on Drawings.

Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Director’s Representative specifically approves such deviations in writing.

* + - 1. DELIVERY, STORAGE, AND HANDLING

Retain this article if mattresses are included as part of the Work.

* + - * 1. Detention Mattresses: Deliver wrapped to provide protection during transit and Project-site storage. Protect from contact with moisture.
      1. FIELD CONDITIONS
         1. Field Measurements: Verify openings for recessed detention furniture by field measurements before fabrication.

1. PRODUCTS
   * + 1. PERFORMANCE REQUIREMENTS
       2. DETENTION BUNKS
          1. Freestanding Single Bunks:

First and second options in "Bunk Pan" Subparagraph below correspond, respectively, to 10- and 12-gage designations for uncoated steel sheet.

Bunk Pan: Formed from [**0.134-inch**] [**0.105-inch**] nominal-thickness steel sheet[**, perforated with at least six holes**].

Size: Minimum 27 inches wide by 76 inches long with bunk pan 14 inches above floor.

Retain first option in "Edges" Subparagraph below to facilitate sitting; retain second option for bunks with drawers.

Edges: Turn up edges of [**back and sides and turn down edge of front**] [**back, sides, and front**], with minimum 2-inch flanges.

Drawer: Minimum 21 inches wide by 24 inches deep by 5 inches high, with [**full-width integral pull formed from steel sheet**] [**solid-steel bar pull**]; formed from 0.134-inch nominal-thickness steel sheet.

Legs and Frames: Formed from 2-by-2-by-3/16-inch steel angle welded at connections to each other and to bunk pan; provide four legs for each bunk.

Mounting Plates: Formed from 1/4-inch thick, steel plate punched with one hole for floor anchorage; provide one mounting plate for each leg.

* + - * 1. Freestanding Double Bunks:

First and second options in "Bunk Pan" Subparagraph below correspond, respectively, to 10- and 12-gage designations for uncoated steel sheet.

Bunk Pan: Formed from [**0.134-inch**] [**0.105-inch**] nominal-thickness steel sheet[, each pan perforated with at least six holes].

Size: Minimum 27 inches wide by 76 inches long with lower bunk pan 14 inches above floor and upper bunk pan at least 49 inches above floor.

Upper Bunk Edges: Turn up edges of back and sides and turn down edge of front, with minimum 2-inch flanges.

Retain first option in "Lower Bunk Edges" Subparagraph below to facilitate sitting; retain second option for bunks with drawers. Typically drawers are for lower bunks only.

Lower Bunk Edges: Turn up edges of [**back and sides and turn down edge of front**] [**back, sides, and front**], with minimum 2-inch flanges.

Drawers: Two; minimum 21 inches wide by 24 inches deep by 5 inches high, with [**full-width integral pull formed from steel sheet**] [**solid-steel bar pull**]; formed from 0.134-inch nominal-thickness steel sheet.

Legs and Frames: Formed from 2-by-2-by-3/16-inch steel angle welded at connections to each other and to bunk pan; provide four legs for each bunk.

Mounting Plates: Formed from 1/4-inch thick, steel plate punched with one hole for floor anchorage; provide one mounting plate for each leg.

Assembly: [**Factory assembled**] [**Knocked down for field assembly**].

Insert requirements for stiffeners, ladder, and bed rail if required.

* + - * 1. Wall-Mounted Bunks:

First and second options in "Bunk Pan" Subparagraph below correspond, respectively, to 10- and 12-gage designations for uncoated steel sheet.

Bunk Pan: Formed from [**0.134-inch**] [**0.105-inch**] nominal-thickness steel sheet[**, perforated with at least six holes**].

Size: Minimum 27 inches wide by 76 inches long with bunk pan 2 inches from wall.

Retain first option in "Edges" Subparagraph below to facilitate sitting; retain second option for bunks with drawers.

Edges: Turn up edges of [**back and sides and turn down edge of front**] [**back, sides, and front**], with minimum 2-inch flanges.

Drawer: Minimum 21 inches wide by 24 inches deep by 5 inches high, with [**full-width integral pull formed from steel sheet**] [**solid-steel bar pull**]; formed from 0.134-inch nominal-thickness steel sheet.

Combination End Panel/Mounting Plate: Formed from 3/16-inch thick steel sheet welded at connections to bunk pan, with 2-inch flange for wall mounting; provide two end panel/mounting plates for each bunk.

