

Hamblen County, Tennessee

Manufactured Steel Detention Cells (ITB 2021-06)

Vendor Submitted Questions with Responses

1. I cannot find the dimensions for the blueprint for the detention cells or how many, I can only see how far they go into the concrete when you install. Could you please help me with more information?

*All bid documents and information is located on Moseley Architects website.
Please refer to the bid solicitation for the information to access bid documents.*

2. Included in the Invitation to Bid document on page 4 item 3 under SCOPE OF WORK, receiving, off loading and installing cells will be the responsibility of the general contractor. In the specification section 134263.161.1.B.f.4 it states that the cell manufacturer shall have their cells installed only by prequalified detention equipment contractors. Is the DCM to arrange for and include in bid the installation by the DEC or will the installation be performed by the GC?

The DCM shall FURNISH ONLY, FOB JOBSITE Detention Cells. The general contractor shall have the responsibility of installing the detention cells by a prequalified Detention Equipment Contractor.

3. Bonding is not specified in the Invitation to Bid document but is addressed in the general bidding specifications. Are there any bonds required?

The manufacturer will be required to provide a certificate of insurance and pictures of raw and processed materials and equipment received and stored.

4. What is the current estimated delivery schedule for the manufactured steel cells?

A preliminary schedule is requested with the bid submission. However, preliminary schedules indicate that detention cells would be needed within 12 to 14 months of award.

5. On drawing A7.1.1 I did not see a reference to the toilet fixtures to discover the specified manufacturer and options. Is there another drawing that specifies the cell fixtures? Additionally, if Acorn is not specified, may they be used as an equal alternative?

Fixtures are shown on the Plumbing drawings. Acorn is already an approved manufacturer listed in the plumbing security fixtures specification.

6. We require monthly progress payments for engineering, stored materials and work completed while we are working on this project. We will be billing via an AIA form with a schedule of values. We will also provide a certificate of insurance and pictures of raw and processed materials and equipment received and stored.

Provide payment terms with your bid submission.

7. Our products can only be installed by our trained and approved modular installers. In addition, the installer really should be licensed by the State of Tennessee to install modular products.

The cells will be installed by the Detention Equipment Contractor (DEC) who will be a subcontractor to the General Contractor. Approved DEC's are listed in the specification and these questions/comments are already addressed in the specification below.

- *Section 134263.16-3.4.B states, "The DEC shall be prequalified and certified cell installer to install the Steel Detention Cells. The DCM shall provide a qualified on-site representative for initial cell installation to verify proper cell offloading and installation procedures."*
- *Section 134263.16-1.1.B.2.e states, "State Modular Product Compliance: DCM shall submit data that they are approved by the State of Tennessee to supply modular products to projects within the state," which calls for the manufacturer to be licensed in TN, but is silent on licensing of the installer. A revised specification is attached.*

8. Delivery and installation of the modular shall be per a mutually agreed upon schedule between the general contractor, the installing DEC and the manufacturer.

A preliminary schedule is required with the bid submission. Once the general contractor and the detention cell provider are selected, a scheduling conference will be conducted to allow a final schedule to be decided. See specification below.

- *This is covered in similar, but less complete detail in Section 134263.16-1.1.B.2.f.1 and .2 stating, "Delivery of the cells shall commence on a mutually agreed upon schedule" and "All cells shall be manufactured and shipped to the jobsite on a mutually agreed upon schedule."*
- *Also in Section 134263.16-3.4.A which states, "The General Contractor shall provide the DEC (Detention Equipment Contractor) and the DCM a proposed schedule of cell delivery and installation sequence before the project bid date in order for the DCM to properly bid the installation of the cells."*

9. Upon award, the manufacturer will need a letter from the County that they are purchasing the modules exclusive of sales or use taxes and agrees to pay such taxes should they be incurred.

The County will provide the successful bidder a tax exempt letter.

10. The 134263.16 specifications should note that a modular supplier to a project in Tennessee should be a licensed dealer, manufacturer and/or installer as required by the Tennessee State Fire Marshall's Office.

The revised specification is attached.

