22 April 2021

ADDENDUM NUMBER ONE (1)

Project: 68 Inmate Housing Addition to
Marshall County Justice Complex
PN: 20078

FROM: Dean and Dean/Associates Architects, P.A.
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The following additions, changes, clarifications and/or substitutions to the Project Drawings as indicated, are hereby made a part of the Contract Documents. Acknowledge receipt of this Addendum by inserting its number and date in the Proposal Form where indicated.

Architectural Specifications:

**Item #1:** Table of Contents, change as follows:

Remove existing Table of Contents and replace with the attached revised Table of Contents.

Note: Added Structural sections
Added Section 087100 Door Hardware

**Item #2:** Section 072100 – Thermal Insulation, paragraph 2.03.B.9, add the following sentence to the end of paragraph 9:

3/8" recovery board equal to Greenguard PB6HD roofing cover board – extruded polystyrene.

**Item #3:** Section 087100, Door Hardware, add this section to the specification in its entirety.

**Item #4:** Section 111900, Detention Equipment General Provisions, paragraph 2.01A, change reference from Alabama Contractor's License to Mississippi Contractor's License.

**Item #5:** Section 111910, Detention Hollow Metal Doors and Frames, paragraph 1.07 Quality Assurance, change the first sentence to read as follows:

No pre-approval or substitution allowed during the bid phase. See Section 016000 Product Requirements, paragraph 3.01.

**Item #6:** Section 111920, Security Hardware, paragraph 1.04 Quality Assurance, change the second sentence to read as follows:

If the bidder elects to substitute any other products, they must follow substitutions procedures per Section 016000 paragraph 3.01.

**Item #7:** Section 111920, Security Hardware, page 22, add the following:

S-06 Hardware Set for Gate 1 on the Door and Frame Schedule. Provide "GLK1" Gate lock, Southern Steele #1050SD for fence mounting. Remainder of hardware by the fencing contractor.

**Item #8:** Section 111930, Security Glass and Glazing, paragraph 1.05 Quality Assurance, change subparagraph 1.05E to read as follows:

E. Security Glazing Substitutions: All request for substitutions must follow Section 016000 Paragraph 3.01.

Architectural Drawings:

**Item #1:** Sheet A601, Door and Frame Schedule, change the hardware set indication at the following doors to read as changed:

Door #100A – Set #1
Door #101A – Set #3
Door #111A – Set #4
Door #113A – Set #4
Door #118A – Set #3
Door #127A – Set #3
Door #140A – Set #3
Door #174A – Set #2
Door #176A – Set #2
Door #177A – Set #5

See Builders Hardware Specification Section 087100 included with this addendum for all hardware components for the sets listed above.

**Item #2:** Sheet A601, Door and Frame Schedule, change the hardware set indication at the following door to read as follows:

Gate 1 Security Hardware – 06, Gate Lock 1 - Southern Steele #1050SD x gate mounting hardware

**Item #3:** Sheet S100, replace this sheet in its entirety.

Structural

SEE ATTACHED STRUCTURAL ITEMS PROVIDED BY SPENCER ENGINEERING

Electrical

**Item #1:** Sheet E001, replace this sheet in its entirety. Edited Communications Symbol Legend.

**Item #2:** Sheet T101, replace this sheet in its entirety.

END OF ADDENDUM NUMBER ONE (1)

**Dean** and **Dean/Associates**
architects p.a.

Kenneth A. Oubre, AIA, Principal


PLEASE ATTACH THIS ADDENDUM TO THE INSIDE FRONT COVER OF EACH SET OF SPECIFICATIONS.

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**SECTION 014533**

**CODE-REQUIRED SPECIAL INSPECTIONS**

## PART 1 GENERAL

### 1.01 DESCRIPTION

A. The Contractor shall employ one or more special inspectors to provide inspections during construction and shall employ testing laboratory to perform all tests. All payments to special inspectors and testing labs shall be by Contractor. The special inspector shall be approved by the Owner, Architect, and Engineer.

B. Special inspection and testing shall meet the requirements of the International Building Code Section 1704. Requirements and forms for structural inspections and testing are included.

1. Structural Special Inspection Schedule

C. Special inspections shall be approved by the Architect and Engineer. All reports shall be sent to the Contractor, Architect, Engineer, and Owner.

D. Duties and Responsibilities

1. Signify presence at jobsite. Special inspectors should notify Contractor personnel of their presence and responsibilities at the jobsite. If required by the building official, they shall sign in on the appropriate form posted with the building permit.

2. Observe assigned work. The special inspector shall observe assigned work for conformance with the building department approved (stamped) design drawings and specifications and applicable workmanship provisions of the International Building Code. Architect/Engineer-reviewed shop drawings may be used only as an aid to inspection.

   For continuous special inspection, the special inspector shall be on site at all times observing the work requiring special inspection. Periodic inspections, if any, must have prior approval based on a separate written plan reviewed and approved by the Architect and Engineer and the registered design professional in responsible charge. Periodic inspection is intended to mean that the inspector at periodic times inspects all work performed but is not required to "witness" the work being performed.

3. Report nonconforming items. The special inspector shall bring nonconforming items to the immediate attention of the Contractor, Architect, Engineer, and Owner, and note all such items in the daily report. If any item is not resolved in a timely manner or is about to be incorporated in the work, the special inspector shall immediately notify the registered design professional in responsible charge and post a discrepancy notice.

4. Provide timely reports. The special inspector should complete written inspection reports for each inspection visit and provide the reports on a timely basis. The special inspector or inspection agency shall furnish these reports directly to the Contractor, Architect, Engineer, Owner, and others as designated (See IBC Section 1704.1.2). These reports should be organized on a daily format and may be submitted weekly at the option of the building official. These reports should include:

   a. Description of daily inspections and tests made with applicable locations;

   b. Listing of all nonconforming items;

   c. Report on how nonconforming items were resolved or unresolved as applicable; and

   d. Itemized changes authorized by the architect, engineer, and building official if not included in nonconforming items.

5. Submit final report. The special inspector or inspection agency shall submit a final signed report to the Contractor, Architect, Engineer, and Owner stating that all items requiring special inspection and testing were fulfilled and reported and, to the best of his/her

knowledge, in conformance with the approved design drawings, specifications, approved change orders and the applicable workmanship provisions of the International Building Code. Items not in conformance, unresolved items or any discrepancies in inspection coverage (i.e., missed inspections, periodic inspections when continuous were required, etc.) shall be specifically itemized in this report.

E. Contractor Responsibilities

1. Notify the special inspector. The Contractor is responsible for notifying the special inspector or agency regarding individual inspections for items listed on the attached schedule and as noted on the building department approved plans. Adequate notice shall be provided so the special inspector has time to become familiar with the project.

2. Provide access to approved plans. The contractor is responsible for providing the special inspector access to approved plans.

3. Retain special inspection records. The Contractor is also responsible for retaining at the jobsite all special inspection records completed by the special inspector upon request.

# STRUCTURAL SPECIAL INSPECTION SCHEDULE
## VERIFICATION AND INSPECTION OF FABRICATORS

| Verification and Inspection Task | | Applicable To Project? | Frequency | | Referenced Standard | Code Reference | Agent |
|---|---|---|---|---|---|---|---|
| | | | Continuous | Periodic | | | |
| 1. Applicable Element (Fabricator Certification Requirements) | | Yes | | X | | 1704.2<br>1704.3<br>1704.6 | |
| A. Structural Steel (AISC Certified For Conventional Steel Building)<br>B. Steel Joists/ Joist Girders (SJI Member)<br>C. Steel Roof Deck (SDI Member)<br>D. Precast Concrete Wall Panels (PCI Group C Manufacturer with C3 Certification)<br>E. Load Bearing Concrete Masonry (NCMA Member) | | | | | | | |
| 2. When Special Inspections Are Required By The Building Official: | | Yes | | X | | | |
| A. Fabrication And Implementation Procedure: The Special Inspector Shall Verify That The Fabricator Maintains Detailed Fabrication And Quality Control Procedures That Provide A Basis For Inspection, Control Of The Workmanship, And The Fabricator's Ability To Conform To Approved Construction Documents And Referenced Standards. The Special Inspector Shall Review The Procedures For Completeness And Adequacy Relative To The Code Requirements For The Fabricator's Scope Of Work. | | | | | | | |
| 3. When Special Inspections Are Not Required By The Building Official: | | Yes | | X | | | |
| A. Upon Completion Of Fabrication, The Approved Fabricator Shall Submit A Certificate Of The Complicance To The Building Official Stating That The Work Was Performed In Accordance With The Approved Construction Documents. | | | | | | | |

# STRUCTURAL SPECIAL INSPECTION SCHEDULE
## VERIFICATION AND INSPECTION OF SOILS

| Verification and Inspection Task | | Applicable To Project? | Frequency | | Referenced Standard | Code Reference | |
|---|---|---|---|---|---|---|---|
| | | | Continuous | Periodic | | | |
| Verify materials below footings are adequate to achieve the design bearing capacity. | | Yes | | X | Geotech. Report | 1704.7 | |
| Verify excavations are extended to proper depth and have reached proper materials. | | Yes | | X | | 1704.7 | |
| Perform classification and testing of controlled fill materials. | | Yes | | X | | 1704.7 | |
| Verify use of proper materials, densities and lift thickness during placement and compaction of controlled fill. | | Yes | X | | | 1704.7 | |
| Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly. | | Yes | | X | | 1704.7 | |

# STRUCTURAL SPECIAL INSPECTION SCHEDULE
## VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

| Verification and Inspection Task | | Applicable To Project? | Frequency | | Referenced Standard | Code Reference | |
|---|---|---|---|---|---|---|---|
| | | | Cont. | Periodic | | | |
| Inspection of reinforcing steel, including prestressing tendons, and placement. | | Yes | | X | ACI 318:3.5, 7.1-7.7 | 1913.4 | |
| Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5b. | | Yes | | | AWS D1.4 ACI 318: 3.5.2 | | |
| Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased. | | Yes | X | | | 1911.5 | |
| Verifying use of required design mix. | | Yes | | X | ACI 318:Ch.4, 5.2-5.4 | 1904.2.2, 1913.2, 1913.3 | |
| At the time fresh concrete is sampled to fabricate specimens for strength tests perform slump and air content tests, and determine the temperature of the concrete. | | Yes | X | | ASTM C 172, ASTM C 31, ACI 318: 5.6, 5.8 | 1913.10 | |
| Inspection of concrete and shotcrete placement for proper application techniques. | | Yes | X | | ACI 318: 5.9, 5.10 | 1913.6, 1913.7, 1913.8 | |
| Inspection for maintenance of specified curing temperature and techniques. | | Yes | | X | ACI 318: 5.11-5.13 | 1913.9 | |
| Inspection of prestressed concrete:<br>a. Application of prestressing forces.<br>b. Grouting of bonded prestressing tendons in the seismic-force-resisting system. | | No | X<br>X | | ACI 318: 18.20, ACI 318: 18.18.4 | | |
| Erection of precast concrete members. | | No | | X | ACI 318: Ch. 16 | | |
| Verification of in-situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs. | | No | | X | ACI 318: 6.2 | | |
| Inspect formwork for shape, location and dimensions of the concrete member being formed | | No | | X | ACI 318: 6.1.1 | | |

# STRUCTURAL SPECIAL INSPECTION SCHEDULE
## VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION-TABLE 1

| Verification and Inspection Task | | Applicable To Project? | Frequency | | Referenced Standard | Code Reference | |
|---|---|---|---|---|---|---|---|
| | | | Cont. | Periodic | | | |
| 1. Material verification of high-strength bolts, nuts and washers: | | | | | | | |
| a. Identification markings to conform to ASTM standards specified in the approved construction documents. | | Yes | | X | Applicable ASTM material specifications; AISC 360, Section A3.3 | | |
| b. Manufacturer's certificate of compliance required. | | Yes | | X | | | |
| 2. Inspection of high-strength bolting: | | | | | | | |
| a. Bearing-type connections. | | Yes | | X | AISC 360, Section M2.5 | 1704.3.3 | |
| b. Slip-critical connections. | | Yes | X | X | | | |
| 3. Material verification of structural steel: | | | | | | | |
| a. Identification markings to conform to ASTM standards specified in the approved construction documents. | | Yes | | | ASTM A 6 or ASTM A 568 | 1708.4 | |
| b. Manufacturer's certified mill test reports. | | Yes | | | ASTM A.6 or ASTM A 568 | | |
| 4. Material verification of weld filler materials: | | | | | | | |
| a. Identification markings to conform to AWS specification in the approved construction documents. | | Yes | | | AISC 360, Section A3.5 | | |
| b. Manufacturer's certificate of compliance required. | | Yes | | | | | |

# STRUCTURAL SPECIAL INSPECTION SCHEDULE
## VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION-TABLE 2

| Verification and Inspection Task | | Applicable To Project? | Frequency | | Referenced Standard | Code Reference | |
|---|---|---|---|---|---|---|---|
| | | | Cont. | Periodic | | | |
| 5. Inspection of welding: | | | | | | | |
| a. Structural steel: | | | | | | | |
| 1) Complete and partial penetration groove welds. | | Yes | X | | | | |
| 2) Multipass fillet welds. | | Yes | X | | AWS D1.1 | 1704.3.1 | |
| 3) Single-pass fillet welds > 5/16" | | Yes | X | | | | |
| 4) Single-pass fillet welds ≤ 5/16" | | Yes | | X | | | |
| 5) Floor and roof deck welds. | | Yes | | X | AWS D1.3 | | |
| b. Reinforcing steel: | | | | | | | |
| 1) Verification of weldability of reinforcing steel other than ASTM A 706. | | No | | X | | | |
| 2) Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement. | | No | X | | AWS D1.4, ACI 318: 3.5.2 | | |
| 3) Shear reinforcement. | | No | X | | | | |
| 4) Other reinforcing steel. | | No | | X | | | |
| 6. Inspection of steel frame joint details for compliance with approved construction documents: | | | | X | | | |
| a. Details such as bracing and stiffening. | | Yes | | | | 1704.3.2 | |
| b. Member locations. | | Yes | | | | | |
| c. Application of joint details at each connection. | | Yes | | | | | |