* + - * 1. Materials:

Steel Plates, Shapes, and Bars: ASTM A36.

Cold-Rolled Steel Sheet: ASTM A1008, CS (Commercial Steel), Type B; suitable for exposed applications.

Hot-Rolled Steel Sheet: ASTM A1011, CS (Commercial Steel), Type B; free of scale, pitting, or surface defects; pickled and oiled.

* + - * 1. Finishes:

Retain "Steel Factory Prime Finish" Subparagraph below for factory-applied primer for field painting, or retain "Steel Baked-Enamel or Powder-Coat Finish" Subparagraph for factory-applied, baked-enamel or powder-coat finishes.

Steel Factory Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

Steel Baked-Enamel or Powder-Coat Finish: Clean, pretreat, and apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat to a minimum dry film thickness of 2 mils.

Color and Gloss: [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**] [**As selected by Director’s Representative from manufacturer's full range**] <**Insert color and gloss**>.

For exact finish, insert names of coating manufacturers and products.

* + - 1. DETENTION MATTRESSES
         1. General: Comply with 16 CFR 1633 and California Technical Bulletin 121 as determined by testing identical products by a testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

Core options may depend on manufacturer and product; verify with manufacturer.

* + - * 1. Core: [**Fire-resistive solid foam**] [**Fire-resistive densified polyester**] [**Cotton, with 10 percent boric acid treatment, tufted to nylon netting to retain shape**].
        2. Cover Fabric: Vinyl bonded to nylon scrim; with a minimum total weight of 10 oz./sq. yd.. Fabricate cover using [**all sealed-seam construction with radio-frequency welded inverted seams**] [**four-corner box construction with seams facing inside of detention mattress except end closing seam located at foot of mattress; sew with nylon thread in a double-lock stitch**][**, with integral pillow**].

Color: [**Clear**] [**Manufacturer's standard**].

* + - * 1. Thickness: [**4 inches**] [**6 inches**].
      1. DETENTION DESKS
         1. Single-Seat, Floor-Mounted Desks:

First and second options in "Desk Top" Subparagraph below correspond, respectively, to 10- and 12-gage designations for uncoated steel sheet; third and fourth options correspond, respectively, to 10- and 16-gage designations for stainless steel sheet.

Desk Top: Formed from [**0.134-inch** nominal-thickness steel] [**0.105-inch** nominal-thickness steel] [**0.141-inch** thick, stainless steel] [**0.062-inch** thick, stainless steel] sheet, with minimum 1-1/2-inch flanged edges.

Size: Minimum 36 inches wide by 15-1/2 inches deep.

Pedestal: Provide two storage shelves with sides and shelves formed from 0.134-inch nominal-thickness steel.

Legs: Formed from 1-1/2-inch-square by 3/16-inch thick steel tubing welded to desk top and mounting plate for an overall desk height of not less than 30 inches.

First and second options in "Seat" Subparagraph below correspond, respectively, to 10- and 14-gage designations for uncoated steel sheet; third and fourth options correspond, respectively, to 10- and 16-gage designations for stainless steel sheet.

Seat: 12-inch diameter, formed from [**0.134-inch nominal-thickness steel**] [**0.075-inch nominal-thickness steel**] [**0.141-inch thick, stainless steel**] [**0.062-inch thick, stainless steel**] sheet; reinforced with 0.134-inch nominal-thickness steel sheet, with minimum 1-1/2-inch flanged edges.

Swivel Seat Support: Formed from 1-by-2-by-0.075-inch nominal-thickness steel tubing, 2-inch-OD-by-0.075-inch nominal-thickness steel tubing, or 3/8-inch thick, steel plate bar; with 1/2-inch pivot pin welded to legs.

Towel Bar: Formed from 1/4-by-1-1/2-inch [**steel**] [**stainless steel**] plate, mounted on one side of desk.

Mounting Plates: Formed from 1/4-inch thick, steel plate punched with one hole for floor anchorage; provide one mounting plate for each leg.

* + - * 1. Wall-Mounted Desk and Seat:

First option in "Desk" Subparagraph below corresponds to 10-gage designation for uncoated steel sheet; second option corresponds to 10-gage designation for stainless steel sheet.

Desk: Formed from [**0.134-inch nominal-thickness steel**] [**0.141-inch thick, stainless steel**] sheet, with minimum 1-1/2-inch flanged edges.