11. Drawing 6.1.5.7 indicated a 6'-0" mezzanine walkway which could require additional installation materials and expense that the installing DEC should be aware about. The mezzanine walkway should also be supplied and installed by the division 5 miscellaneous metals provider.

Please cover this in your bid submission to allow the general contractor's bidding the project to understand their materials and scope to include.

SECTION 134263.16 - MANUFACTURED STEEL DETENTION CELLS

PART 1 - GENERAL

1.1 SCOPE

- A. Owner will furnish Manufactured Steel Detention Cells as Owner-furnished, Contractor-installed (OFICI). Refer to Section 011000-1.3 "Owner-Furnished Products."
- B. This specification covers the requirements, including labor, materials, services and equipment for the manufacturing, delivering, and installing of pre-engineered, prefabricated Steel Detention Cells.
 - 1. The Detention Cell Manufacturer (DCM) shall provide the following materials:
 - a. Prefabricated housing cells - Typical and Barrier-Free.
 - b. Associated closure pieces between modular units and other adjacent wall types.
 - 2. Requirements for all bidders:
 - a. Submit current reports for all performance testing:
 - 1) ASTM F2322-12; Physical Assault on Vertical Fixed Barriers for Detentions and Correctional Facilities.
 - 2) ASTM F1450-12a; Hollow Metal Swinging Door Assemblies for Detention Facilities.
 - b. Submit performance testing for coating system: Polyurea or Powder Coating
 - 1) Polyurea:
 - a) Adhesion to galvanized steel: ASTM D4541, 800 PSI.
 - b) Tensile Strength: ASTM D638, 3000PSI.
 - c) Elongation: ASTM D638, 425 percent.
 - d) Hardness: ASTM D2240, Shore D51.
 - e) Tear Strength: ASTM D624, -580 PLI.
 - f) Abrasion Resistance: ASTM 4060, 1000g 1000 cycles.
 - g) Accelerated Weathering: ASTM G53 3000 Hrs.
 - h) Gardner Impact: ASTM 2794 160 in lbs.
 - i) Salt Fog Resistance: ASTM B117-90, 3000 Hrs.
 - 2) Powder Coating:
 - a) Pencil Hardness/Mar: ASTM D3363 2H.
 - b) Pencil Hardness/Gouge: ASTM D3363 6H.
 - c) Cross Hatch Adhesion: ASTM D3359 5B.
 - d) Salt Spray Resistance: ASTM B117.
 - e) 3000+ hours- 1/8 inch "x" scribe.
 - f) Impact Resistance: ASTM D2794 140.
 - c. To confirm experience the DCM must submit a list of at least five (5) other similar projects that are in operation in the last three (3) years using one of the above coating systems.
 - d. Seismic Performance: Cells shall safely withstand an acceleration, S_s , equal to 300 percent of gravity. Submit engineering calculations to confirm that cells meet this requirement.
 - e. **State Modular Product Compliance: DCM shall submit data ~~that~~ indicating they are approved by the State of Tennessee to supply modular products to projects within the state. DCM shall also submit data indicating the cell installer referenced in this section is licensed by the State of Tennessee to install modular products within the state. (*AD 02)**
 - f. DCM shall submit in writing compliance to the following schedule:
 - 1) Submittal package of shop drawings shall be submitted 2 weeks after Notice to Proceed is received by the DCM. (Should be 3 weeks after receipt of executed Purchase Order.)

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Architect's Project No: 590418

- 2) Delivery of the cells shall commence on a mutually agreed upon schedule.
- 3) All cells shall be manufactured and shipped to the jobsite on a mutually agreed upon schedule.
- 4) The cell manufacturer shall have their cells installed only by a pre-qualified Detention Equipment Contractor (DEC). Failure to follow this requirement with the bid will be ample reason for disqualification.

1.2 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.3 SUMMARY

- A. The Steel Detention Cell Manufacturer (DCM) shall provide the following and as indicated in PART 3 - DIVISION OF RESPONSIBILITY.