# STRUCTURAL SPECIAL INSPECTION SCHEDULE

## VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION - LEVEL 1

### TABLE 1

| Verification and Inspection Task | | Applicable To Project? | Frequency | | Referenced Standard | Code Reference | |
|---|---|---|---|---|---|---|---|
| | | | Continuous | Periodic | | | |
| 1. As masonry construction begins, the following shall be verified to ensure compliance: | | | | | | | |
| a. Proportions of site-prepared mortar. | | Yes | | X | ACI 530.A Art. 2.6A | | |
| b. Construction of mortar joints. | | Yes | | X | ACI 530.1 Art. 3.3B | | |
| c. Location of reinforcement, connectors, prestressing tendons and anchorages. | | No | | X | ACI 530.1 Art. 3.4, 3.6A | | |
| d. Prestressing technique. | | No | | X | ACI 530.1 Art 3.6B | | |
| e. Grade and size of prestressing tendons and anchorages. | | No | | X | ACI 530.1 Art. 2.4B, 2.4H | | |
| 2. The inspection program shall verify: | | | | | | | |
| a. Size and location of structural elements. | | Yes | | X | ACI 530.1 Art. 3.3G | | |
| b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction. | | Yes | | X | ACI 530 Sec. 1.2.2(e), 2.1.4, 3.1.6 | | |
| c. Specified size, grade and type of reinforcement. | | Yes | | X | ACI 530 Sec. 1.13, ACI 530.1 Art. 2.4, 3.4 | | |
| d. Welding of reinforcing bars. | | No | X | | ACI 530 Sec. 2.1 10.7.2, 3.3.3.4(b) | | |
| e. Protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F). | | Yes | | X | ACI 530.1 Art. 1.8C, 1.8D | Sec 2104.3, 2104.4 | |
| f. Application and measurement of prestressing force. | | No | | X | ACI 530.1 Art. 3.6B | | |

# STRUCTURAL SPECIAL INSPECTION SCHEDULE

## VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION - LEVEL 1

## TABLE 2

| Verification and Inspection Task | | Applicable To Project? | Frequency | | Referenced Standard | Code Reference | |
|---|---|---|---|---|---|---|---|
| | | | Continuous | Periodic | | | |
| 3. Prior to grouting, the following shall be verified to ensure compliance: | | | | | | | |
| a. Grout space is clean. | | Yes | | X | ACI 530.1 Art. 3.2D | | |
| b. Placement of reinforcement and connectors and prestressing tendons and anchorages. | | Yes | | X | ACI 530 Sec. 1.13, ACI 530.1 Art. 3.4 | | |
| c. Proportions of site-prepared grout and prestressing grout for bonded tendons. | | Yes | | X | ACI 530.1 Art. 2.6B | | |
| d. Construction of mortar joints. | | Yes | | X | ACI 530.1 Art. 3.3B | | |
| 4. Grout placement shall be verified to ensure compliance with code and construction document provisions. | | Yes | X | | ACI 530.1 Art 3.5 | | |
| a. Grouting of prestressing bonded tendons. | | No | X | | ACI 530.1 Art. 3.6C | | |
| 5. Preparation of any required grout speciments, mortar speciments and/or prisms shall be observed. | | Yes | X | | ACI 530.1 Art. 1.4 | Sec 2105.2.2, 2105.3 | |
| 6. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified. | | Yes | | X | ACI 530.1 Art. 1.5 | | |

## SECTION 031000

## CONCRETE FORMING AND ACCESSORIES

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Formwork for cast-in place concrete, with shoring, bracing and anchorage.

B. Openings for other work.

C. Form accessories.

D. Form stripping.

### 1.02 PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION

A. Section 033000 - Cast-In-Place Concrete.

### 1.03 RELATED SECTIONS

A. Section 032000 - Concrete Reinforcing.

B. Section 033000 - Cast-in-Place Concrete.

### 1.04 REFERENCES

A. ACI 301 - Structural Concrete for Buildings.

B. ACI 318 - Building Code Requirements for Reinforced Concrete.

C. ACI 347 - Recommended Practice For Concrete Formwork.

D. PS 1 - Construction and Industrial Plywood.

### 1.05 DESIGN REQUIREMENTS

A. Design, engineer and construct formwork, shoring and bracing to conform to code requirements; resultant concrete to conform to required shape, line and dimension.

### 1.06 QUALITY ASSURANCE

A. Perform Work in accordance with ACI 347.

B. Maintain one copy of document on site.

### 1.07 QUALIFICATIONS

A. Design formwork under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State of Mississippi.

### 1.08 REGULATORY REQUIREMENTS

A. Conform to International Building Code for design, fabrication, erection and removal of formwork.

## 1.09 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect and handle products to site.

## 1.10 COORDINATION

A. Coordinate this Section with other Sections of work which require attachment of components to formwork.

B. If formwork is placed after reinforcement resulting in insufficient concrete cover over reinforcement before proceeding, request instructions from Architect/Engineer.

# PART 2 PRODUCTS

## 2.01 WOOD FORM MATERIALS

A. Softwood Plywood: PS 1, B Grade, Group 1, Exterior.

B. Softwood Plywood: PS 1, HDO, Group I Exterior.

C. Lumber: No. 2 grade; with grade stamp clearly visible.

## 2.02 PREFABRICATED FORMS

A. Preformed Steel Forms: Tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished surfaces. Special care shall be used at areas of exposed concrete.

## 2.03 FORMWORK ACCESSORIES

A. Form Ties: Snap-off type, adjustable length, free of defects that could leave holes larger than 1/2 inch in concrete surface.

B. Form Release Agent: Colorless mineral oil which will not stain concrete, or absorb moisture, or impair natural bonding or color characteristics of coating intended for use on concrete.

C. Corners: Chamfer type; 3/4 x 3/4 inch.

D. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required, of sufficient strength and character to maintain formwork in place while placing concrete.

## 2.04 CARDBOARD VOIDS AND RETAINERS

A. Cardboard voids shall be by Savway Carton Forms, Inc. or approved equal. Forms shall be impregnated with parafin and laminated with moisture resistant adhesive. Size as shown on drawings. Forms shall be designed to carry 1,000 pounds per square foot.

B. Plastic retainers shall be by Savway Carton Forms, Inc. or approved equal.

# PART 3 EXECUTION

## 3.01 EXAMINATION

A. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

**3.02 EARTH FORMS**

A. Earth forms are permitted for spread footings, interior grade beams and the interior face of perimeter grade beams. The exterior face of perimeter grade beams shall be formed.

**3.03 ERECTION - FORMWORK**

A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 301.

B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to over stressing by construction loads.

C. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.

D. Align joints and make watertight. Keep form joints to a minimum.

E. Formwork ties for grade beams with exposed exterior shall be uniformly spaced horizontally and vertically.

F. Obtain approval before framing openings in structural members which are not indicated on Drawings.

G. Provide chamfer strips on external corners of beams, columns and walls.

**3.04 APPLICATION - FORM RELEASE AGENT**

A. Apply form release agent on formwork in accordance with manufacturer's recommendations.

B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.

C. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings which are effected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

**3.05 INSERTS, EMBEDDED PARTS, AND OPENINGS**

A. Provide formed openings where required for items to be embedded in passing through concrete work.

B. Locate and set in place items which will be cast directly into concrete.

C. Coordinate with work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other Work.

D. Install accessories in accordance with manufacturer's instructions, straight, level, and plumb. Ensure items are not disturbed during concrete placement.

E. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain.

F. Close temporary openings with tight fitting panels, flush with inside face of forms, and neatly fitted so joints will not be apparent in exposed concrete surfaces.

**3.06 FORM CLEANING**

A. Clean forms as erection proceeds, to remove foreign matter within forms.

B. Clean formed cavities of debris prior to placing concrete.

C. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.

D. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms, unless formwork and concrete construction proceed within heated enclosure. Use compressed air or other means to remove foreign matter.

**3.07 FORMWORK TOLERANCES**

A. Construct formwork to maintain tolerances required by ACI 301.

**3.08 FIELD QUALITY CONTROL**

A. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and items are secure.

B. Do not reuse wood formwork more than 6 times for concrete surfaces to be exposed to view.

**3.09 FORM REMOVAL**

A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.

B. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.

C. Store removed forms in manner that surfaces to be in contact with fresh concrete will not be damaged. Discard damaged forms.

**3.10 SCHEDULE**

A. Grade B plywood for areas not exposed.

B. HDO plywood for Grade Beams and wall to be exposed.

C. Steel column forms for exposed concrete columns.

**END OF SECTION**

**SECTION 032000**

**CONCRETE REINFORCING**

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Reinforcing steel bars and accessories for cast-in-place concrete.

### 1.02 RELATED SECTIONS

A. Section 031000 - Concrete Forming and Accessories.

B. Section 033000 - Cast-in-Place Concrete.

C. Section 014533 - Code-Required Special Inspections.

### 1.03 REFERENCES

A. ACI 301 - Structural Concrete for Buildings.

B. ACI 318 - Building Code Requirements for Reinforced Concrete.

C. ACI SP-66 - American Concrete Institute - Detailing Manual.

D. ANSI/ASTM A185 - Welded Steel Wire Fabric for Concrete Reinforcement.

E. ANSI/AWS D1.4 - Structural Welding Code for Reinforcing Steel.

F. ASTM A615 - Deformed and Plain Billet Steel Bars for Concrete Reinforcement.

G. AWS D12.1 - Welding Reinforcement Steel, Metal Inserts and Connections in Reinforced Concrete Construction.

H. CRSI - Concrete Reinforcing Steel Institute - Manual of Practice.

I. CRSI 63 - Recommended Practice for Placing Reinforcing Bars.

J. CRSI 65 - Recommended Practice for Placing Bar Supports, Specifications and Nomenclature.

### 1.04 SUBMITTALS

A. Shop Drawings: Indicate bar sizes, spacings, locations, and quantities of reinforcing steel and wire fabric, bending and cutting schedules, and supporting and spacing devices.

B. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

### 1.05 QUALITY ASSURANCE

A. Contractor Quality Assurance:
   1. Perform Work in accordance with CRSI 63, 65 and Manual of Practice, ACI 301, ACI SP-66, and ACI 318.
   2. Maintain one copy of each document on site.
   3. Submit certified copies of mill test report of reinforcement materials analysis.

## 1.06 STRUCTURAL SPECIAL INSPECTION AND TESTING

A. Contractor shall coordinate and schedule in a timely manner with the testing laboratory to perform the following inspections and tests:
   1. Inspection of reinforcing steel for size, spacing, location and support.
   2. Inspection of proper reinforcing steel concrete coverage.
   3. Submit certified copies of mill test report of reinforcement materials analysis.
   4. Welder's Certificates: If approved by the Engineer of Record, submit Certificates, certifying welders employed on the Work, verifying AWS qualification within the previous 12 months.

## 1.07 QUALIFICATIONS

A. Welders' Certificates: Submit Certificates, certifying welders employed on the Work, verifying AWS qualification within the previous 12 months.

## 1.08 COORDINATION

A. Coordinate with placement of formwork, formed openings and other Work.

# PART 2 PRODUCTS

## 2.01 REINFORCEMENT

A. Reinforcing Steel: ASTM A615, 60 ksi yield grade; deformed billet steel bars.

B. Fiber Reinforcement: Similar and equal to Fibermesh InForce as manufactured by Synthetic Industries. Application rate shall be 1.5 pounds per cubic yard. Provide where shown on drawings.

## 2.02 ACCESSORY MATERIALS

A. Tie Wire: Minimum 16 gage annealed type.

B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions.

C. Special Chairs, Bolsters, Bar Supports, Spacers Adjacent to Weather Exposed Concrete Surfaces: Plastic coated steel type; size and shape as required.

## 2.03 FABRICATION

A. Fabricate concrete reinforcing in accordance with ACI 318.

B. When approved by Engineer of Record, weld reinforcement in accordance with ANSI/AWS D1.4 and ANSI/AWS D12.1.

C. Locate reinforcing splices not indicated on drawings, at point of minimum stress.

# PART 3 EXECUTION

## 3.01 PLACEMENT

A. Place, support and secure reinforcement against displacement. Do not deviate from required position.

B. Do not displace or damage vapor barrier.

C. Accommodate placement of formed openings. Do not cut bars.

D. Maintain concrete cover around reinforcing as per ACI 318.

**END OF SECTION**

**SECTION 033000**

**CAST-IN-PLACE CONCRETE**

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Cast-in-place concrete building members, floors, foundation walls, grade beams, footings, and etc.

B. Floors and slabs on grade.

C. Control, expansion and contraction joint devices associated with concrete work, including joint sealants.

D. Site concrete.

### 1.02 RELATED SECTIONS

A. Section 031000 - Concrete Forming and Accessories.

B. Section 032000 - Concrete Reinforcing.

C. Section 014533 - Code-Required Special Inspections.

### 1.03 REFERENCES

A. ACI 301 - Structural Concrete for Buildings.

B. ACI 302 - Guide for Concrete Floor and Slab Construction.

C. ACI 304 - Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete.

D. ACI 305R - Hot Weather Concreting.

E. ACI 306R - Cold Weather Concreting.

F. ACI 308 - Standard Practice for Curing Concrete.

G. ACI 318 - Building Code Requirements for Reinforced Concrete.

H. ANSI/ASTM D1190 - Concrete Joint Sealer, Hot-Poured Elastic Type.

I. ANSI/ASTM D1751 - Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).

J. ASTM C33 - Concrete Aggregates.

K. ASTM C94 - Ready-Mixed Concrete.

L. ASTM C150 - Portland Cement.

M. ASTM C260 - Air Entraining Admixtures for Concrete.

N. ASTM C494 - Chemicals Admixtures for Concrete.

O. ASTM C618 - Fly Ash and Raw or Calcinated Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.

**1.04 SUBMITTALS**

A. Product Data: Provide data on joint devices, attachment accessories and admixtures.

B. Manufacturer's Installation Instructions: Indicate installation procedures and interface required with adjacent Work.

**1.05 PROJECT RECORD DOCUMENTS**

A. Accurately record actual locations of embedded utilities and components which are concealed from view.

**1.06 QUALITY ASSURANCE**

A. Contractor Quality Assurance:
   1. Perform Work in accordance with ACI 301.
   2. Maintain one copy of each document on site.
   3. Acquire cement and aggregate from same source for all work.
   4. Conform to ACI 305R when concreting during hot weather.
   5. Conform to ACI 306R when concreting during cold weather.

## 1.07 STRUCTURAL SPECIAL INSPECTION AND TESTING

A. Contractor shall coordinate and schedule in a timely manner with the testing laboratory to perform the following tests and inspections. Tests shall be performed in accordance with ACI 301.
   1. Verify correct design mix is provided.
   2. Perform a slump test as deemed necessary for each load of concrete. Record if water or admixtures are added to the concrete at the jobsite. Perform additional slump tests after job site adjustments.
   3. Mold four specifications per set for compressive testing; one set for each 100 or less cubic yards of each class concrete placed per day. Test one at 7 days, 2 at 28 days, and hold one as a spare to be broken as directed by the Architect/Engineer if compressive strengths do not appear adequate.
   4. For each set of molded specimens record the following:
      a) Slump
      b) Temperature, ambient and concrete
      c) Air content
      d) Location of placement
      e) Verification of correct design mix
   5. Inspection of concrete placement for proper application techniques.
   6. Inspection for maintenance of specified curing temperature and techniques.