Size: Minimum [**12 inches wide by 18 inches deep**] [**18 inches wide by 18 inches deep**] [**24 inches wide by 18 inches deep**] [**30 inches wide by 20 inches deep**].

Third option in "Seat" Subparagraph below corresponds to 10-gage designation for uncoated steel sheet; fourth option corresponds to 10-gage designation for stainless steel sheet.

Seat: Minimum 12 inches wide by [**16 inches**] [**18 inches**] deep; formed from [**0.134-inch nominal-thickness steel**] [**0.141-inch thick, stainless steel**] sheet, with minimum 1-1/2-inch flanged edges.

* + - * 1. Materials:

Steel Plates, Shapes, and Bars: ASTM A36.

Cold-Rolled Steel Sheet: ASTM A1008, CS (Commercial Steel), Type B; suitable for exposed applications.

Hot-Rolled Steel Sheet: ASTM A1011, CS (Commercial Steel), Type B; free of scale, pitting, or surface defects; pickled and oiled.

Stainless Steel Sheet, Strip, Plate, and Flat Bars: ASTM A666 or ASTM A240, austenitic stainless steel, Type 304.

Steel Tubing: ASTM A513, Type B unless otherwise indicated; thickness indicated or required by structural loads.

* + - * 1. Finishes:

Retain "Steel Factory Prime Finish" Subparagraph below for factory-applied primer for field painting, or retain "Steel Baked-Enamel or Powder-Coat Finish" Subparagraph for factory-applied, baked-enamel or powder-coat finishes.

Steel Factory Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

Steel Baked-Enamel or Powder-Coat Finish: Clean, pretreat, and apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat to a minimum dry film thickness of 2 mils.

Color and Gloss: [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**] [**As selected by Director’s Representative from manufacturer's full range**] <**Insert color and gloss**>.

For exact finish, insert names of coating manufacturers and products.

Retain "Stainless Steel Finish" Subparagraph below if retaining stainless steel tops and seats.

Stainless Steel Finish:

Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

Polished Finish: Grind and polish surfaces to produce uniform finish, free of cross scratches.

Retain first subparagraph below for directional finishes.

Run grain of directional finishes with long dimension of each piece.

When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

Directional Satin Finish: [**No. 3**] [**No. 4**].

* + - 1. DETENTION TABLES
         1. Pedestal-Style Table:

First and second options in "Tabletop" Subparagraph below correspond, respectively, to 10- and 12-gage designations for uncoated steel sheet; third, fourth, and fifth options correspond, respectively, to 12-, 14-, and 16-gage designations for stainless steel sheet.

Tabletop: Formed from [**0.134-inch nominal-thickness steel**] [**0.105-inch nominal-thickness steel**] [**0.109-inch thick, stainless steel**] [**0.078-inch thick, stainless steel**] [**0.062-inch thick, stainless steel**] sheet; reinforced with steel shapes or steel plate, with minimum 1-1/2-inch flanged edges.

Size: Minimum [**30 inches**] [**40 inches**] wide by length required for capacity by [**30 inches**] [**35 inches**] high.

Top in "Game Top" Subparagraph below is an optional feature; retain if required.

Game Top: Engrave, or otherwise integrally incorporate, checkerboard into tabletop.

First and second options in "Seats" Subparagraph below correspond, respectively, to 12- and 14-gage designations for uncoated steel sheet; third and fourth options correspond, respectively, to 14- and 16-gage designations for stainless steel sheet.

Seats: 12-inch diameter, formed from [**0.105-inch nominal-thickness steel**] [**0.075-inch nominal-thickness steel**] [**0.078-inch thick, stainless steel**] [**0.062-inch thick, stainless steel**] sheet; reinforced with 0.134-inch nominal-thickness steel plate, with minimum 1-1/2-inch flanged edges.

Pedestal Supports: Formed from [**3-inch-square by 3/16-inch**] [**4-inch-square by 0.134-inch**] thick, steel tubing welded to top and base plate.[**Provide two pedestals for tables with capacity of more than four persons.**]

Seat Framing: Formed from [**3-inch-square by 0.134-inch**] [**3-by-2-by-3/16-inch**] thick, steel tubing welded to pedestal supports.

Base Plate: Minimum 16-inch square, 1/4-inch thick, steel plate punched with four holes for floor anchorage.

Capacity: [**Four persons**] [**Six persons**] [**Eight persons**] [**As indicated on Drawings**].