1. Security Frames.
2. Electrical and Lighting.
3. Plumbing Fixtures.
4. HVAC Grilles.
5. Furnishings.

- B. Related Sections include the following:

1. Division 03 Section "Cast In Place Concrete."
2. Division 05 Section "Metal Fabrications" for bar gratings, grating frames and supports.
3. Division 07 Section "Joint Sealants" for security sealant requirements for cell modules.
4. Division 09 Section "Paints" for field painting detention cell modules.
5. Division 11 Section "Detention Equipment" for general requirements for detention work.
6. Division 11 Section "Custom / Security Hollow Metal Work."
7. Division 11 Section "Security Glass and Glazing" for glazing in detention cell modules.
8. Division 11 Section "Security Hardware" for door hardware for detention doors.
9. Divisions 22, 23 and 26 for plumbing, fire prevention, HVAC and electrical.

1.4 APPROVED MANUFACTURERS

- A. Only **Prequalified Manufacturers** are allowed to bid this section. The substitution of other manufacturers will not be acceptable. Manufacturers who have met the minimum pre-qualifications include:

1. Steel Cell of North America; Cornelia, GA.
2. Maximum Security Systems, Inc.; Penrose, CO.
3. Approved Equal.

- B. Qualifications of other manufacturers:

1. To prequalify, firms must submit in writing, no later than 14 business days before the bid, the pre-qualification package which must include the following:
 - a. A list of 20 (minimum) other similar projects, of which 5 projects are currently in operation.
 - b. DCM must have a minimum of 10 years documented experience in the detention industry. DCM to provide experience documentation.
 - c. Manufacturer must certify that the cells will be manufactured entirely of galvanized or galvanized steel or powder coated steel plate to prevent the likelihood of deterioration or rust. DCM must submit mill certifications as proof.
 - d. Provide Tennessee State modular building approval which allows manufacturer to supply modular products within in the state.
 - e. Provide names and phone numbers for all of the DCM's security applications customers for the past 5 years.

HAMBLEN COUNTY JUSTICE CENTER
MORRISTOWN, TENNESSEE
Architect's Project No: 590418

- f. A notarized statement from the Owner or President listing the products that will be used. NO exceptions to this Bill of Materials shall be accepted after the awarding of the contract. Multiple selections are unacceptable. State in writing the intent to "comply fully with the requirements of this specification and to hold harmless the Architect, Engineer, and the Owner from omissions of a casual nature that would be considered to be an implied requirement for a fully operational modular cell system." Provide a list of compliance to and non-compliance for each section and subsection of this specification and an explanation of compliance/non-compliance for each section of this specification. Compliance/Non-compliance must be a formal listing of each section and subsection of this specification and an explanation of compliance/non-compliance for each section and subsection.
- g. A list of all outstanding or past judgments or lawsuits against the company Owners, under their current name, or any previous name or business entity.
- h. Design Engineering Capability:
 - 1) The Steel Detention Cell producer must have current design engineering capability to provide the final engineered structural design for modular steel cells and associated items and their integration into the building construction.
 - 2) Submit a list of design engineering staff, or contractor, giving name, discipline, degree and registrations or licenses, number of years' experience, years with the company, and title or position.
 - 3) Submit a list of technical support personnel for design engineering.
 - 4) Submit samples of design engineering systems (or samples of previous projects) either in AutoCad, or other equivalent engineering programs, in order to determine engineering capability.
- i. In-House Production Engineering Capability:
 - 1) The Steel Detention Cell manufacturer must have current, in-house production management, with at least ten (10) years of cell experience, capable of understanding design engineering documentation and managing the fabrication and erection process to produce the modular steel cells as engineered.
 - 2) Submit a list of key in-house production management staff giving name, credentials, number of years' experience, number of years with company, and title.
- j. Production Capability:
 - 1) The Steel Detention Cell manufacturer must have the production capacity and resources to produce the required number of units within a duration of production which is compatible with the construction schedule.
 - 2) Submit name, location, historic production rate and annual production capacity of the plant, and the total number of units produced and in the field.
 - 3) Submit the estimated quantity of work under contract and either scheduled or anticipated for the production facilities proposed for the time period of this project. List by project and estimated production dates.
- k. Performance Characteristics:
 - 1) Impact resistance: Third party certification of test results for compliance with the following:
 - a) ASTM F2322-12; Physical Assault on Vertical Fixed Barriers for Detention and Correctional Facilities.
 - b) ASTM F1450-12a; Hollow Metal Swinging Door Assemblies for Detention Facilities.