B. The ready-mixed concrete plant shall be certified for conformance with the requirements of the National Ready Mix Concrete Association.

C. Slab on Grade Floor Surface: Test floor flatness and levelness per ASTM E-1155. $F_F$ 25/ $F_L$ 18 minimum overall and $F_F$ 18/ $F_L$ 13 minimum local.

## 1.08 COORDINATION

A. Coordinate the placement of joint devices with erection of concrete formwork and placement of form accessories.

B. Coordinate all embedded items.

## PART 2 PRODUCTS

## 2.01 CONCRETE MATERIALS

A. Cement: ASTM C150, Type I or Type II.

B. Fine and Coarse Aggregates: ASTM C33.

C. Water: Clean and not detrimental to concrete.

## 2.02 ADMIXTURES

A. Air Entrainment: ASTM C260.

B. Chemical: ASTM C494 Type F - Water Reducing, High Range added at job site after slump tests have been performed.

C. Fly Ash: ASTM C618.

## 2.03 ACCESSORIES

A. Vapor Retarder: Refer to other sections.

B. Non-Shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2,400 psi in 48 hours and 5,000 psi in 28 days.

## 2.04 JOINT DEVICES AND FILLER MATERIALS

A. Joint Filler: ASTM D1751; Asphalt impregnated fiberboard or felt.

B. Sealant for Pavements, Sidewalks, Curb and Gutter: Silicone joint sealant Dow Corning 888 or approved equal.

## 2.05 CONCRETE MIX

A. Mix and deliver concrete in accordance with ASTM C94, Alternative No. 2.

B. Select proportions for normal weight concrete in accordance with ACI 301 Method 1 or Method 2. Submit proposed mix design to Architect/Engineer in accordance with ACI 301.

C. Provide concrete to the following criteria:
   1. Compressive strength: As noted on drawings or other specification sections.
   2. Slump: 3 to 5 inches.
   3. Water/Cement Ratio shall be .5 or below for all concrete.

D. Use accelerating admixtures in cold weather only when approved by Architect/Engineer. Use of admixtures will not relax cold weather placement requirements.

E. Do not use calcium chloride.

F. Use set retarding admixtures during hot weather only when approved by Architect/Engineer.

G. Add air entraining agent to normal weight concrete mix for work exposed to exterior.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify site conditions.

B. Verify requirements for concrete cover over reinforcement.

C. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not cause hardship in placing concrete.

### 3.02 PREPARATION

A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.

### 3.03 PLACING CONCRETE

A. Place concrete in accordance with ACI 318 and ACI 301.

B. Notify Architect/Engineer minimum 24 hours prior to commencement of operations.

C. Ensure reinforcement, inserts, embedded parts, formed expansion and contraction joints are not disturbed during concrete placement.

D. Install joint devices in accordance with manufacturer's instructions.

E. Construction joints in floor slabs and floor beams shall be located in the middle third of the span.

F. Construction joints for grade beams shall be located at one third of the span beyond the support.

G. Place concrete continuously between predetermined expansion, control, and construction joints.

H. Do not interrupt successive placement; do not permit cold joints to occur.

I. Slab on Grade Floor Surface: $F_F$ 25/$F_L$ 18 minimum overall and $F_F$ 18/$F_L$ 13 minimum local.

### 3.04 SEPARATE FLOOR TOPPINGS

A. Prior to placing floor topping, roughen substrate concrete surface and remove deleterious material. Broom and vacuum clean.

B. Apply bonding agent to substrate in accordance with manufacturer's instructions.

C. Place concrete floor toppings to required lines and levels.

**3.05 CONCRETE FINISHING**

A. Provide formed concrete surfaces to be left exposed with smooth rubbed finish.

B. Finish concrete floor surfaces in accordance with ACI 301.

C. Wood float surfaces which will receive tile with full bed setting system.

D. Steel trowel surfaces which will receive carpeting, resilient flooring, or seamless flooring.

E. Steel trowel surfaces which are scheduled to be exposed.

F. Pavements and sidewalks - light broom finish.

**3.06 CURING AND PROTECTION**

A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

C. Cure floor surfaces in accordance with ACI 308.

**3.07 PATCHING**

A. Allow Architect/Engineer to inspect concrete surfaces immediately upon removal of forms.

B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Architect/Engineer upon discovery.

C. Patch imperfections as directed in accordance with ACI 301.

**3.08 DEFECTIVE CONCRETE**

A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.

B. Repair or replacement of defective concrete will be determined by the Architect/Engineer.

C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect/Engineer for each individual area.

**END OF SECTION**

# SECTION 040511

# MASONRY MORTARING AND GROUTING

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Grout for masonry.

### 1.02 RELATED SECTIONS

A. Section 014533 - Code-Required Special Inspections.

### 1.03 REFERENCES

A. ACI 530/ASCE 5/TMS 402 - Building Code Requirements For Masonry Structures; American Concrete Institute International.

B. ACE 530.1/ASCE 6/TMS 602 - Specification for Masonry Structures; American Concrete Institute International.

C. ASTM C 94/C 94M - Standard Specification for Ready-Mixed Concrete.

D. ASTM C 150 - Standard Specification for Portland Cement.

E. ASTM C 270 - Standard Specification for Mortar for Unit Masonry.

F. ASTM C 387 - Standard Specification for Packaged, Dry, Combined Materials for Mortar and Concrete.

G. ASTM C 404 - Standard Specification for Aggregates for Masonry Grout.

H. ASTM C 476 - Standard Specification for Grout for Masonry.

I. ASTM C 1019 - Standard Test Method Sampling and Testing Grout.

J. ASTM C 1314 - Standard Test Method for Compressive Strength of Masonry Prisms.

K. ASTM E 518 - Standard Test Methods for Flexural Bond Strength of Masonry.

L. IMIAWC (CW) - Recommended Practices & Guide Specifications for Cold Weather Masonry Construction; International Masonry Industry All-Weather Council.

M. IMIAWC (HW) - Recommended Practices & Guide Specifications for Hot Weather Masonry Construction; International Masonry Industry All-Weather Council.

### 1.04 SUBMITTALS

A. Product Data: Include design mix and indicate whether the proportion or Property specification of ASTM C 270 is to be used.

B. Reports: Submit reports on grout indicating conformance of component grout materials to requirements of ASTM C 476 and test and evaluation reports to requirements of ASTM C 1019.

### 1.05 QUALITY ASSURANCE

A. Comply with provisions of ACI 530/ASCE 5/TMS 402 and ACI 530.1/ASCE 6/TMS 602, except where exceeded by requirements of the contract documents.

**1.06 STRUCTURAL SPECIAL INSPECTION AND TESTING**

A. Contractor shall coordinate and schedule in a timely manner with the testing laboratory to perform the following tests and inspections.

1. For masonry construction, verify compliance of:
   a) Site prepared mortar proportions.
   b) Construction of mortar joints.
   c) Location of reinforcing and other imbeds.

2. Inspection of:
   a) Size and location of structural elements such as grout filled cells, lintels, bond beams, and etc.
   b) Anchors and attachments to structural steel, floors, or other construction.
   c) Reinforcement size and grade.
   d) Protection of masonry during cold or hot weather.

3. Grouting of masonry: Inspection shall include:
   a) Grout space is clean and open.
   b) Placement of reinforcing is accurate.
   c) Site prepared grout proportions.
   d) Construction of mortar joints is complete and correct.

4. Grout placement inspection:
   a) Continuous inspection during grout placement to ensure code and construction document compliance.
   b) Continuous inspection of prisms, grout, or mortar specimens. Refer to Section 3.04.

**1.07 DELIVERY, STORAGE AND HANDLING**

A. Maintain packaged materials clean, dry, and protected against dampness, freezing, and foreign matter.

**1.08 ENVIRONMENTAL REQUIREMENTS**

A. Cold Weather Requirements: Comply with recommendations of IMIAWC (CW).

B. Hot Weather Requirements: Comply with IMIAWC(HW).

**PART 2 PRODUCTS**

**2.01 MATERIALS**

A. Portland Cement: ASTM C 150, Type I.

B. Grout Aggregate: ASTM C 404.

C. Water: Clean and potable.

**2.02 GROUT MIXES**

A. Bond Beams; Lintels; and Block Filled Cells: 2500 psi strength at 28 days; 8-10 inches slump; provide premixed type in accordance with ASTM C 94/C 94M; or mix in accordance with ASTM C 476.

1. Fine grout for spaces with smallest horizontal dimension of 2 inches or less.
2. Coarse grout for spaces with smallest horizontal dimension greater than 2 inches.

**2.03 GROUT MIXING**

A. Mix grout in accordance with ASTM C 94/C 94M.

B. Thoroughly mix grout ingredients in quantities needed for immediate use in accordance with ASTM C 476 for fine and coarse grout.

C. Add admixtures in accordance with manufacturer's instructions; mix uniformly.

D. Do not use anti-freeze compounds to lower the freezing point of grout.

**2.04 PRECONSTRUCTION TESTING**

A. Testing will be conducted by an independent test agency, in accordance with provisions of Section 014533.

B. Grout Mixes: Test grout batches in accordance with ASTM C 1019 procedures.
1. Test results will be used to establish optimum grout proportions and establish quality control values for construction testing.

**PART 3 EXECUTION**

**3.01 PREPARATION**

A. Construct grout spaces free of mortar droppings, debris, loose aggregates, and any other material deleterious to masonry grout.

B. Clean reinforcement by removing mud, oil, or other materials that will adversely affect or reduce bond at the time mortar or grout is placed.

C. Brace masonry to resist wet grout pressure and assure stability of masonry during construction.

**3.02 REINFORCEMENT INSTALLATION**

A. Support and fasten reinforcement together to prevent displacement when the grout is placed.

B. Maintain clear distance between reinforcing bars and any face of masonry unit or formed surface. Do not bend reinforcement after it is embedded in grout or mortar.

C. Place joint reinforcing as indicated on project drawings so that the longitudinal wires are embedded in mortar with a minimum of 5/8" cover.

**3.03 GROUT PLACEMENT**

A. Perform all grouting by means of "low-lift grouting" where cleanouts are not required.

B. Low-Lift Grouting:
1. The masonry wall is built to scaffold height or to a bond beam course, to a maximum of five (5) feet.

2. Verify that horizontal and vertical reinforcement is in the proper position and adequately secured before beginning pours.
3. Project steel reinforcement above the top of the pour for sufficient height to provide the minimum lap splice required.
4. Place grout within 1½ hours from introducing water in the mixture and prior to initial set.
5. Consolidate grout at the time of placement.
    a. Consolidate grout pours 12 inches or less in height by mechanical vibration or puddling.
    b. Consolidate pours exceeding 12 inches in height by mechanical vibration only, and reconsolidate by mechanical vibration after initial water loss and settlement has occurred.
6. Place grout for spanning elements in single, continuous pour.

**3.04 FIELD QUALITY CONTROL**

A. An independent testing agency will perform fixed tests, in accordance with provisions of Section 014000.

B. Test and evaluate grout in accordance with ASTM C 1019 procedures.
    1. Test frequency: One per each cubic yard of grout.

C. Prism Tests: Test masonry and mortar panels for compressive strength in accordance with ASTM C 1314, and for flexural bond strength in accordance with ASTM C 1072 or ASTM E 518; perform tests and evaluate results as specified in individual masonry sections.

**END OF SECTION**

## SECTION 051200

## STRUCTURAL STEEL FRAMING

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Structural steel, embedded items, and miscellaneous steel.

B. Fabrication shop coat painting.

C. Steel erection.

### 1.02 RELATED SECTIONS

A. Section 055000 - Metal Fabrications.

B. Section 099000 - Painting and Coating.

C. Section 014533 - Code-Required Special Inspections.

### 1.03 REFERENCES

A. ASTM A36 - Structural Steel.

B. ASTM A53 - Hot-Dipped, Zinc-coated Welded and Seamless Steel Pipe.

C. ASTM A108 - Steel Bars, Carbon, Cold-Finished, Standard Quality.

D. ASTM A123 - Zinc (Hot Dipped Galvanized) Coatings on Iron and Steel Products.

E. ASTM A307 - Carbon Steel Externally Threaded Standard Fasteners.

F. ASTM A325 - High Strength Bolts for Structural Steel Joints.

G. ASTM A500 - Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes.

H. ASTM A501 - Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.

I. ASTM A992 - Structural Steel, Grade 50.

J. AWS A2.0 - Standard Welding Symbols.

K. AWS D1.1 - Structural Welding Code.

L. AISC - Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.

M. SSPC - Steel Structures Painting Council.

### 1.04 SUBMITTALS

A. Shop Drawings:
   1. Indicate sizes, spacing, and locations of structural members.
   2. Connections.

3. Indicate welded connections with AWS A2.0 welding symbols. Indicate net weld lengths.

B. Mill Test Reports: Submit indicating structural strength.

C. Welders Certificates: Certify welders employed on the Work, verifying AWS qualification within the previous 12 months.

### 1.05 QUALITY ASSURANCE

A. Fabricate structural steel members in accordance with AISC - Specification for the Design, Fabrication and Erection of Structural Steel for Buildings. Provide ultrasonic testing reports for all complete penetration shop welds.