* + - * 1. Bench-Style Table:

First and second options in "Tabletop" Subparagraph below correspond, respectively, to 10- and 12-gage designations for uncoated steel sheet; third option corresponds to 12-gage designation for stainless steel sheet.

Tabletop: Formed from [**0.134-inch nominal-thickness steel**] [**0.105-inch nominal-thickness steel**] [**0.109-inch thick, stainless steel**] sheet; reinforced with steel channel frame or steel plate, with minimum 1-1/2-inch flanged edges.

Size: Minimum 24 inches wide by length required for capacity by [**30 inches**] [**35 inches**] high.

First and second options in "Benches" Subparagraph below correspond, respectively, to 10- and 12-gage designations for uncoated steel sheet; third and fourth options correspond, respectively, to 12- and 14-gage designations for stainless steel sheet.

Benches: 12 inches deep by length of tabletop, formed from [**0.134-inch nominal-thickness steel**] [**0.105-inch nominal-thickness steel**] [**0.109-inch thick, stainless steel**] [**0.062-inch thick, stainless steel**] sheet, with minimum 1-1/2-inc flanged edges.

Vertical Supports: Formed from 8-inch hot-rolled steel channels or 0.164-inch thick, formed-steel channels; braced and welded, with steel base plates punched for floor anchorage.[**Provide three supports for tables with capacity of more than four persons.**]

Bench Supports: Formed from 2-by-2-1/2-by-1/4-inch thick, steel angle or 2-inch-square by 1/4-inch thick, steel tubing; welded to vertical supports.

Floor Anchor: Formed from steel angle punched for floor anchorage.

Capacity: [**Four persons**] [**Six persons**] [**Eight persons**] [**As indicated on Drawings**].

* + - * 1. Materials:

Steel Plates, Shapes, and Bars: ASTM A36.

Cold-Rolled Steel Sheet: ASTM A1008, CS (Commercial Steel), Type B; suitable for exposed applications.

Hot-Rolled Steel Sheet: ASTM A1011, CS (Commercial Steel), Type B; free of scale, pitting, or surface defects; pickled and oiled.

Stainless Steel Sheet, Strip, Plate, and Flat Bars: ASTM A666 or ASTM A240, austenitic stainless steel, Type 304.

Steel Tubing: ASTM A513, Type B unless otherwise indicated; thickness indicated or required by structural loads.

* + - * 1. Finishes:

Retain "Steel Factory Prime Finish" Subparagraph below for factory-applied primer for field painting, or retain "Steel Baked-Enamel or Powder-Coat Finish" Subparagraph for factory-applied, baked-enamel or powder-coat finishes.

Steel Factory Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

Steel Baked-Enamel or Powder-Coat Finish: Clean, pretreat, and apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat to a minimum dry film thickness of 2 mils.

Color and Gloss: [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**] [**As selected by Director’s Representative from manufacturer's full range**] <**Insert color and gloss**>.

For exact finish, insert names of coating manufacturers and products.

Retain "Stainless Steel Finish" Subparagraph below if retaining stainless steel tops and seats.

Stainless Steel Finish:

Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

Polished Finish: Grind and polish surfaces to produce uniform finish, free of cross scratches.

Retain first subparagraph below for directional finishes.

Run grain of directional finishes with long dimension of each piece.

When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

Directional Satin Finish: [**No. 3**] [**No 4**].

* + - 1. DETENTION SEATING
         1. Floor-Mounted Stool:

First and second options in "Seats" Subparagraph below correspond, respectively, to 10- and 14-gage designations for uncoated steel sheet; third and fourth options correspond, respectively, to 11- and 16-gage designations for stainless steel sheet.

Seats: Minimum 12-inch diameter, formed from [**0.134-inch** nominal-thickness steel] [**0.075-inch** nominal-thickness steel] [**0.125-inch** thick, stainless steel] [**0.062-inch** thick, stainless steel] sheet; reinforced with 0.134-inch thick steel sheet cut to interior dimension of seat, with minimum 1-1/2-inch flanged edges.

Seat Support: Formed from steel pipe or 2-inch-OD-by-0.075-inch thick, steel tubing welded to seat reinforcement and base plate for an overall stool height of not less than 18 inches.

Base Plate: Minimum 6-by-1/4-inch thick, [**square**] [**round**] [**steel**] punched with four holes for floor anchorage.