- 2) Paint Performance: Submit testing of coating system (polyurea or powder coat) that complies with the performance requirements as outlined in the "FINISH" portion of this specification.
1. DCM must submit a list of at least 5 other similar projects in the last 3 years using one of the specified coating systems to confirm experience.
 - 1) DCM shall submit testing data to confirm compliance with the performance characteristics noted herein.
 - 2) DCM shall submit coated wall section sample for review and testing.
- m. Seismic Performance: Cells shall safely withstand an acceleration, S_s , equal to 300 percent of gravity. Submit engineering calculations to confirm that cells meet this requirement.

1.5 ACTION SUBMITTALS

- A. General: Submit the following according to conditions of Contract and Division 01 Specifications Sections.
- B. Product data and instructions for manufactured materials and products. Include manufacturer's certifications and laboratory test reports as required.
- C. Submittal drawings prepared by or under supervision of a qualified licensed professional, showing complete design information for fabrication and installation of Steel Detention Cell units. Indicate cell dimensions, cross-section, elevations, material specifications, and installation details. Coordinate shop drawings with other trades to ensure compatibility of required service connections.
- D. Submit drawings of recommended bearing pads and/or special anchoring devices.
- E. Provide shipping, lifting and handling diagrams indicating point loads and net and gross loads.
- F. Provide catalog data with full performance criteria and dimension for components purchased from outside sources.
- G. Submit color samples for review and selection by the Owner. Submit samples of the cell finish, color, and texture.

1.6 WARRANTIES

- A. Provide special project warranty signed by the DCM, Installer, and Contractor agreeing to repair defective materials and workmanship of the Steel Detention Cell, installation, and related work. The cell warranty shall be conditional upon normal use of the cells. Abuse, such as riots are not considered normal use. The Warranty shall be for a period of one (1) year after substantial completion.

PART 2 - PRODUCTS

2.1 ENGINEERING AND DESIGN

- A. The DCM shall provide Professional certification for the design of the Steel Detention Cells to support superimposed dead loads and live loads as indicated on the contract drawings. The DCM shall certify the design for compliance with applicable governing Code and local Seismic requirements.
- B. The design shall include integration of Steel Detention Cells into the physical floor plan, sections, elevations, and structural design of the facility and shall assure that all systems specified in the contract documents are interfaced completely with Steel Detention Cells for a fully installed, fully working facility.

2.2 WORKMANSHIP

- A. All units shall be tightly fitted and securely fastened with no through seams or cracks.
- B. All panels and assemblies shall be inspected for correct dimensions, joint configuration, straightness, plumb and square.
- C. All exposed edges shall be chamfered or bent for finger contact.
- D. Out-to-out length, width and height dimensions of individual cell units shall be a tolerance of +/- 1/4 inch. The cumulative tolerance in any direction shall not exceed the available horizontal or vertical dimension for the entire assembly of cell units.
- E. All panel joints, ceiling joints, and cell corner joints exceeding 1/16 in. wide and 1/8 in. deep shall be filled with high strength epoxy caulk.
- F. Joints to be welded shall be cleaned and prepared as necessary to assure quality welds.
- G. Welding shall be controlled and sequenced to reduce warpage and distortion.
- H. All welds shall be free of deleterious porosity, pinholes, and cracks.
- I. Finished welds shall be smooth, weld spatter, and flux shall be removed.