B. Maintain one copy of each document on site.

### 1.06 STRUCTURAL SPECIAL INSPECTIONS AND TESTING

A. Contractor shall coordinate and schedule in a timely manner with the testing laboratory to perform the following tests and inspections:
   1. Anchor bolts
      a) Anchor bolt size, configuration, and embedment shall be verified prior to placement of concrete.
   2. Inspect identification markings for compliance.
   3. Review Manufacturer's Certificate of Compliance.
   4. Review certified mill test reports.
   5. Bolted connections
      a) Inspection and testing shall be in accordance with AISC specifications for Structural Joints using ASTM A325 or A490 Bolts.
      b) Provide periodic inspection of all bearing type bolted connections and continuous inspection of slip critical connections. Slip critical connections, if any, will be specifically noted on drawings.
   6. Field welded connections
      a) Inspection shall be in accordance with AWS Structural Welding Code.
      b) Visually inspect all field welded connections. Provide continuous inspection for complete and partial penetration groove welds; multi-pass fillet welds; single-pass fillet welds greater than 5/16". Provide periodic inspection for fillet welds equal to or less than 5/16"; and joist, floor and deck welds.
      c) Provide ultrasonic inspection of all complete penetration welds.
      d) Verify welder qualifications.
      e) Review weld filler material markings for compliance.
      f) Review Manufacturer's Certificate of Compliance.
   7. Inspection of steel frame joint details for compliance with approved construction documents.
      a) Details
      b) Member location
      c) Joint details at each joint

## PART 2 PRODUCTS

### 2.01 MATERIALS

A. Structural Steel Members:

1. W Shapes: ASTM A992 (Grade 50).
2. Angles, Channels, Plates: ASTM A36.

B. Structural Tubing: ASTM A500, Grade B.

C. Pipe: ASTM A53, Grade B.

D. Shear Stud Connectors: ASTM A108 forged steel, headed.

E. Bolts, Nuts, and Washers: ASTM A325; galvanized to ASTM A123 for galvanized members.

F. Anchor Bolts: ASTM A307.

G. Welding Materials: AWS D1.1; type required for materials being welded.

H. Grout: Non-shrink type, pre-mixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing additives, capable of developing a minimum compressive strength of 5000 psi at 28 days.

I. Shop and Touch-Up Primer: SSPC 15, Type 1, red oxide.

J. Touch-Up Primer for Galvanized Surfaces: SSPC 20 Type I Inorganic.

**2.02 FABRICATION**

A. Provide shop workmanship equal to the best modern practice conforming to listed industry standard and in accordance with the latest requirements of the American Institute of Steel Construction.

**2.03 FINISH**

A. Prepare structural component surfaces in accordance with SSPC SP 2.

B. Shop prime structural steel members. Do not prime surfaces that will be field welded, in contact with concrete, and high strength bolted connections.

C. Galvanize to ASTM A123, structural steel members indicated on drawings. Provide minimum 1.25 oz/sq.ft.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Verify that field conditions are acceptable and are ready to receive work.

**3.02 ERECTION**

A. Allow for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing.

B. Field weld components indicated on Drawings or shop drawings.

C. All exposed welds shall be ground smooth.

D. Do not field cut or alter structural members without approval of Engineer.

E. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces to be in contact with concrete.

**3.03 ERECTION TOLERANCES**

A. All erection of steel, bracing and etc. should be as required by AISC.

**END OF SECTION**

## SECTION 052100

## STEEL JOIST FRAMING

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Open web steel joists, with bridging, attached seats, and anchors.

### 1.02 RELATED SECTIONS

A. Section 051200 - Structural Steel Framing.

B. Section 053100 - Steel Decking.

C. Section 099000 - Painting and Coating.

### 1.03 REFERENCES

A. ASTM A307 - Carbon Steel Threaded Standard Fasteners.

B. AWS D1.1 - Structural Welding Code.

C. FS TT-P-636 - Primer Coating, Alkyd, Wood and Ferrous Metal.

D. SJI - Standard Specifications for Open Web Steel Joists, K Series.

E. SSPC - Steel Structures Painting Council.

### 1.04 SUBMITTALS

A. Shop Drawings:
   1. Indicate standard designations, configuration, sizes, spacing, locations of joists, joist leg extensions.
   2. Bridging, connections.
   3. Cambers.

B. Welder's Certificates: Submit manufacturer's certificates that welders employed on the Work have met AWS verification within the previous 12 months.

### 1.05 QUALITY ASSURANCE

A. Perform Work in accordance with SJI Standard Specifications, Load Tables, and Weight Tables.

B. Maintain one copy of each document on site.

### 1.06 STRUCTURAL SPECIAL INSPECTIONS AND TESTING

A. Contractor shall coordinate and schedule in a timely manner with the Testing Laboratory to perform the following tests and inspections:
   1. Inspection of all welds or bolts of steel joist to other steel members.

### 1.07 DELIVERY, STORAGE AND HANDLING

A. Store and protect products to SJI requirements.

B. Protect joists from distortion or damage.

## PART 2 PRODUCTS

### 2.01 MATERIALS

A. Open Web Joists Members: SJI Type K open web.

B. Nuts and Washers: ASTM A307.

C. Primer: FS TT-P-636.

D. Structural Steel for Supplementary Framing and Joist Leg Extensions: ASTM A36.

E. Welding Materials: AWS D1.1; type required for materials being welded.

### 2.02 FABRICATION

A. Provide bottom and top chord extensions as indicated.

### 2.03 FINISH

A. Shop prime joists. Do not prime surfaces that will be field welded.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

B. Beginning of installation means erector accepts existing conditions.

### 3.02 ERECTION

A. Erect and bear joists on supports.

B. Allow for erection loads. Provide sufficient temporary bracing to maintain framing safe, plumb, and in true alignment until completion of erection and installation of permanent bridging and bracing.

C. Coordinate placement of anchors in masonry.

D. After joist alignment and installation of framing, field weld joist seat to bearing plates.

E. Position and field weld joist chord extensions and wall attachments after dead load is applied.

F. Do not permit erection of decking until joists are braced, bridged, and secured.

G. Do not field cut or alter structural members without approval of joist fabricator.

H. After erection, prime welds, abrasions, and surfaces not shop primed.

### 3.03 ERECTION TOLERANCES

A. Maximum Variation from Plumb: 1/4 inch.

B. Maximum Offset from True Alignment: 1/2 inch.

**END OF SECTION**

**SECTION 053100**

**STEEL DECKING**

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Steel deck and accessories.

### 1.02 RELATED SECTIONS

A. Section 051200 - Structural Steel Framing.

### 1.03 REFERENCES

A. AISI - Specification for the Design of Cold-Formed Steel Structural Members.

B. ASTM 36 - Structural Steel.

C. ASTM A466 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Structural (Physical) Quality.

D. ASTM A525 - Steel Sheet, Zinc-Coated, Galvanized by the Hot Dip Process.

E. ASTM A611 - Steel, Cold-Rolled Sheet, Carbon, Structural.

F. AWS D1.1 - Structural Welding Code.

G. SDI - Design Manual for Composite Decks, Form Decks, Roof Decks.

### 1.04 PERFORMANCE REQUIREMENTS

A. Design metal decking in accordance with SDI Design Manual for Composite Decks, Form Decks, Roof Decks.

### 1.05 SUBMITTALS

A. Shop Drawings: Indicate decking plan, support locations, projections, openings and reinforcement, pertinent details, and accessories.

B. Product Data: Provide deck profile characteristics and dimensions, structural properties and finishes.

C. Manufacturer's Installation Instructions: Indicate specific installation sequence.

### 1.06 DELIVERY, STORAGE AND HANDLING

A. Store and protect products from damage.

B. Cut plastic wrap to encourage ventilation.

C. Separate sheets and store decking on dry wood sleepers; slope for positive drainage.

### 1.07 STRUCTURAL SPECIAL INSPECTIONS AND TESTING

A. Inspection of all welds and/or other attachment to steel members.

## PART 2 PRODUCTS

### 2.01 MATERIALS

A. Sheet Steel: ASTM A446, Grade A Structural Quality; with G90 galvanized coating conforming to ASTM A525.

B. Bearing Plates: ASTM A36 steel.

C. Welding Materials: AWS D1.1.

D. Touch-Up Primer: Zinc chromate type.

### 2.02 FABRICATION

A. Metal Decking: Sheet steel, configured as follows:

| | |
|---|---|
| Span Design: | Multiple |
| Minimum Metal Thickness (Excluding Finish): | as shown on drawings |
| Nominal Height: | as shown on drawings |

B. Metal Closure Strips, Cover Plates, and Related Accessories: 20 gage galvanized sheet steel; of profile and size as required.

C. Fasteners: Galvanized hardened steel, steel-tapping.

D. Weld Washers: Mild steel, uncoated, 3/4 inch outside diameter.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

B. Beginning of installation means installer accepts existing conditions.

### 3.02 INSTALLATION

A. Erect metal decking in accordance with SDI Design Manual for Composite Decks, Form Decks, Roof Decks.

B. Bear decking on steel supports with 1-1/2 inch minimum bearing. Align and level.

C. Fasten deck to steel support members per drawings.

D. Weld in accordance with AWS D1.1.

E. Install sheet steel closures and angle flashings to close openings between deck and walls, columns, and openings.

F. Immediately after welding deck and other metal components in position, coat welds, burned areas, and damaged surface coating, with touch-up primer.

**END OF SECTION**

**SECTION 08 71 00**

**DOOR HARDWARE**

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes: Finish Hardware for non-security rated door openings, except as otherwise specified herein. (See Section 111920 for Security/Detention Rated Hardware)

1. Door hardware for steel (hollow metal) doors.
2. Door hardware for aluminum doors.
3. Door hardware for wood doors.
4. Door hardware for other doors indicated.
5. Keyed cylinders as indicated.

B. Related Sections:

1. Division 6: Rough Carpentry.
2. Division 8: Aluminum Doors and Frames
3. Division 8: Hollow Metal Doors and Frames.
4. Division 8: Wood Doors.
5. Division 26 Electrical

C. References: Comply with applicable requirements of the following standards. Where these standards conflict with other specific requirements, the most restrictive shall govern.

1. Builders Hardware Manufacturing Association (BHMA)
2. NFPA 101 Life Safety Code
3. NFPA 80 -Fire Doors and Windows
4. ANSI-A156.xx- Various Performance Standards for Finish Hardware
5. UL10C – Positive Pressure Fire Test of Door Assemblies
6. ANSI-A117.1 – Accessible and Usable Buildings and Facilities
7. DHI /ANSI A115.IG – Installation Guide for Doors and Hardware
8. ICC – International Building Code

D. Intent of Hardware Groups

1. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
2. Where items of hardware aren't definitely or correctly specified, are required for completion of the Work, a written statement of such omission, error, or other discrepancy to be submitted to Architect, prior to date specified for receipt of bids for clarification by addendum; or, furnish such items in the type and quality established by this specification, and appropriate to the service intended.

1.2 SUBSTITUTIONS:

A. Comply with Division 1.

1.3 SUBMITTALS:

A. Comply with Division 1.

B. Special Submittal Requirements: Combine submittals of this Section with Sections listed below to ensure the "design intent" of the system/assembly is understood and can be reviewed together.

C. Product Data: Manufacturer's specifications and technical data including the following:

1. Detailed specification of construction and fabrication.
2. Manufacturer's installation instructions.
3. Wiring diagrams for each electric product specified. Coordinate voltage with electrical before submitting.
4. Submit 6 copies of catalog cuts with hardware schedule.
5. Provide 9001-Quality Management and 14001-Environmental Management for products listed in Materials Section 2.2

D. Shop Drawings - Hardware Schedule: Submit 6 complete reproducible copy of detailed hardware schedule in a vertical format.

1. List groups and suffixes in proper sequence.
2. Completely describe door and list architectural door number.
3. Manufacturer, product name, and catalog number.
4. Function, type, and style.
5. Size and finish of each item.
6. Mounting heights.
7. Explanation of abbreviations and symbols used within schedule.
8. Detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.

E. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.

1. Templates, wiring diagrams and "reviewed Hardware Schedule" of electrical terms to electrical for coordination and verification of voltages and locations.

F. Samples: (If requested by the Architect)

1. 1 sample of Lever and Rose/Escutcheon design, (pair).
2. 3 samples of metal finishes

G. Contract Closeout Submittals: Comply with Division 1 including specific requirements indicated.

1. Operating and maintenance manuals: Submit 3 sets containing the following.

a. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.
b. Catalog pages for each product.

c. Name, address, and phone number of local representative for each manufacturer.
d. Parts list for each product.

2. Copy of final hardware schedule, edited to reflect, "As installed".
3. Copy of final keying schedule
4. As installed “Wiring Diagrams” for each piece of hardware connected to power, both low voltage and 110 volts.
5. One set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

1.4 QUALITY ASSURANCE

A. Comply with Division 1.

1. Statement of qualification for distributor and installers.
2. Statement of compliance with regulatory requirements and single source responsibility.
3. Distributor's Qualifications: Firm with 3 years experience in the distribution of commercial hardware.

a. Distributor to employ full time Architectural Hardware Consultants (AHC) for the purpose of scheduling and coordinating hardware and establishing keying schedule.
b. Hardware Schedule shall be prepared and signed by an AHC.

4. Installer's Qualifications: Firm with 3 years experienced in installation of similar hardware to that required for this Project, including specific requirements indicated.
5. Regulatory Label Requirements: Provide testing agency label or stamp on hardware for labeled openings.

a. Provide UL listed hardware for labeled and 20 minute openings in conformance with requirements for class of opening scheduled.
b. Underwriters Laboratories requirements have precedence over this specification where conflict exists.

6. Single Source Responsibility: Except where specified in hardware schedule, furnish products of only one manufacturer for each type of hardware.

B. Review Project for extent of finish hardware required to complete the Work. Where there is a conflict between these Specifications and the existing hardware, notify the Architect in writing and furnish hardware in compliance with the Specification unless otherwise directed in writing by the Architect.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping: Comply with Division 1.

1. Deliver products in original unopened packaging with legible manufacturer's identification.
2. Package hardware to prevent damage during transit and storage.
3. Mark hardware to correspond with "reviewed hardware schedule".
4. Deliver hardware to door and frame manufacturer upon request.

B. Storage and Protection: Comply with manufacturer's recommendations.

1.6 PROJECT CONDITIONS:

A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.

B. Review Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.

1.7 WARRANTY:

A. Refer to Conditions of the Contract

B. Manufacturer's Warranty:

1. Closers: Ten years
2. Exit Devices: Five Years
3. Locksets & Cylinders: Three years
4. All other Hardware: Two years.

1.8 OWNER'S INSTRUCTION:

A. Instruct Owner's personnel in operation and maintenance of hardware units.

1.9 MAINTENANCE:

A. Extra Service Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals Section.

1. Special Tools: Provide special wrenches and tools applicable to each different or special hardware component.
2. Maintenance Tools: Provide maintenance tools and accessories supplied by hardware component manufacturer.
3. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra service materials.