* + - * 1. Wall-Mounted Stool:

First and second options in "Seat" Subparagraph below correspond, respectively, to 10- and 14-gage designations for uncoated steel sheet; third and fourth options correspond, respectively, to 11- and 14-gage designations for stainless steel sheet.

Seat: Minimum 12-inch diameter, formed from [**0.134-inch** nominal-thickness steel] [**0.075-inch** nominal-thickness steel] [**0.125-inch** thick, stainless steel] [**0.078-inch** thick, stainless steel] sheet; reinforced with 0.134-inch thick steel sheet cut to interior dimension of seat, with minimum 1-1/2-inch flanged edges.

Seat Support: Formed from 1-by-2-by-0.075-inch thick, steel tubing; 2-inch-OD-by-0.075-inch thick, steel tubing; or 3/8-inch thick, steel plate bar; welded to seat reinforcement and wall bracket.

Swivel Wall Bracket: Minimum 1/2-inch pivot pin, with 3/8-inch thick, steel plate [**for welding to embedded steel plate**] [**for welding to steel wall**] [**punched with four holes for wall anchorage**].

* + - * 1. Floor-Mounted Bench:

First and second options in "Bench Top" Subparagraph below correspond, respectively, to 10- and 12-gage designations for uncoated steel sheet; third and fourth options correspond, respectively, to 10- and 12-gage designations for stainless steel sheet.

Bench Top: Formed from [**0.134-inch** nominal-thickness steel] [**0.105-inch** nominal-thickness steel] [**0.141-inch** thick, stainless steel] [**0.109-inch** thick, stainless steel] sheet, with minimum 1-1/2-inch flanged edges.

Size: Minimum 12 inches deep by [**48 inches**] [**60 inches**] [**72 inches**] [**96 inches**] long.

Supports: Formed from 0.164-inch thick, formed-steel channels or 2-1/2-inch-OD-by-0.0677-inch thick, steel tubing; welded to bench and base plate for an overall bench height of not less than 18 inches. [**Provide three supports for benches with length of more than 72 inches.**]

Some manufacturers offer handcuff rings as an option. Verify with manufacturer and retain "Handcuff Ring" Subparagraph below if required.

Handcuff Ring: Formed from 3/8-inch diameter, stainless steel rod;welded to [**front**] [**back**] [**both sides**] of each support.

Retain "Base Plates" Subparagraph below if required for product selected.

Base Plates: Minimum 8-inch-square by 1/4-inch thick, steel plate punched with four holes for floor anchorage.

Capacity: [**Four persons**] [**Six persons**] [**Eight persons**] [**As indicated on Drawings**].

* + - * 1. Materials:

Steel Plates, Shapes, and Bars: ASTM A36.

Cold-Rolled Steel Sheet: ASTM A1008, CS (Commercial Steel), Type B; suitable for exposed applications.

Hot-Rolled Steel Sheet: ASTM A1011, CS (Commercial Steel), Type B; free of scale, pitting, or surface defects; pickled and oiled.

Stainless Steel Sheet, Strip, Plate, and Flat Bars: ASTM A666 or ASTM A240, austenitic stainless steel, Type 304.

Steel Tubing: ASTM A513, Type B unless otherwise indicated; thickness indicated or required by structural loads.

Round steel tubing and pipe are sized differently. Tubing is designated by OD and wall thickness. Pipe is designated by nominal pipe size (NPS) and weight or schedule number.

Steel Pipe: ASTM A53, Standard Weight (Schedule 40) unless another weight is indicated or required by structural loads.

* + - * 1. Finishes:

Retain "Steel Factory Prime Finish" Subparagraph below for factory-applied primer for field painting, or retain "Steel Baked-Enamel or Powder-Coat Finish" Subparagraph for factory-applied, baked-enamel or powder-coat finishes.

Steel Factory Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

Steel Baked-Enamel or Powder-Coat Finish: Clean, pretreat, and apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat to a minimum dry film thickness of 2 mils.

Color and Gloss: [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**] [**As selected by Director’s Representative from manufacturer's full range**] <**Insert color and gloss**>.

For exact finish, insert names of coating manufacturers and products.

Retain "Stainless Steel Finish" Subparagraph below if retaining stainless steel tops and seats.

Stainless Steel Finish:

Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

Polished Finish: Grind and polish surfaces to produce uniform finish, free of cross scratches.

Retain first subparagraph below for directional finishes.