2.3 STRUCTURAL COMPONENTS

- A. Framing, floors, walls, and ceilings, as required, shall be constructed of steel shapes, tubing, stiffened plates, cold-formed sections, and/or sheets stiffened with formed sections from steels conforming to design requirements to provide adequate structural strength including the ability to support loading as specified.
- B. All walls and ceiling face panels shall be 0.100 in. (12 gage) minimum thickness A-60 galvanized steel conforming to ASTM A 653-CS requirements or 3/16-inch steel plate. All structural or stiffening members shall be 0.058 in. (16 gage) minimum thickness A-60 galvanized steel conforming to ASTM A 653-LFQ requirements. All structural tubing shall be 0.115 in. (11 gage) minimum thickness steel conforming to ASTM A 653-CS and ASTM A-525, G-90 galvanized requirements.
- C. All welders shall be certified to, and all welding shall be in conformance with, the ANSI/AWS D1.1, Structural Welding Code - Steel and/or ANSI/AWS D1.3, Structural Welding Code - Sheet Steel, as applicable.
- D. Tamper resistant fasteners shall be used for all exposed fasteners where required for accessories.
- E. Mounting and bearing pads, anchorage's, shims, or spacers, shall be manufactured of stainless steel.
- F. Walls must satisfy the following performance requirements:
- G. Wall load tests: Test wall panels using ASTM F2322-12 Standard Test Methods for Physical Assault on Fixed Barriers for Detention and Correctional Facilities. Damage that enables forcible egress constitutes failure. Duplicate 8 ft. high by 8 ft. wide cell wall panels supported four sides in each half of the wall frame illustrated in ASTM F2322-12 Figure 1 and Figure 2. Deliver the following series of impacts:
 - 1. Test Wall-Solid Half (center vertical joint where applicable): Deliver 600 blows at mid-height on the vertical joint (where applicable), 600 blows at mid-height in the center of one panel, and 600 blows at any opening (where applicable).

2. Test Wall-Half with Exterior Window: Deliver 600 blows at center of window frame sill.
- H. Provide weld plates at front and rear of cells for attachment of mezzanine framing and chase framing. Design cell capable of withstanding loads imposed by mezzanine and rear chase catwalk.
- 2.4 DOORS AND FRAMES
- A. All door and frame construction shall be in accordance with Division 11 Section "Custom/Security Hollow Metal Work."
- B. Glass and Glazing:
1. All glass utilized in the Steel Detention Cell doors shall be as scheduled in the Door Schedule and shall be provided by the DEC. Provide plywood in all security door openings.
 2. Frames and doors shall be installed in prefabricated steel cells by the DCM.
- 2.5 ELECTRICAL
- A. The DCM shall provide the light fixture for the Steel Detention Cell.
- B. Light Fixture:
1. The light fixture shall be equal to a Kenall SDSA-4-0/0-45L50K-120-1/9-1-DLN with LED lamps and one (1) LED night light and shall be surface type. The housing shall be 14-gauge steel. The frame shall be 14 gauge with 0.250 polycarbonate and 0.125 prismatic acrylic overlay. The finish shall be baked-on white enamel. All fixtures will provide a minimum of 20-foot candles of light at the desk and the mirror per ACA standards.
 2. The DCM shall provide a wiring whip from the cell light to a junction box at the cell mechanical chase.
- C. The DCM shall provide conduit terminated at the mechanical for other electrical cell equipment.
- D. The Division 26 contractor shall make all permanent connections from the termination point at the cell mechanical chase.
- 2.6 PLUMBING
- A. The DCM shall provide and install the plumbing fixtures and valve mounting plates for the Steel Detention Cell. The DCM shall supply the water valves, flush valves for the plumbing fixtures separate and uninstalled. The valves shall be installed by the Division 22 Sub-contractor.
- B. Water-closet and Lavatory Plumbing Fixtures:
1. Water-closet/Lavatory Combination Unit (where indicated on Drawings): Unit shall be PWA-1. Refer to Drawings for detention toilet accessories.
 2. Barrier Free Water-closet/Lavatory Combination Unit (where indicated on Drawings): Unit shall be PWA-2. Refer to Drawings for detention toilet accessories.
- C. The flush valves for the water closets and, the water control manifolds for the lavatories and showers, p-traps, pinned cleanout plugs and other plumbing accessories for the plumbing fixtures shall be provided by the DCM separately and installed by the Division 22 Sub-contractor.