B. Maintenance Service: Submit for Owner's consideration maintenance service agreement for electronic products installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

A. The following manufacturers are approved subject to compliance with requirements of the Contract Documents. Approval of manufacturers other than those listed shall be in accordance with Division 1.

| Item: | Manufacturer: | Approved: |
|---|---|---|
| Hinges | Stanley | Bommer, McKinney |
| Continuous Hinges | Stanley | Select, ABH |
| Locksets | Best | Sargent, |
| Cylinders | Best Patented | Medeco Patented |
| Exit Devices | Precision 2000 | Von Duprin98/99 |

| | | |
|---|---|---|
| Closers | CLD4550 | LCN4040XP |
| Access Control System | S2 Security | Software House |
| Automatic Operators | Besam | Horton |
| Push/Pull Plates | Trimco | Burns, Rockwood |
| Protection Plates | Trimco | Burns, Rockwood |
| Door Stops | Trimco | Burns, Rockwood |
| Coordinator & Brackets | Trimco | ABH, Burns |
| Threshold & Gasketing | National Guard | Reese, K.N. Crowder |
| Flush Bolt | Rockwood | Trimco, Burns |

2.2 MATERIALS:

A. Hinges: Shall be Five Knuckle Ball bearing hinges

1. Template screw hole locations
2. Bearings are to be fully hardened.
3. Bearing shell is to be consistent shape with barrel.
4. Minimum of 2 permanently lubricated non-detachable bearings on standard weight hinge and 4 permanently lubricated bearing on heavy weight hinges.
5. Equip with easily seated, non-rising pins.
6. Non Removable Pin screws shall be slotted stainless steel screws.
7. Hinges shall be full polished, front, back and barrel.
8. Hinge pin is to be fully plated.
9. Bearing assembly is to be installed after plating.
10. Sufficient size to allow 180-degree swing of door
11. Furnish five knuckles with flush ball bearings
12. Provide hinge type as listed in schedule.
13. Furnish 3 hinges per leaf to 7 foot 6 inch height. Add one for each additional 30 inches in height or fraction thereof.
14. Tested and approved by BHMA for all applicable ANSI Standards for type, size, function and finish
15. UL10C listed for Fire rated doors.

B. Mortise Type Locks and Latches:

1. Tested and approved by BHMA for ANSI A156.13, Series 1000, Operational Grade 1, Extra-Heavy Duty, Security Grade 2 and be UL10C.
2. Furnish UL or recognized independent laboratory certified mechanical operational testing to 4 million cycles minimum.
3. Provide 9001-Quality Management and 14001-Environmental Management.
4. Fit ANSI A115.1 door preparation
5. Functions and design as indicated in the hardware groups
6. Solid, one-piece, 3/4-inch (19mm) throw, anti-friction latchbolt made of self-lubricating stainless steel
7. Deadbolt functions shall have 1 inch (25mm) throw bolt made of hardened stainless steel
8. Latchbolt and Deadbolt are to extend into the case a minimum of 3/8 inch (9.5mm) when fully extended
9. Auxiliary deadlatch to be made of one piece stainless steel, permanently lubricated
10. Provide sufficient curved strike lip to protect door trim
11. Lever handles must be of forged or cast brass, bronze or stainless steel construction and conform to ANSI A117.1. Levers that contain a hollow cavity are not acceptable
12. Lock shall have self-aligning, thru-bolted trim
13. Levers to operate a roller bearing spindle hub mechanism

14. Mortise cylinders of lock shall have a concealed internal setscrew for securing the cylinder to the lockset. The internal setscrew will be accessible only by removing the core, with the control key, from the cylinder body.
15. Spindle to be designed to prevent forced entry from attacking of lever
16. Provide locksets with 7-pin removable and interchangeable core cylinders
17. Each lever to have independent spring mechanism controlling it
18. Core face must be the same finish as the lockset.

C. Door Closers shall:

1. Tested and approved by BHMA for ANSI 156.4, Grade 1
2. UL10C certified
3. Provide 9001-Quality Management and 14001-Environmental Management.
4. Closer shall have extra-duty arms and knuckles
5. Conform to ANSI 117.1
6. Maximum 2 7/16 inch case projection with non-ferrous cover
7. Separate adjusting valves for closing and latching speed, and backcheck
8. Provide adapter plates, shim spacers and blade stop spacers as required by frame and door conditions
9. Full rack and pinion type closer with 1½“ minimum bore
10. Mount closers on non-public side of door, unless otherwise noted in specification
11. Closers shall be non-handed, non-sized and multi-sized.

D. Push Plates: Provide with four beveled edges ANSI J301, .050 thickness, size as indicated in hardware set. Furnish oval-head countersunk screws to match finish.

E. Pulls with plates: Provide with four beveled edges ANSI J301, .050 thickness Plate s with ANSI J401 Pull as listed in hardware set. Provide proper fasteners for door construction.

F. Push Pull Bars: Provide ANSI J504, .1” Dia. Pull and push bar model and series as listed in hardware set. Provide proper fasteners for door construction.

G. Kickplates: Provide with four beveled edges ANSI J102, 10 inches high by width less 2 inches on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.

H. Seals: All seals shall be finished to match adjacent frame color. Seals shall be furnished as listed in schedule. Material shall be UL listed for labeled openings.

I. Silencers: Furnish silencers on all interior frames, 3 for single doors, 2 for pairs. Omit where any type of seals occur.

2.3 FINISH:

A. Designations used in Schedule of Finish Hardware - 3.05, and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 including coordination with traditional U.S. finishes shown by certain manufacturers for their products

B. Powder coat door closers to match other hardware, unless otherwise noted.

C. Aluminum items shall be finished to match predominant adjacent material. Seals to coordinate with frame color.

2.4 KEYS AND KEYING:

A. Provide keyed brass construction cores and keys during the construction period. Construction control and operating keys and core shall not be part of the Owner's permanent keying system or furnished in the same keyway (or key section) as the Owner's permanent keying system. Permanent cores and keys (prepared according to the accepted keying schedule) will be furnished to the Owner.

B. Cylinders, removable and interchangeable core system: Best CORMAX™ Patented 7-pin.

C. Permanent keys and cores: Stamped with the applicable key mark for identification. These visual key control marks or codes will not include the actual key cuts. Permanent keys will also be stamped "Do Not Duplicate."

D. Transmit Grand Masterkeys, Masterkeys and other Security keys to Owner by Registered Mail, return receipt requested.

E. Furnish keys in the following quantities:

1. 1 each Grand Masterkeys
2. 4 each Masterkeys
3. 2 each Change keys each keyed core
4. 15 each Construction masterkeys
5. 1 each Control keys

**F. The Bidder in this Section 087100, will install permanent cores and return the construction cores to the Hardware Supplier. Construction cores and keys remain the property of the Hardware Supplier.**

G. Keying Schedule: Arrange for a keying meeting, and programming meeting with Architect Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying and programming complies with project requirements. Furnish 3 typed copies of keying and programming schedule to Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of conditions: Examine doors, frames, related items and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.

1. Do not proceed until unsatisfactory conditions have been corrected.

3.2 HARDWARE LOCATIONS:

A. Mount hardware units at heights indicated in the following publications except as specifically indicated or required to comply with the governing regulations.

1. Recommended Locations for Builder’s Hardware for Standard Steel Doors and Frames, by the Door and Hardware Institute (DHI).

2. Recommended locations for Architectural Hardware for flush wood doors (DHI).

3. WDMA Industry Standard I.S.-1A-04, Industry Standard for Architectural wood flush doors.

3.3 INSTALLATION:

A. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

B. Conform to local governing agency security ordinance.

C. Install Conforming to ICC/ANSI A117.1 Accessible and Usable Building and Facilities.

1. Adjust door closer sweep periods so that from the open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing side of the door.

D. Installed hardware using the manufacturers fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use “Riv-Nuts” or similar products.

3.4 FIELD QUALITY CONTROL AND FINAL ADJUSTMENT

A. Contractor/Installers, Field Services: After installation is complete, contractor shall inspect the completed door openings on site to verify installation of hardware is complete and properly adjusted, in accordance with both the Contract Documents and final shop drawings.

1. Check and adjust closers to ensure proper operation.

2. Check latchset, lockset, and exit devices are properly installed and adjusted to ensure proper operation.

a. Verify levers are free from binding.
b. Ensure latchbolts and dead bolts are engaged into strike and hardware is functioning.

3. Report findings, in writing, to architect indicating that all hardware is installed and functioning properly. Include recommendations outlining corrective actions for improperly functioning hardware if required.

3.5 SCHEDULE OF FINISH HARDWARE:

**Manufacturer List**

| Code | Name |
|---|---|
| BE | Best Access Systems |
| BY | By Others |
| BS | Besam |
| HO | Honeywell |
| HS | HES |
| NA | National Guard |
| PR | Precision |
| SD | Stanley Door Closers |
| SN | Securitron |
| ST | Stanley |
| SS | Southern Steel |
| TR | Trimco |
| RK | Rockwood |

**Option List**

| Code | Description |
|---|---|
| C | QUICK CONNECT WIRING OPTION |
| C | Quick Connect Wiring System |
| DE | DELAYED EGRESS |
| FL | Fire Exit Hardware |
| SH | SECURITY HEAD SCREWS |
| SN | Sex Nuts (Pkg. of 4) |
| TS | TOUCHBAR MONITORING SWITCH |
| VT | Vandal Trim (630 Finish) |
| 36" | 36" Door Width |
| B4E | BEVELED 4 EDGES - KICK PLATES |
| CSK | COUNTER SINKING OF KICK and MOP PLATES |
| FSE | Fail Secure |
| IDH | Integrated Dr. Hardware (45HW,47HW) |
| LBR | LESS BOTTOM ROD |
| MLR | MOTORIZED LATCH RETRACTION |
| SMB | Surface Mounting Box |
| VIN | Visual Indicator |
| VIT | Visual Indictor Thumb-Turn |
| 7'0" | 7'0" HIGH |
| S301 | OPT. ROLLER. STRK - RIM AND TOP OF SVR |
| S988 | STANDARD. STRIKE - NARROW STILE RIM |
| 2004M | Electrolynx Adaptor |
| CA-03 | Cylinder Attachment Kit (Rim/SVR Device) |
| NCA-03 | Cylinder Attachment Kit(24/2500 Devices) |
| SNB (2) | SEX BOLTS (2) |
| SNB (6) | SEX BOLTS (6) |
| P45-180D | Drop Plate for Narrow Top Rail |

**Finish List**

| Code | Description |
|---|---|
| AL | Aluminum |
| 626 | Satin Chromium Plated |
| 628 | Satin Aluminum, Clear Anodized |
| 630 | Satin Stainless Steel |
| 689 | Aluminum Painted |
| GREY | Grey |
| US26D | Chromium Plated, Dull |
| US32D | Stainless Steel, Dull |

**Hardware Sets**

**SET #1**

Doors: 100A

| | | | | |
|---|---|---|---|---|
| 2 | Mortise Cylinder | 1E-76 PATD | 626 | BE |

NOTE: Balance of hardware devices to hang, secure, and gasket this opening to be supplier by aluminum door and frame supplier.

**SET #2**

Doors: 174A, 176A

| | | | | |
|---|---|---|---|---|
| 3 | Hinges | FBB199 4 1/2 X 4 1/2 NRP | US32D | ST |
| 1 | Exit Device | FL 2103 X 4903D | 630 | PR |
| 1 | Rim Cylinder | 12E-72 PATD | 626 | BE |
| 1 | Door Closer | CLD-4550 CS SN | 689 | SD |
| 1 | Kick Plate | K0050 8" x 34" B4E CSK | 630 | TR |
| 1 | Perimeter Seals | 5075 B 1x36" 2x84" | | NA |
| 1 | Drip Cap | 16 A - 4" ODW | | NA |
| 1 | Door Sweep | 101 VA 36" | | NA |
| 1 | Threshold | 896 S 36" | AL | NA |

**SET #3**

Doors: 101A, 118A, 127A, 140A

| | | | | |
|---|---|---|---|---|
| 3 | Hinges | FBB191 4 1/2 X 4 1/2 | US32D | ST |
| 1 | Privacy Set | 45H-0L14S VIN VIT | 630 | BE |
| 1 | Mop Plate | KM050 6" x 35" B4E CSK | 630 | TR |
| 1 | Wall Bumper | 1270CVPV | 626 | TR |
| 1 | Coat Hook | 3071 | 630 | TR |
| 1 | Preimeter Seals | 5075 B 36" | | NA |

**SET #4**

Doors: 111A, 113A

| | | | | |
|---|---|---|---|---|
| 3 | Hinges | FBB191 4 1/2 X 4 1/2 | US32D | ST |
| 1 | Passage Set | 45H-0N14S | 630 | BE |
| 1 | Mop Plate | KM050 6" x 31" B4E CSK | 630 | TR |
| 1 | Wall Bumper | 1270CVPV | 626 | TR |

**SET #5**

Doors: 177A

| | | | | |
|---|---|---|---|---|
| 6 | Hinges | FBB199 4 1/2 X 4 1/2 NRP | US32D | ST |
| 1 | Exit Device | FL 2103 X 4903D | 630 | PR |
| 1 | Rim Cylinder | 12E-72 PATD | 626 | BE |
| 1 | Door Closer | CLD-4550 CS SN | 689 | SD |
| 2 | Kick Plate | K0050 8" x 34" B4E CSK | 630 | TR |
| 2 | Perimeter Seals | 5075 B 1x36" 2x84" | | NA |
| 1 | Drip Cap | 16 A - 4" ODW | | NA |
| 2 | Door Sweep | 101 VA 36" | | NA |
| 1 | Threshold | 896 S 36" | AL | NA |
| 1 | Flush Bolts | 557 | US26D | RK |

## GENERAL NOTES

1. THESE NOTES ARE NOT INTENDED TO REPLACE THE PROJECT SPECIFICATIONS.

## DIMENSIONS

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN WITH ARCHITECTURAL DRAWINGS BEFORE WORK IS TO BEGIN. ANY DISCREPANCY SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT AND WORK SHALL NOT BEGIN UNTIL THE DISCREPANCY IS RESOLVED.
2. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ANY DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

## DOCUMENTS AND LIMITATIONS

1. THE DRAWINGS, CALCULATIONS AND REPRODUCTIONS RELATING TO THE STRUCTURAL PART OF THE PROJECT ARE INSTRUMENTS OF SERVICE TO BE USED FOR THIS PROJECT ONLY.
2. IT IS UNDERSTOOD THAT THE ENGINEER MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO THE FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS OR PROFESSIONAL ADVICE EXCEPT THAT THESE INSTRUMENTS OF SERVICE HAVE BEEN PREPARED IN ACCORDANCE WITH CURRENT GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRACTICES.
3. THE FOLLOWING ITMES ARE SPECIFICALLY EXCLUDED FROM THE STRUCTURAL PART OF THE PROJECT.