Run grain of directional finishes with long dimension of each piece.

When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

Directional Satin Finish: [**No. 3**] [**No 4**].

* + - 1. FABRICATION
         1. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
         2. Coordinate dimensions and attachment methods of detention furniture with those of adjoining construction to produce integrated assemblies with closely fitting joints and with edges and surfaces aligned unless otherwise indicated.
         3. Shear and punch metals cleanly and accurately. Remove burrs.
         4. Form and grind edges and corners to be free of sharp edges or rough areas.

Fabricate detention furniture with no more than 1/32-inch gap between component materials. Weld edges that cannot be crimped to meet tolerance so as to provide a seamless joint with no place for concealment of contraband.

* + - * 1. Form metal in maximum lengths to minimize joints. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing the Work.
        2. Weld corners and seams continuously to comply with referenced AWS standard and the following:

Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.

Obtain fusion without undercut or overlap.

Remove welding flux immediately.

Finish exposed welds and surfaces smooth and blended at exposed connections so that no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

Weld before finishing components to greatest extent possible. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.

* + - * 1. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space anchoring devices to secure detention furniture rigidly in place and to support expected loads. Build in straps, plates, and brackets as needed to support and anchor fabricated items to adjoining construction. Reinforce formed-metal units as needed to attach and support other construction.
        2. Cut, reinforce, drill, and tap detention furniture as indicated to receive hardware, security fasteners, and similar items.
        3. Form exposed work true to line and level with accurate angles, surfaces, and straight sharp edges.
        4. Form exposed connections with hairline joints, flush and smooth using concealed fasteners where possible. Use exposed security fasteners of type indicated or, if not indicated, flat-head (countersunk) security fasteners. Locate joints where least conspicuous.
        5. Attach [**drawer slides**] [**shelves**] to furniture [**by welding**] [**with security fasteners**].
      1. SECURITY FASTENERS
         1. Operable only by tools produced by fastener manufacturer or other licensed fabricator for use on specific type of fastener. Drive-system type, head style, material, and protective coating as required for assembly, installation, and strength, and as follows:

Drive-System Type: Pinned Torx-Plus.

Revise "Fastener Strength" Subparagraph below if different fastener strength is required.

Fastener Strength: 120,000 psi.

Socket Button Head Fasteners:

Heat-treated alloy steel, ASTM F835.

Stainless steel, ASTM F879, Group 1 CW.

Socket Flat Countersunk Head Fasteners:

Heat-treated alloy steel, ASTM F835.

Stainless steel, ASTM F879, Group 1 CW.

Socket Head Cap Fasteners:

Heat-treated alloy steel, ASTM A574.

Stainless steel, ASTM F837, Group 1 CW.

Protective Coatings for Heat-Treated Alloy Steel:

Zinc and clear trivalent chromium where indicated.

Zinc phosphate with oil, ASTM F1137, Grade I, or black oxide unless otherwise indicated.

* + - 1. SECURITY SEALANTS
         1. Polyurethane Security Sealants: Manufacturer's standard, nonsag, tamper-resistant sealant for joints with low movement.
         2. Epoxy Security Sealants: Manufacturer's standard, non-sag, tamper-resistant sealant for joints with no movement.
      2. ACCESSORIES
         1. Concealed Bolts: ASTM A307, Grade A unless otherwise indicated.
         2. Cast-in-Place Anchors in Concrete: Fabricated from corrosion-resistant materials capable of sustaining, without failure, a load equal to [**four**] <**Insert safety factor**> times the load imposed, as determined by testing per ASTM E488, conducted by a qualified testing agency; of type indicated below:

Threaded or wedge type; galvanized ferrous castings, either ASTM A47 malleable iron or ASTM A27 cast steel. Provide bolts, washers, and shims as needed; hot-dip galvanized per ASTM A153 or ASTM F2329.

* + - * 1. Embedded Plate Anchors: Fabricated from mild steel shapes and plates, minimum 3/16 inch thick; with minimum 1/2-inch diameter, headed studs welded to back of plate.
        2. Proprietary Built-in Masonry Anchors: Fabricated from [**0.134-inch nominal-thickness steel sheet**] [**1/4-inch nominal-thickness steel plate**] [**1/2-inch nominal-thickness steel plate**] into [**6-inch**] [**8-inch**] deep blocks matching size of concrete masonry units[**; with weld nuts attached on inside to receive field-bolted attachments**].