2.7 HVAC

- A. Each Steel Detention Cell shall be designed, manufactured and equipped to receive the required HVAC fixtures specified in other Divisions of this specification.
- B. The DCM shall provide the HVAC grilles. The grilles shall be pre-punched into the wall panel in compliance and coordinated with the specified Mechanical CFM requirements. Provide extended flange suitable for the connection of the HVAC duct.

2.8 THERMAL AND ACOUSTICAL INSULATION

- A. Insulation Material: Materials shall be Sprayed Foam, approved by the applicable codes of NFPA and governing authorities to provide the required thermal and acoustical performance.
- B. Cell Thermal Insulation: Walls, floors, and ceilings shall be insulated to an R-value of no less than 3.3 R's per inch.
- C. Acoustical Insulation: The walls between cells and adjacent cells shall have a Sound Transmission Classification (STC) of 53. Cell Fronts shall have a STC of 35. Back of cells to rear mechanical chase and front chase walls to mechanical chase shall have a STC of 40. Provide ignition barrier.
- D. Ignition Barrier: Provide open-cell foam insulation manufacturer's recommended ignition barrier material; either a water-based intumescent coating or alternate material acceptable to manufacturer and included in current Evaluation Service Report

2.9 FURNISHINGS, AND ACCESSORIES

- A. Steel Detention Cell Furniture: Where shown on the contract drawings as cell furniture to be so provided, the DCM shall provide and install wall mounted bunks, tables and stools. Bunks, tables, and stools shall be fabricated of ASTM 653 steel ASTM 525 grade A60 galvanized, 0.100 inch (2.7mm) minimum thickness and of the sizes shown. DCM shall include drawings which detail materials, construction, and attachment. These drawings shall be a part of the submittals as outlined in Section 1.5 herein. Fabrication of these items shall not begin prior to the Architect's approval.
- B. Fixtures, Furnishings and Accessories Load Test: Reinforce walls, stiffen furnishings, and provide connections as required to support dead loads plus single point (concentrated) static live loads as indicated, at maximum distance on each from wall and from supports for each of the following in accordance with the ASTM draft standard test method for wall mounted steel bunks, seats, and tables used in detention and correctional facilities.
 - 1. Top impact test.
 - 2. Static force test.
 - 3. Cantilever load test.
 - 4. Uplift load test.
 - 5. Wall mounted lavatory - 1000 lbf (4.45 kN)
- C. All security hardware, and associated wiring, shall be supplied and installed by others. This includes, but is not limited to, the following:
 - 1. Cell Door and Pass Locks or Slider Devices.
 - 2. Cell Door Position Switches.
 - 3. Cell Door and Pass Hinges.
 - 4. Cell Intercoms.
 - 5. Cell Surveillance Cameras.

2.10 AUTOMATIC FIRE PROTECTION SYSTEMS

- A. The DCM shall provide a prepared location for the installation of the sprinkler head by the fire protection contractor.
- B. The DCM and fire protection contractor shall coordinate to confirm the type and location of the sprinkler head to ensure the proper interface of work.
- C. The DCM shall provide a "chase" through top of lower cell to run fire protection piping.

2.11 FINISH

- A. Use one (1) of the following coating systems:

1. **Powder Coating System:**

- a. The Society for Protective Coatings Specifications SSPC-SP10 Near White Blast Clean, with 1.2 mils to 2.5 mils blast profile is utilized for interior of cell, cleaning prior to paint applied. Blasting is the required means of obtaining a clean surface suitable for application of epoxy.
- b. Painting: All cell interior steel wall and ceiling assemblies shall be finish coated on all exposed surfaces with Powder Coat Finish Coating. The coatings shall meet these criteria as a minimum:
- c. Generic: Polyester Based Powder Coat:
 - 1) General Description: A high performance, weatherable, multi- purpose, surface tolerant, coating for industrial or high performance architectural coating (HIPAC) applications. Polyester Based Powder Coatings possess outstanding over bake resistance, exterior exposure qualities, and excellent performance characteristics and mechanical properties.
 - 2) Typical Uses: Applications include sports and recreation equipment, outdoor furniture, fence, automotive and marine aftermarket parts, architectural, lawn and garden implements, institutional and detention furnishings, and various other products and materials requiring long lasting durable protective coatings.
 - 3) Application Conditions: All oil and grease, mill scale and rust, must be removed. Iron or Zinc Phosphate pretreatment is recommended for optimal performance.
- d. Cure Schedule F/MIN: 400 F/10 MIN
 - 1) Application Method: Electrostatic Spray
 - 2) Recommended Dry Film Thickness: 1.8 – 2.2
 - 3) Powder Properties:

Property	Test Method	Results
Specific Gravity	Calculated	1.63
Square Foot Coverage (ft ² /lb/mil:	Calculated	117.97
60 Degree Gloss:	ASTM D523	90+
 - 4) Typical Performance Characteristics:

Pencil Hardness/Mar:	ASTM D3363	2H
Pencil Hardness/Gouge:	ASTM D3363	6H
Cross Hatch Adhesion:	ASTM D3359	5B
Salt Spray Resistance:	ASTM B117	3000+ hours - 1/8-inch "x" scribe
Impact Resistance:	ASTM D2794	140

2. **Polyurea Elastomer Coating System:**

- a. Prior to application of coatings, all surfaces shall be cleaned and prepared in accordance with SSPC-SP1, SP6, or SP7 as required or as specified by the coating manufacturer.
- b. All interior steel surfaces of the Steel Detention Cell shall be prime coated with a Polyurea Elastomer 26 mils to 36 mils dft. The coating shall be certified to ASTM E84, Class II for surface burning characteristics and shall meet or exceed the following:

Adhesion to galvanized steel:	ASTM D4541	850 psi
Tensile Strength:	ASTM D638	3000 psi
Elongation:	ASTM D638	425 percent
Hardness:	ASTM D2240	Shore D-51
Tear Strength:		450-550 pli
Abrasion Resistance:	ASTM D4060	1000g @ 1000 cycles CS-17 (6 mg loss)

- c. All cell interior steel surfaces shall be finish coated for UV protection with a Polyester Urethane Enamel, 3 mils to 4 mils DFT, and shall meet or exceed the following:

Abrasion Resistance:	ASTM D4060	145 mg loss
Weathering:	ASTM D4587	3000 hrs Accelerated
Direct Impact:	ASTM 2794	160 in lbs.
Pencil Hardness:	ASTM D3363	2H

- d. The exterior of the cell fronts and cell door along with the cover plates shall be prime painted only with a Catalyzed Epoxy 3 mils to 4 mils DFT, and shall meet or exceed the following:

Adhesion:	ASTM D4541	500 psi
Corrosion Weathering:	ASTM D5894	3360 hours
Direct Impact Resistance:	ASTM D2794	> 140 in. lbs.
Moisture Condensation:	ASTM D4585	100F, 1250 hrs
Salt Fog Resistance:	ASTM B117	1250 hrs, Passes

- 1) Finish painting of these items shall be completed by the General Contractor.

- B. Steel Detention Cells shall be of a single color as selected by the Owner from samples submitted by the manufacturer. Available colors shall be included with cell product data Submittals.

PART 3 – DIVISION OF RESPONSIBILITY, DELIVERY AND INSTALLATION

3.1 DIVISION OF RESPONSIBILITY

A. By DCM

- 1. Engineer, design, fabricate, transport, deliver for erection by others, prefabricated steel cells and group shower units as required for a complete installation. Provide products, systems and system components of other related Sections for complete functionally operational prefabricated steel cell units.
 - a. Cells shall be 5 sided modular units with integral cell front, side and rear walls and ceiling.
- 2. Provide for any structural components for support of work. Provide all hardware for structurally anchoring and attaching prefabricated steel cell units.