3.1 ARCHITECTURAL ELEMENTS

(A) NON-LOAD BEARING MASONRY WALLS.
(B) AUXILIARY MEMBERS, STRUTS, ANGLES, PIPES, BATTENS, ETC. OR ANY PATENTED SYSTEMS, WITH THE SOLE PURPOSE TO SERVE AS SUPPORTING MEMBERS FOR NON-STRUCTURAL ELEMENTS.
(C) EXTERIOR CLADDING, SIDING, SECONDARY WALL FRAMING AND RAILINGS, NOT PART OF THE PRIMARY STRUCTURAL SYSTEM.
(D) UNIT PAVERS, GLAZING, WINDOW WALL AND DOOR SYSTEMS.
(E) CEILING AND LIGHTING SYSTEMS AND RELATED BRACING AND ATTACHMENT SYSTEMS.
(F) DECORATIVE WORK SUCH AS SCREENS, MURALS, ETC. AND FINISHES.

3.2 MECHANICAL AND ELECTRICAL ELEMENTS

(A) ANCHORAGE FOR ELECTRICAL ELEMENTS SUCH AS TRANSFORMERS, EMERGENCY GENERATORS, CONDUITS AND CABLES, CABLE TRAYS, PANEL BOARDS, LIGHTING FIXTURES AND SWITCHESGEAR.
(B) SPECIAL SUPPORT ASSEMBLIES, WALL BRACKETS, STANDS, ELEVATED OR SUSPENDED PLATFORMS, STANCHIONS, ETC., WHOSE ONLY PURPOSE IS TO ACCOMMODATE MECH. AND ELECTRICAL ELEMENTS.
(C) HOUSEKEEPING AND INERTIA PADS, ACOUSTIC SLABS AND FOUNDATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT.

WHERE ITEMS NOTED IN 3.1 AND 3.2 ARE SHOWN ON STRUCTURAL DRAWINGS FOR GENERAL REFERENCE, NO RESPONSIBILITY FOR THEIR CORRECTNESS IS IMPLIED. ACCORDINGLY, REFERENCE MUST BE MADE TO PLANS, DETAILS OR SPECIFICATIONS OF APPROPRIATE CONSULTANTS.

## SOILS AND FOUNDATIONS

1. THE FOUNDATION DESIGN IS BASED UPON THE:

GEOTECHNICAL INVESTIGATION
MARSHALL COUNTY JUSTICE COMPLEX
HOLLY SPRINGS, MISSISSIPPI

BY

PRECISION ENGINEERING CORP.
276 COUNTY ROAD 101
OXFORD, MS 38655

| 2. FOUNDATION TYPE | ALLOWABLE SOIL BEARING PRESSURE |
|---|---|
| SPREAD FOOTINGS | 3500 PSF |

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION, SHORING, UNDERPINNING, BRACING, ISOLATION, ECT. OF ALL EXISTING CONDITIONS AS REQUIRED TO PREVENT ANY DISTURBANCE TO EXISTING CONDITIONS AS A RESULT OF THIS WORK.

## CONCRETE

1. CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STENGTH IN 28 DAYS:

ALL CONCRETE ---------- 4000 PSI

2. REINFORCING SHALL COMFORM TO A.S.T.M. A-615, AND SHALL BE GRADE 60
3. PROVIDE ALL NECESSARY REINFORCING STEEL ACCESSORIES TO HOLD BARS IN PROPER POSTITION.
4. WHERE NOT SPECIFICALLY COVERED, REINF. SHALL BE DETAILED IN ACCORDANCE WITH ACI STANDARD 315
5. PROVIDE CORNER BARS OF THE SAME SIZE AND NUMBER AS HORIZONTAL BARS AT ALL CORNERS AND "T"-INTERSECTIONS.
6. UNLESS NOTED OTHERWISE, LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE:

| BAR SIZE | SLAB-ON-GRADE LAP LENGTH | RAISED SLABS, WALLS, ECT. LAP LENGTH |
|---|---|---|
| #3 | 14" | 22" |
| #4 | 19" | 29" |
| #5 | 24" | 36" |
| #6 | 28" | 43" |
| #7 | 41" | 63" |
| #8 | 47" | 72" |
| #9 | 53" | 81" |
| #10 | 59" | 89" |
| #11 | 65" | 98" |

7. FOR MISCELLANEOUS ANGLES, DETAILS, OUTSIDE CONCRETE WORK, ETC, SEE ARCHITECTURAL DRAWINGS.

## MASONRY

1. CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530/ASCE 5, BUILDING CODE REQUIRMENTS FOR CONCRETE MASONRY STRUCTURES, AND ACI 530.1/ASCE 6, SPECIFICATIONS FOR MASONRY STRUCTURES, AND NATIONAL CONCRETE MASORNRY ASSOCIATION SPECIFICATIONS.
2. PROVIDE LIGHTWEIGHT, HOLLOW, LOAD-BEARING CONCRETE MASONRY UNITS (CMU) CONFORMING TO ASTM C90, GRADE N, TYPE 1, UNLESS NOTED OTHERWISE.
3. PROVIDE MASONRY WITH MINIMUM COMPRESSIVE STRENGTH, f'm = 1,500 PSI.
4. PROVIDE TYPE "S" MORTAR IN ACCORDANCE WITH ASTM C270, UNLESS NOTED OTHERWISE.
5. PROVIDE GROUT FOR REINFORCE MASONRY IN ACCORDANCE WITH ASTM C476 WITH MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI UNLESS NOTED OTHERWISE.
6. PROVIDE RUNNING BOND WITH VERTICAL JOINTS LOCATED AT THE CENTER OF MASONRY UNITS IN THE ALTERNATE COURSE BELOW, UNLESS NOTED OTHERWISE.
7. REINFORCING STEEL SHALL CONFORM TO ASTM 615, GRADE 60.
8. THE FOLLOW LINTEL SCHEDULE SHALL BE USED:

### CONCRETE BLOCK LINTELS

| | SPAN | BLOCK | REINFORCING |
|---|---|---|---|
| 8" WALLS | 0' TO 4'-0" | 8" DEEP | 2 #5 BOT. |
| | 4'-0" TO 9'-0" | 16" DEEP | 2 #6 BOT. |

### CONCRETE BEAM LINTELS

| SPAN | BEAM (W x D) | REINFORCING |
|---|---|---|
| 9'-0" TO 14'-0" | 7 5/8"x15 5/8" | 2 #6 BOTTOM<br>2 #6 TOP<br>#3 □ @ 8" |

## STRUCTURAL STEEL

1. STRUCTURAL STEEL:
   A. W AND WT SHAPES SHALL CONFORM TO ASTM A992 (GRADE 50).
   B. ANGLE, CHANNELS SHALL CONFORM TO ASTM A36.
   C. SQUARE HOLLOW TUBES SHALL CONFORM TO ASTM A500, GRADE B.
   D. ROUND HOLLOW SECTIONS SHALL CONFORM TO ASTM A501 OR ASTM A53.
2. BOLTS FOR STEEL TO STEEL CONNECTIONS SHALL CONFORM TO A.S.T.M. SPECIFICATION A-325 AND SHALL BE INSTALLED IN ACCORDANCE WITH AISC PUBLICATION "STRUCTURAL JOINST USING A.S.T.M. A325 OR A490 BOLTS."
3. ANCHOR BOLTS SHALL BE HEADED AND CONFORM TO ASTM A307.
4. ALL CONNECTIONS FOR STRUCTURAL STEEL SHALL BE SUFFICIENT TO FULLY DEVELOP THE CONNECTED MEMBERS.
5. SUBMIT COMPLETE SHOP DRAWINGS TO ENGINEER FOR APPROVAL. DRAWINGS SHALL INDICATE PROFILE, SIZES, SPACING, LOCATION OF STRUCTURAL MEMBERS, CONNECTIONS, ATTACHMENTS, FASTENERS, CAMBERS AND WELDS.
6. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.

## STEEL BAR JOISTS

1. BAR JOISTS SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE STEEL JOIST INSTITUTE.
2. BRIDGING FOR STEEL BAR JOISTS SHALL BE AS SHOWN ON THE DRAWINGS, BUT IN NO CASE SHALL IT BE LESS THAN THAT SPECIFIED BY THE STEEL JOIST INSTITUTE.
3. IN ADDITION TO BRIDGING SHOWN ON DRAWINGS, PROVIDE ONE ROW OF HORIZONTAL BOTTOM CORD BRIDGING AT FIRST PANEL POINT AT EACH END OF ALL ROOF JOISTS.
4. WHERE SHOWN, CONNECT BOTTOM CORD TO SUPPORTING MEMBER AFTER DEAD LOAD HAS BEEN APPLIED.
5. DESIGN ROOF JOIST FOR UPLIFT SHOWN ON COMPONENT AND CLADDING TABLE.

## METAL DECK

1. FLOOR DECK FLOOR SHALL BE 9/16 INCH DEPTH, 28 GAGE GALVANIZED,3 SPAN MINIMUM. FASTENER LAYOUT - 30/4 W/ 5/8" WELDS, SIDE LAPS - (1) #10 TEK SCREW PER SPAN
2. ROOF DECK SHALL BE 1 1/2 INCH DEPTH, 22 GAGE INTERMEDIATE TYPE GALVANIZED, 3 SPAN MINIMUM. FASTENER LAYOUT - 36/4 W/ 5/8" WELDS, SIDE LAPS - (2) #10 TEK SCREWS PER SPAN
3. THE EDGE OF DECK SHOULD BE 1/2" FROM THE VERTICAL LEG OF THE EDGE ANGLE, U.N.O.
4. UNLESS SHOWN OTHERWISE, PROVIDE L4 X 4 X 1/4 AROUND ALL OPENINGS THROUGH METAL DECK. WELD ANGLES TO SUPPORTING MEMBERS.

## SPECIAL INSPECTIONS PER THE 2012 IBC

1. THE CONTRACTOR WILL EMPLOY THE SERVICES OF ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECIAL INSPECTIONS DURING CONSTRUCTION FOR THE ITEMS IN THE SPECIAL INSPECTION TABLE BELOW.
2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL AND THE REGESTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN OF THE STRUCTURE, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
3. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
   A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE INSPECTOR MAY NOT ALTER, MODIFY, ENLARGE OR WAIVE THE REQUIREMENTS OF THE DOCUMENTS.
   B. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ENGINEER OF RECORD, AND THE CONTRACTOR. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, SUBMIT A COMPLETE LIST OF ALL OUTSTANDING DISCREPANCIES ON A WEEKLY BASIS TO THE OWNER, THE BUILDING OFFICIAL, AND THE ENGINEER OF RECORD UNTIL ALL CORRECTIONS HAVE BEEN COMPLETED.
   C. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
4. WHERE SPECIAL INSPECTION REQUIREMENTS DUPLICATE THE REQUIREMENTS OF SPECIFIED QUALITY ASSURANCE TESTING, DUPLICATE INSPECTIONS SHALL BE REQUIRED.

| SPECIAL INSPECTION | FREQUENCY | REFERENCED STANDARD |
|---|---|---|
| SOILS | | |
| 1. VERIFY MATERIALS BELOW FOOTING ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY. | PERIODIC | GEOTECHNICAL ENGINEERING REPORT |
| 2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIALS. | PERIODIC | |
| 3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS. | PERIODIC | |
| 4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL. | CONTINUOUS | |
| 5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY. | PERIODIC | |
| CONCRETE (NOT APPLICABLE TO ISOLATED SPREAD FOOTING OR NON-STRUCTURAL SLABS ON GROUND) | | |
| 1. INSPECTIONS OF REINFORCING STEEL, INCLUDING PRESTRESSED TENDONS, AND PLACEMENT. | PERIODIC | ACI 318: 3.5, 7.1-7.7 |
| 3. INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE. | CONTINUOUS | |
| 4. INSPECT EPOXY SET ANCHORS AND EXPANSION ANCHORS INSTALLED IN HARDENED CONCRETE. | CONTINUOUS | PRODUCT ICBO REPORT |
| 5. VERIFYING USE OF REQUIRED DESIGN MIX. | PERIODIC | ACI 318: CH. 4, 5.2, 5.8 |
| 6. SAMPLING FRESH CONCRETE AND PERFORMING SLUMP, AIR CONTENT AND DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS. | CONTINUOUS | ASTM C 172<br>ASTM C 31<br>ACI 318: 5.6, 5.8 |
| 7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES. | CONTINUOUS | ACI 318: CH. 5.9, 5.10 |
| 8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMERATURE AND TECHNIQUES. | PERIODIC | ACI 318: 5.11-5.13 |
| 11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS. | PERIODIC | ACI 318: 6.2 |
| 12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED. | PERIODIC | ACI 318: 6.1.1 |

| SPECIAL INSPECTION | FREQUENCY | REFERENCED STANDARD |
|---|---|---|
| STEEL CONSTRUCTION | | |
| 1. MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS AND WASHERS: | PERIODIC | APPLICABLE ASTM MATERIAL SPECIFICATIONS AISC ASD. SECTION A3.4 AISC LRFD. SECTION A3.3 |
| A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS. | | |
| B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED. | | |
| 2. INSPECTION OF HIGH-STRENGTH BOLTING: | | |
| A. BEARING-TYPE CONNECTION | PERIODIC | AISC LRFD ASTM A 568 |
| B. SLIP-CRITICAL CONNECTION | CONTINUOUS | |
| 3. MATERIAL VERIFICATION OF STRUCTURAL STEEL: | | ASTM A 6 OR ASTM A 568 |
| A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS. | | |
| B. MANUFACTURER'S CERTIFIED MILL TEST REPORTS REQUIRED. | | |
| 4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS: | | AISC. ASD. SECTION A3.6 AISC LRFD. SECTION A3.5 |
| A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS. | | |
| B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED. | | |
| 5. INSPECTION OF WELDING: | | |
| A. STRUCTURAL STEEL | | |
| 1.) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS. | CONTINUOUS | AWS D1.1 |
| 2.) MULTI-PASS FILLET WELDS. | CONTINUOUS | |
| 3.) SINGLE-PASS FILLET WELDS GREATER THAN 5/16" (7.9mm) | CONTINUOUS | |
| 4.) SINGLE-PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16" (7.9mm) | PERIODIC | |
| 5.) FLOOR AND DECK WELDS | PERIODIC | AWS D1.3 |
| 6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS. | PERIODIC | |
| A. DETAILS SUCH AS BRACING AND STIFFENING | | |
| B. MEMBER LOCATIONS | | |
| C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION | | |

| SPECIAL INSPECTION | FREQUENCY | IBC SECTION | ACI 530/ASCE 5/TMS 402 | ACI 530.1/ASCE 6/TMS 602 |
|---|---|---|---|---|
| MASONRY CONSTRUCTION | | | | |
| 1. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: | | | | |
| A. PROPORTIONS OF SITE-PREPARED MORTAR. | PERIODIC | | | ART. 2.6A |
| B. CONSTRUCTION OF MORTAR JOINTS. | PERIODIC | | | ART. 3.3B |
| C. LOCATION OF REINFORCEMENT AND CONNECTORS. | PERIODIC | | | ART. 3.4. 3.6A |
| D. PRESTRESSING TECHNIQUE. | PERIODIC | | | ART. 3.6B |
| E. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES. | PERIODIC | | | ART. 2.4B, 2.4H |
| 2. THE INSPECTION PROGRAM SHALL VERIFY: | | | | |
| A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS | PERIODIC | | | ART. 3.3G |
| B. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION. | PERIODIC | | SEC. 1.2.2(e), 2.1.4, 3.1.6 | |
| C. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT. | PERIODIC | | SEC. 1.12 | ART. 2.4, 3.4 |
| D. WELDING OF REINFORCING BARS. | CONTINUOUS | | SEC. 2.1.10.6.2, 3.2.3.4(b) | |
| E. PROTECTION OF MASONRY DURING COLD WEATHER (TEMP. BELOW 40 DEG. F) OR HOT WEATHER (TEMP. ABOVE 90 DEG. F). | PERIODIC | SEC. 2104.3, 2104.4 | | ART. 1.8C, 1.8D |
| F. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE. | PERIODIC | | | ART. 3.6B |
| 3. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE. | | | | |
| A. GROUT SPACE IS CLEAN. | PERIODIC | | | ART. 3.2D |
| B. PLACEMENT OF REINFORCEMENT AND CONNECTORS AND PRESTRESSING GROUT FOR BONDED TENDONS. | PERIODIC | | SEC. 1.12 | ART. 3.4 |
| C. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS. | PERIODIC | | | ART. 2.6B |
| D. CONSTRUCTION OF MORTAR JOINTS. | PERIODIC | | | ART. 3.3B |
| 4. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS | CONTINUOUS | | | ART. 3.5 |
| A. GROUTING OF PRESTRESSING BONDED TENDONS. | CONTINUOUS | | | ART. 3.6C |
| 5. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED. | CONTINUOUS | SEC. 2102.2.2, 2105.3 | | ART. 1.4 |
| 6. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED. | PERIODIC | | | ART. 1.5 |