Finish: [**Factory primed for field painting for anchors with field-welded attachments**] [**Polyester powder coat for anchors with bolted attachments**] [**Epoxy paint for anchors with bolted attachments**].

* + - * 1. Welding Rods and Bare Electrodes: Select in accordance with AWS specifications for metal alloy welded.

1. EXECUTION
   * + 1. EXAMINATION
          1. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of detention furniture.
          2. Examine roughing-in for embedded and built-in anchors to verify actual locations of detention furniture before detention furniture installation.
          3. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of detention furniture.

Retain first paragraph below if detention furniture is built-in or cast-in integrally with wall construction. Delete for in-place-construction installation.

* + - * 1. Inspect built-in and cast-in anchor installations, before installing detention furniture, to verify that anchor installations comply with requirements. Prepare inspection reports.

Remove and replace anchors where inspections indicate that they do not comply with specified requirements. Reinspect after repairs or replacements are made.

Perform additional inspections to determine compliance of replaced or additional work. Prepare inspection reports.

* + - * 1. Verify locations of detention furniture with those indicated on Shop Drawings.
        2. Proceed with installation only after unsatisfactory conditions have been corrected.
      1. INSTALLATION
         1. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing detention furniture to in-place construction. Include threaded fasteners for [**concrete**] [**and**] [**masonry**] inserts, security fasteners, and other connectors.
         2. Cutting, Fitting, and Placement: Obtain manufacturer's written approval for cutting, drilling, and fitting required for installing detention furniture. Set detention furniture accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
         3. Provide temporary bracing or anchors in formwork for items that are to be built into [**concrete**] [**or**] [**masonry**] or similar construction.
         4. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations.
         5. Field Welding: Comply with the following requirements:

Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.

Obtain fusion without undercut or overlap.

Remove welding flux immediately.

Finish exposed welds and surfaces smooth and blended at exposed connections so that no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

Fillet Welds:

Retain one of two subparagraphs below.

Minimum size of 1/8 inch by 1-1/2 inches long, spaced not greater than o.c. Fill spaces between welds with [**polyurethane**] [**epoxy**] security sealant where weld is exposed.

Continuous.

* + - * 1. Assemble detention furniture requiring field assembly with security fasteners with no exposed fasteners on exposed faces and frames.
        2. Anchor furniture [**with security fasteners**] [**by welding**] [**as indicated on Drawings**] to floors and walls at intervals required by expected loads, but not more than 12 inches o.c.

Retain subparagraphs below if retaining first option in last paragraph above.

Install anchors through backup reinforcing plates where necessary to avoid metal distortion.

Use security fasteners with head styles appropriate for installation requirements, strength, and finish of adjacent materials, except that a maximum of two different sets of tools shall be required to operate security fasteners for Project.[**Provide stainless steel security fasteners in painted materials.**]

Weld nuts onto cast-in-place anchors after installation so as to be non-removable.

* + - * 1. Apply [**polyurethane**] [**epoxy**] security sealant at all exposed gaps between detention furniture and adjacent construction greater than 1/16 inch.

Retain paragraph below if mattresses are included in Project.

* + - * 1. Install one detention mattress for each detention bunk.
      1. FIELD QUALITY CONTROL
         1. Inspect installed products to verify compliance with requirements. Prepare inspection reports and indicate compliance with and deviations from the Contract Documents.
         2. Remove and replace detention work if inspections indicate that work does not comply with specified requirements. Remove malfunctioning units; replace with new units.
         3. Perform additional inspections to determine compliance of replaced or additional work. Prepare inspection reports.

Retain option in paragraph below if field quality-control certifications are signed by the Detention Specialist.

* + - * 1. Prepare field quality-control certification[**endorsed by Detention Specialist**] that states installed products and their installation comply with requirements in the Contract Documents.
      1. CLEANING AND PROTECTION

Delete "Touchup Painting" Paragraph below if detention furniture does not require painted finish.

* + - * 1. Touchup Painting:

Retain first subparagraph below if touchup painting is included in this Section; retain second subparagraph below if touchup painting is included in Section 099123 "Interior Painting."

Immediately after erection, clean bolted connections and abraded areas of shop paint, and paint exposed areas with same material used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

Cleaning and touchup painting of bolted connections and abraded areas of shop paint are specified in Section 099123 "Interior Painting."

END OF SECTION 125500