HAMBLEN COUNTY JUSTICE CENTER
MORRISTOWN, TENNESSEE
Architect's Project No: 590418

3. Provide all joint sealants and security sealants for this scope of work. Caulk all interior joints, cell furniture, mirrors, plumbing fixtures, detention window and door frames, detention window glazing. Joint between cell bottom and floor shall be caulked by the Division 07 contractor.
 4. Provide hollow metal framed opening, hardware preparation and in wall support for detention hollow metal doors.
 5. Provide high build coating system of finishes of steel components and cell interiors.
 6. Provide detention furnishings, equipment and accessories for wall mounted furnishings including the writing surface, stools, bunks, one-piece mirrors, grab bar, security fasteners and security bolts.
 7. Furnish cell units with plumbing fixtures and provide for drains, and pipes. Fixtures to be stainless steel combination lavatory/water closet for standard cells and barrier free stainless-steel combination lavatory/water closet for handicap accessible. Provide carriers and flush valves for water closets and hot and cold valves for lavatory.
 8. Provide security air distribution supply and return grilles, finish painted.
 9. Provide electrical conduit, and fittings, conductors and security light fixtures. Provide 1-foot-0-inch x 4-foot-0-inch LED light fixture with LED night-light in each cell. Provide back box inside cell and conduit to junction box in chase for inmate intercom station with pull string. Provide wiring for light fixtures, terminated at fixture and pulled to junction box in rear cell chase with 18-inch pigtail and tagged for identification.
 10. Provide block out for sprinkler head in cell.
 11. Provide an acceptable quality control program that complies with the state modular program.
 12. Caulk/grouting of the cells to the slab and upper to lower cell shall be completed by Division 07 contractor.
 13. Steel plates to cover joints between cells and between cells and different construction.
- B. Items Not By DCM
1. On-site Mechanical, Plumbing, and Electrical connections to the cells.
 2. Painting exterior of cell surfaces.
- 3.2 DELIVERY SEQUENCING AND SCHEDULING
- A. The General Contractor shall provide the DCM a proposed schedule of cell delivery and installation sequence before the project bid date in order for the DCM to properly bid the installation of the cells.
 - B. The General Contractor and DCM shall coordinate the scheduling of cell delivery to the project site. A mutually approved schedule shall be determined by the General Contractor and DCM at the pre-construction meeting. The sequencing of the cell units shall conform to this schedule to properly interface the delivery and installation of cells at the proper time during the construction period.
 - C. DCM shall deliver Steel Detention Cells to the designated project site, properly protected from shipping damage. The General Contractor shall provide suitable protective coverings, devices or such methods and procedures to protect the cells from damage from the weather or vandalism. Protective measures shall remain throughout the construction period. Unloading and handling of the cell units shall be the responsibility of the cell installer. Final cell door adjustments shall be completed by the installer.
- 3.3 SITE INSPECTION
- A. The installer of the Steel Detention Cells shall examine areas and conditions under which the units are to be installed. The installer is to notify the contractor in writing of conditions

detrimental to proper completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

3.4 INSTALLATION

- A. The General Contractor shall provide the DEC (Detention Equipment Contactor) and the DCM a proposed schedule of cell delivery and installation sequence before the project bid date in order for the DCM to properly bid the installation of the cells.
- B. The DEC shall be a pre-qualified and certified cell installer to install the Steel Detention Cells. The DCM shall provide a qualified on-site representative for initial cell installation to verify proper cell offloading and installation procedures.
- C. The General Contractor shall provide adequate access for the DCM's tractor-trailer transport trucks and the cell installer's installation equipment. This access shall be suitable for the DCM's trucks, and the DEC's installation equipment to maneuver under their own power.
- D. The General Contractor shall provide adequate space and maneuvering room to install the cells. There shall be no barriers or work of others that restrict or prevent the adequate movement of the cells or the installer's installation equipment.
- E. Steel Detention Cells shall be set in place by the DEC and shall be checked for correct alignment and level. Shims shall be installed as necessary and securely fastened to the foundation. Complete all connections, trim and touch up, meeting the acceptable industry standards and manufacturer's recommendations. Provide mortar setting bed at low spots in the slab and foundation.
- F. The DEC shall install cell to cell trim plates (12 GA MIN), provided by the DCM to cover the joint between the cells. All other joints are to be trimmed by others.
- G. The General Contractor shall provide for the protection of the Steel Detention Cell's from the weather, misuse or abuse from the other trades, and vandalism once the cells are delivered and installed.
- H. Fill all voids between the bottom of the cells walls and the floor with security caulk (and backer rod if required).

END OF SECTION 134263.16