## BUILDING CODE

2012 INTERNATIONAL BUILDING CODE

## DESIGN CODES

| | |
|---|---|
| AISC | "MANUAL OF STEEL CONSTRUCTION" NINTH EDITION |
| STEEL JOIST INSTITUTE | STANDARD SPECIFICATIONS, LOAD TABLES AND WEIGHT TABLES FOR STEEL JOIST AND JOIST GIRDERS |
| ACI 318 | BUILDING REQUIREMENT FOR REINFORCED CONCRETE |

## DESIGN INFORMATION

FIRST FLOOR LIVE LOAD -------- 100 PSF
ROOF LIVE LOAD ------------- 20 PSF

## WIND LOAD

BASIC WIND VELOCITY --------- 115 MPH
$I_W$ ---------- 1.0
EXPOSURE ---------- C
INTERNAL PRESSURE --------- ±.18
COMPONENT AND CLADDING ---- SEE TABLE BELOW

### COMPONENT AND CLADDING

| | ZONE | EFFECTIVE WIND AREA (SF) | PRESSURE (PSF) (POS. AND NEG.) |
|---|---|---|---|
| ROOF | 1 | 10 | 32.1 |
| | | 20 | 31.3 |
| | | 50 | 30.2 |
| | | 100 | 29.4 |
| | 2 | 10 | 53.9 |
| | | 20 | 48.2 |
| | | 50 | 40.6 |
| | | 100 | 34.8 |
| | 3 | 10 | 81.1 |
| | | 20 | 67.2 |
| | | 50 | 48.7 |
| | | 100 | 34.8 |
| WALL | 4 | 10 | 34.8 |
| | | 20 | 33.3 |
| | | 50 | 31.5 |
| | | 100 | 30.0 |
| | | 500 | 26.7 |
| | 5 | 10 | 43.1 |
| | | 20 | 40.1 |
| | | 50 | 36.3 |
| | | 100 | 33.3 |
| | | 500 | 26.7 |

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Project No: 20078 Revisions:
Date: APRIL 8, 2021
Drawn: KSM
Checked: SKM

Sheet Number : S100

A NEW 68-INMATE HOUSING ADDITION at the THE MARSHALL COUNTY JUSTICE COMPLEX
HOLLY SPRINGS, MISSISSIPPI

1" =1'-0" GRAPHIC SCALE
3" =1'-0" GRAPHIC SCALE
1" =1'-0" GRAPHIC SCALE
1 1/2" =1'-0" GRAPHIC SCALE
3/4" =1'-0" GRAPHIC SCALE
3/4" =1'-0" GRAPHIC SCALE
3/4" =1'-0" GRAPHIC SCALE


68-INMATE HOUSING ADDITION FOR
MARSHALL COUNTY JUSTICE COMPLEX
HOLLY SPRINGS, MISSISSIPPI
REV. 7/08

GENERAL ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, AND LOCAL ORDINANCES, AS ENFORCED BY THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS.
2. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL DETAILS OF THE WORK AND EXISTING FIELD CONDITIONS.
3. ALL NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANELS SHALL BE FULLY COMPATIBLE WITH AND MATCH THE AIC RATING OF THE PANEL IN WHICH THEY ARE INSTALLED.
4. THE ELECTRICAL CONTRACTOR SHALL CAREFULLY COORDINATE HIS WORK WITH OTHER CONTRACTORS THROUGH THE GENERAL CONTRACTOR FOR SPACE REQUIREMENTS, ETC.
5. THE CONTRACTOR SHALL VERIFY ALL MECHANICAL EQUIPMENT NAMEPLATE DATA BEFORE ANY WORK IS DONE AND MAKE ANY ADJUSTMENTS IN CIRCUIT BREAKER AND WIRE SIZE AS MAY BE REQUIRED.
6. IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES OR OMISSIONS IN THE CONTRACT DOCUMENTS, OR BE IN DOUBT AS TO INTENT, HE SHALL IMMEDIATELY OBTAIN CLARIFICATION FROM THE ARCHITECT OR ENGINEER OF RECORD.
7. THE ELECTRICAL DRAWINGS ARE SCHEMATIC AND ARE NOT INTENDED TO SHOW THE EXACT LOCATION OF CONDUITS, OUTLETS, ETC. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS AND SHALL FIT HIS WORK TO CONFORM WITH THE BUILDING CONSTRUCTION AND WITH OTHER TRADES.
8. MOUNTING HEIGHTS OF ALL WALL OUTLETS SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
   - WALL SWITCHES: 44" A.F.F.
   - RECEPTACLES, GENERAL: 18" A.F.F.
   - TELEPHONE/DATA: 18" A.F.F.
   - JUNCTION BOXES: 18" A.F.F.
   - EXIT LIGHT: CENTERLINE ABOVE DOOR
9. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT HEIGHT OF ALL COUNTER TOPS AND BACKSPLASHES ON CASEWORK SHOP DRAWINGS, AND CHANGE SPECIFIED MOUNTING HEIGHT OF INDICATE WALL OUTLETS AS REQUIRED SO THAT THE BOTTOM OF THE OUTLET BOX IS 2" ABOVE THE TOP ON THE BACKSPLASH OR, IF NO BACKSPLASH IS USED, 4" ABOVE COUNTER TOP.
10. DO NOT MOUNT OUTLET JUNCTION BOXES BACK-TO-BACK, PROVIDE AT A MINIMUM 24" SEPARATION IN FIRE RATED WALLS.
11. ALL OUTLET IN EXPOSED CONCRETE BLOCK WALLS SHALL BE ADJUSTED, AS REQUIRED, TO ALLOW FOR THE CUTTING OF ONLY ONE BLOCK. MAINTAIN UNIFORM HEIGHTS THROUGHOUT THE BUILDING.
12. VERIFY ALL DOOR SWINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN OF LIGHT SWITCHES.
13. THE CONTRACTOR SHALL CHECK ALL LIGHT FIXTURES FOR EXACT TYPE MOUNTING AND SPACE REQUIRED PRIOR TO ROUGH-IN.
14. BRANCH CIRCUITS SHALL BE #12 AWG CONDUCTORS IN 1/2" CONDUIT (EMT) AT A MINIMUM. THE CONDUCTORS SHALL BE 98% CONDUCTIVITY COPPER, THHN TYPE INSULATION. SERVICE AND FEEDER CONDUCTORS SHALL HAVE TYPE RHH INSULATION.
15. ALL CIRCUIT BREAKERS SHALL BE FULLY RATED WITH INTERRUPTING CAPACITY TO MEET AVAILABLE FAULT CURRENTS.
16. ALL CONDUIT INDOORS SHALL BE METALLIC, EMT WHERE EXPOSED. CONDUIT EXPOSED OUTDOORS SHALL BE IMC OR RIGID. CONDUIT UNDERGROUND SHALL BE RIGID OR PVC. PVE CONDUIT SHALL NOT BE EXPOSED ABOVE GRADE OR FINISH FLOOR LEVEL.
17. ALL RIGID AND IMC CONDUIT SHALL BE HOT DIP GALVANIZED, INSIDE AND OUT. EMT CONDUIT SHALL BE ELECTRO GALVANIZED. CONDUIT SHALL BE AS MANUFACTURED BY REPUBLIC, WHEATLAND, ALLIED, OR APPROVED EQUAL.
18. ALL CONDUITS CROSSING EXPANSION JOINTS SHALL HAVE EXPANSION TYPE FITTINGS.
19. ALL JUNCTION BOXES SHALL BE SUPPORTED INDEPENDENT OF CONDUIT FROM STURCTURE ABOVE.
20. SUPPORT OF RACEWAYS SHALL BE BY FACTORY MADE SUPPORTS OR HANGERS. SUPPORTS SHALL BE MADE FROM COLD-FORMED STEEL WITH CORROSION-RESISTANT COATING.
21. BRANCH CIRCUIT SPLICES SHALL BE MADE WITH THREADED WIRE-NUT CONNECTORS.
22. TERMINATE ALL DEVICES SUCH THAT REMOVAL OF ONE DEVICE SHALL NOT INTERRUPT POWER TO DOWNSTREAM DEVICES. PROVIDE AT LEAST 6" OF SLACK CONDUCTOR AT EACH OUTLET.
23. CONCEAL ALL CABLES, FEEDERS AND BRANCH CIRCUITS WHERE CEILING IS PRESENT.
24. SUPPORT LIGHT FIXTURES AT ALL FOUR CORNERS AND INDEPENDENT OF CEILING GRID.
25. PROVIDE ALL POWER PACKS AND CONTROL WIRING NECESSARY FOR A COMPLETE AND FULLY OPERATIONAL LIGHTING CONTROL SYSTEM.
26. NEW PANELBOARDS, AND EXISTING PANELBOARDS THAT ARE MODIFIED, SHALL BE IDENTIFIED TO INDICATE THE DEVICE OR EQUIPMENT WHERE THE POWER SUPPLY ORIGINATES.
27. ALL CONDUCTORS SHALL BE COPPER UNLESS OTHERWISE NOTED.
28. ALL NEW ELECTRICAL TERMINATIONS AND DEVICES SHALL BE RATED FOR 75°C.
29. THE CONTRACOTR SHALL PROVIDE ARC-FLASH WARNING LABELS THAT COMPLY WITH N.E.C. ARTICLE 110.16 ON NEW ELECTRICAL EQUIPMENT OR EXISTING EQUIPMENT THAT IS MODIFIED.
30. FUSES SHALL BE TIME-DELAY, DUAL ELEMENT, UL LISTED WITH A MINIMUM INTERRUPTING RATING OF 100,000 AMPERES SYMMETRICAL. FUSES SHALL BE BUSSMAN, LITTLEFUSE, OR APPROVED EQUAL.
31. VOLTAGE DROP: INDICATED HOMERUN CONDUCTOR SIZE CALCULATIONS ARE BASED ON ESTIMATED DISTANCES TO PANELBOARDS FOR LOADS SERVED, WITH A MAXIMUM OF 3% VOLTAGE DROP. THE CONTRACTOR MAY VERIFY BRANCH CIRCUIT LENGTHS AND ADJUST BRANCH CIRCUIT CONDUCTOR SIZES ACCORDINGLY TO MAINTAIN A VOLTAGE DROP OF LESS THAN 3% FOR LOADS SERVED. THE CONTRACTOR SHALL PROVIDE WRITTEN CALCULATIONS TO BE REVIEWED BY THE ENGINEER OF RECORD PRIOR TO INSTALLATION.
32. THE FIRE ALARM SYSTEM SHALL BE FULLY ADDRESSABLE CLASS B. PROVIDE ALL DEVICES NECESSARY FOR A FULLY FUNTIONAL AND CODE-COMPLIANT SYSTEM. TIE INTO HOOD SUPPRESSION SYSTEM AND HVAC UNITS OVER 2000 CFM.

## ELECTRICAL SYMBOLS LEGEND

| | |
|---|---|
| LA-1 | HOMERUN (CONDUIT AND WIRING) CONCEALED ABOVE CEILING OR IN WALL, WITH NUMBER OF CONDUCTORS INDICATED. ( V ) INDICATES GREEN GROUNDING CONDUCTOR, SMALL (↩) INDICATES PHASE CONDUCTOR(S), OR SWITCHLEGS. LARGER (↩) INDICATES NEUTRAL CONDUCTOR(S), HOMERUN CONDUCTORS SHALL BE MINIMUM #12 AWG UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS, MINIMUM SIZE FOR HOMERUN CONDUIT IS 3/4". UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS, INDICATED HOMERUN CONDUCTOR SIZE IS BASED ON ESTIMATED DISTANCES TO PANELS FOR LOADS SERVED FOR A MAXIMUM 3% VOLTAGE DROP. CONTRACTOR MAY DETERMINE ACTUAL LENGTH OF BRANCH CIRCUITS AND MAY ADJUST BRANCH CIRCUIT CONDUCTOR SIZES ACCORDINGLY TO MAINTAIN A VOLTAGE DROP OF NOT LESS THAN 3% FOR LOADS SERVED, BUT WILL NOT SIZE THE CONDUCTORS LESS THAN INDICATED ABOVE. CONTRACTOR SHALL PROVIDE WRITTEN VOLTAGE DROP CALCULATIONS TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO INSTALLATION. |
| #↩V | BRANCH CIRCUIT (CONDUIT AND WIRING) CONCEALED ABOVE CEILING OR IN WALL, WITH NUMBER OF CONDUCTORS INDICATED, (↩) INDICATES GREEN GROUNDING CONDUCTOR. SMALL (↩) INDICATES PHASE CONDUCTOR(S), OR SWITCHLEGS. LARGER (↩) INDICATES NEUTRAL CONDUCTOR(S). BRANCH CONDUCTORS SHALL BE SIZED PER THE HOMERUN CIRCUIT, UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. MINIMUM SIZE FOR CONDUIT IS 1/2". IF NO CONDUCTORS ARE INDICATED, ASSUME ONE (1) PHASE, ONE (1) NEUTRAL, ONE (1) GROUND. |
| | BRANCH CIRCUIT (CONDUIT AND WIRING) CONCEALED BENEATH GRADE OR SLAB. BRANCH CONDUCTORS SHALL BE SIZED PER THE HOMERUN CIRCUIT, UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. SEE HOMERUN NOTE ABOVE. MINIMUM SIZE CONDUIT IS 1" UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| A 1 | 2' X 4' LUMINAIRE, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| A1 1 | 2' X 4' LUMINAIRE EQUIPPED WITH EMERGENCY BATTERY, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| B 2 | 2' X 2' LUMINAIRE, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| B1 2 | 2' X 2' LUMINAIRE EQUIPPED WITH EMERGENCY BATTERY, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| C 3 | CEILING OUTLET, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| D 4 | 48" INDUSTRIAL STRIP, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| D1 4 | 48" INDUSTRIAL STRIP EQUIPPED WITH EMERGENCY BATTERY, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| F 5 | 1' X 4' FIXTURE, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| G1 6 | WALL BRACKET OUTLET EQUIPPED WITH EMERGENCY BATTERY, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| H 7 | 48" WALL BRACKET, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| H1 7 | 48" WALL BRACKET EQUIPPED WITH EMERGENCY BATTERY, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| SA 8 | SITE LIGHTING FIXTURE, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE SITE PLAN LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| SB 9 | SITE LIGHTING FIXTURE, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE SITE PLAN LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| X1 10 | SINGLE/DOUBLE FACED EXIT SIGN, CEILING MOUNT, WITH FIXTURE SYMBOL AND CIRCUIT NUMBER. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION. |
| $ | SWITCH, SINGLE POLE, FLUSH TUMBLER. MOUNT CENTER LINE UP 48", UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. VERIFY ALL SWITCH LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN. |
| $3 | SWITCH, THREE WAY, MOUNT CENTER LINE UP 48", UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. VERIFY ALL SWITCH LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN. |
| $4 | SWITCH, FOUR WAY, MOUNT CENTER LINE UP 48", UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. VERIFY ALL SWITCH LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN. |
| OS1 | WALL MOUNTED, DUAL TECHNOLOGY, LOW VOLTAGE OCCUPANCY SENSOR. WATTSTOPPER DT-200, OR EQUAL. PROVIDE POWER PACKS AS REQUIRED. |
| SB | WALL MOUNTED SWITCHBANK. |
| SCP | SECURITY CONTROL PANEL. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. |
| GA | GATE ACCESS CONTROL PANEL-A/V. COORDINATE WITH GATE CONTROL VENDOR AND ARCHITECT. |
| LCP | LIGHTING CONTROL PANEL. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. |
| | DISTRIBUTION / POWER PANEL, SURFACE MOUNTING. |
| | LIGHTING / SMALL POWER PANEL, SURFACE MOUNTING, 208 VOLT SYSTEM. |
| J | JUNCTION BOX, SURFACE MOUNTED, CONCEALED IN WALL OR ABOVE ACCESSIBLE CEILING. 4" SQUARE UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| J | JUNCTION BOX, FLUSH MOUNTED. 4" SQUARE UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| 1 | DUPLEX GROUNDING TYPE RECEPTACLE, 120 VOLTS, NEMA 5-20R, WITH CIRCUIT NUMBER. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| 2 | DUPLEX GROUNDING TYPE RECEPTACLE, 120 VOLTS, NEMA 5-20R, WITH CIRCUIT NUMBER. MOUNT CENTER LINE UP 4" ABOVE COUNTER/BACKSPLASH, UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| 3 | DOUBLE DUPLEX (QUAD) GROUNDING TYPE RECEPTACLE, 120 VOLTS, NEMA 5-20R, WITH CIRCUIT NUMBER. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| 4 | DUPLEX GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE (GFCI), 120 VOLTS, NEMA 5-20R, WITH CIRCUIT NUMBER. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| 5 | DUPLEX GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE (GFCI), 125 VOLTS, NEMA 5-20R, WHITE, WITH CIRCUIT NUMBER. MOUNT CENTER LINE UP 4" ABOVE COUNTER/BACKSPLASH, UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| | ELECTRICAL SYSTEM GROUND. SIZED AS NOTED. |
| M# | POWER CONNECTION SCHEDULE SYMBOL. |

## ELECTRICAL ABBREVIATIONS

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|---|---|
| AC | THIS NOTATION BY ANY RECEPTACLE SYMBOL INDICATES RECEPTACLE IS TO BE MOUNTED 4" ABOVE COUNTERTOP OR BACKSPLASH. |
| EDF | THIS NOTATION BY ANY RECEPTACLE SYMBOL INDICATES OUTLET IS FOR AN ELECTRIC DRINKING FOUNTAIN. MOUNT RECEPTACLE, OR JUNCTION BOX, WHERE DIRECTED BY EQUIPMENT MANUFACTURER. |
| GFI | THIS NOTATION BY ANY RECEPTACLE SYMBOL INDICATES RECEPTACLE IS TO BE A GROUND FAULT INTERRUPTER TYPE, 120 VOLTS, NEMA 5-20R. |
| TV | THIS NOTATION BY ANY RECEPTACLE SYMBOL INDICATES OUTLET IS FOR CONNECTION TO TELEVISION. MOUNT RECEPTACLE ADJACENT TO TELEVISION SYSTEM OUTLET. |
| WP | THIS NOTATION BY ANY RECEPTACLE SYMBOL INDICATES OUTLET IS A DUPLEX GROUND FAULT INTERRUPTER TYPE, 120 VOLTS, NEMA 5-20R RECEPTACLE IN A SINGLE GANG BOX. OUTLET SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHEN PLUG IS INSERTED AND COVER IS CLOSED. "WP" DENOTES WEATHERPROOF, WET LOCATION PER 2014 N.E.C. 406.9(B)(1). |

## INTERCOM SYMBOLS LEGEND

| | |
|---|---|
| IM | INTERCOM MASTER STATION. REFER TO SPECIFICATIONS FOR DETAILS. |
| IS | INTERCOM STAFF STATION. REFER TO SPECIFICATIONS FOR DETAILS. |
| IC | INTERCOM TWO-WAY CEILING SPEAKER/MICROPHONE STATION. REFER TO SPECIFICATIONS FOR DETAILS. |

CEILING ACCESS PANELS:

THE MECHANICAL CONTRACTOR IS PROVIDING A NUMBER OF ACCESS PANELS THROUGHOUT THE SPACE. THESE PANELS MAY BE UTILIZED BY ELECTRICAL WHEREVER POSSIBLE TO REDUCE THE NUMBER OF PENETRATIONS THROUGH THE CEILING. ANY ADDITIONAL ACCESS PANELS REQUIRED FOR ELECTRICAL ROUTING SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

## FIRE ALARM SYSTEM SYMBOLS LEGEND

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|---|---|
| FACP | FIRE ALARM SYSTEM CONTROL PANEL. MOUNT CENTER LINE UP 60" A.F.F. ROUTE ALL FIRE ALARM HOME RUNS TO THIS LOCATION. |
| FAR | FIRE ALARM SYSTEM REMOTE ANNUNCIATOR. MOUNTING HEIGHT SHALL BE IN COMPLIANCE WITH NFPA. VERIFY EXACT LOCATION WITH CONTRACTING OFFICER PRIOR TO ROUGH-IN. |
| F | FIRE ALARM SYSTEM PULL STATION. MOUNT CENTER LINE UP 48" A.F.F. SEE SPECIFICATIONS FOR MORE INFORMATION. |
| FL 15cd | FIRE ALARM SYSTEM ALARM STROBES. WALL MOUNTED, WITH CANDELA. THE FIRE ALARM STROBE SHALL BE WHITE WITH A CLEAR LENS WITH "FIRE" PRINTED ON THE LENS. MOUNTING HEIGHT SHALL BE IN COMPLIANCE WITH NFPA-72-6-4.4. |
| F 15cd | FIRE ALARM SYSTEM WALL MOUNTED AUDIBLE/VISUAL DEVICE, WITH CANDELA. SEE FIRE ALARM/MASS NOTIFICATION SYSTEMS RISER, THIS SHEET, FOR MORE INFORMATION. HORN LOUDSPEAKER SHALL BE WET LOCATION LISTED WHEN LOCATED ON THE EXTERIOR OF BUILDING. |
| S | FIRE ALARM SYSTEM SMOKE DETECTOR. PHOTOELECTRIC TYPE. MOUNT ON CEILING UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| T | FIRE ALARM SYSTEM THERMAL DETECTOR. 135° RATING UNLESS NOTED OTHERWISE. MOUNT ON CEILING UNLESS NOTED OTHERWISE. |
| DSDP R/S | FIRE ALARM SYSTEM PHOTOELECTRIC SMOKE DETECTOR. PLENUM TYPE WITH SAMPLING TUBES AND REMOTE ALARM INDICATOR LIGHT. MOUNT DETECTOR IN SUPPLY (S) OR RETURN (R) PLENUM. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR. |
| TSF | SPRINKLER SYSTEM TAMPER SWITCH. |
| FSF | SPRINKLER SYSTEM FLOW SWITCH. |
| | SPRINKLER SYSTEM ALARM BELL. WATER FLOW TYPE. |

## COMMUNICATIONS SYMBOLS LEGEND

| | |
|---|---|
| CBB | COMMUNICATIONS BACKBOARD, 4' X 8' X 3/4" FIRE RATED PLYWOOD, RIGIDLY ATTACHED TO WALL TO SUPPORT TERMINATION EQUIPMENT. LONG DIMENSION VERTICAL. COVER INDICATED WALL(S) UP TO 8'-0" A.F.F. |
| TMGB | TELECOMMUNICATIONS GROUND BUS. PROVIDE 12" X 3" X 1/2" COPPER BUS BAR WITH ISOLATED MOUNTS. |
| W | VOICE OUTLET . WALL MOUNTED. MOUNT 42" A.F.F. UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| | DATA OUTLET. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| | COMBINATION VOICE/DATA OUTLET . MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| J | JUNCTION BOX, SURFACE MOUNTED, CONCEALED IN WALL OR ABOVE ACCESSIBLE CEILING. 4" SQUARE UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. |
| Tv | TELEVISION SYSTEM OUTLET. MOUNT 84" A.F.F. UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. VERIFY EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. |
| SD | SECURE DOOR ROUGH-IN. ALL SECURE DOORS SHALL BE CONTROLLED FROM CENTRAL CONTROL 117 AND HOUSING CONTROL 141. |
| | CAMERA ROUGH-IN LOCATION. COORDINATE REQUIREMENTS WITH CCTV PROVIDER PRIOR TO ROUGH-IN. |
| WP | THIS NOTATION BY ANY OUTLET SYMBOL INDICATES OUTLET SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF. "WW" DENOTES WEATHERPROOF, WET LOCATION. |

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Dean and Dean/Associates architects a professional association
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Project No: 20078 Revisions:
Date: APRIL 8, 2021 1 April 22, 2021 Addendum #1
Drawn: MBC
Checked: VGL

A NEW 68-INMATE HOUSING ADDITION at the THE MARSHALL COUNTY JUSTICE COMPLEX
HOLLY SPRINGS, MISSISSIPPI

Sheet Number : E001

EDMONDS Trusted Engineering Solutions
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Project Number : JAN20459

80 INMATE HOUSING ADDITION FOR
MARSHALL COUNTY JUSTICE COMPLEX
HOLLY SPRINGS, MISSISSIPPI
PN- 17018

FLOOR PLAN KEYNOTES:

1. 1" SCHEDULE 40 PVC 24" BELOW GRADE WITH GATE ACCESS CONTROL A /V CABLE TO GATE ACCESS CONTROL PANEL IN ROOM 117. SEE SPECIFICATIONS. COORDINATE WITH GATE CONTROL VENDOR AND ARCHITECT FOR EXACT ROUGH-IN REQUIREMENTS AND CABLE TYPE.
2. 1" SCHEDULE 40 PVC 24" BELOW GRADE WITH GATE ACCESS CONTROL OPERATION CABLE TO SECURITY PANEL IN ROOM 117. SEE SPECIFICATIONS. COORDINATE WITH GATE CONTROL VENDOR AND ARCHITECT FOR EXACT ROUGH-IN REQUIREMENTS AND CABLE TYPE.
3. 1" SCHEDULE 40 PVC 24" BELOW GRADE WITH GATE ACCESS CONTROL CABLE . SEE SPECIFICATIONS. COORDINATE WITH GATE CONTROL VENDOR AND ARCHITECT FOR EXACT ROUGH-IN REQUIREMENTS AND CABLE TYPE.
4. PROVIDE ALERT BEACON WITH ACTIVATION WHILE GATE IS IN MOTION. PROVIDE 120V CIRCUIT FROM UNSWITCHED SOURCE AND INTERLOCK WITH N.O. CONTACT IN THE GATE CONTROLLER. BEACON EQUAL TO EDWARDS SIGNALING CAT# 95A-N5-WBR-92-GRD. COORDINATE EXACT LOCATION WITH ARCHITECT.
5. TWO, 4" SCHEDULE 80 PVC CONDUITS 36" BELOW GRADE WITH SWEEPING NINETY DEGREE BENDS TO MDF AT EXISTING COU RTHOUSE BU ILDING. COORDINATE WITH ARCHITECT FOR EXACT ROUTING. CONNECT TO EXISTING STUBBED OUT CONDUITS AT PULLBOX.
6. MOUNT CAMERA(S) ON 20' STRAIGHT, SQUARE STEEL POLE. PROVIDE MOUNTING ARMS AS REQUIRED PER MANUFACTURER'S RECOMMENDATION. ROUTE 1"C. TO RACK CONTAINING VIDEO EQUIPMENT. PROVIDE CONCRETE POLE BASE. SEE POLE BASE DETAIL SHEET E501, DETAIL 3.
7. SWITCHBANK FOR ON/OFF CONTROL OF TELEVISIONS IN INMATE DORMS. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
8. GENERATOR REMOTE ANNUNCIATOR. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
9. FOUR POST FLOOR MOUNTED RACK, WITH CABLE MANAGEMENT. PROVIDE CHATSWORTH 50120-703, OR EQUAL.

GENERAL NOTES:

A. ROUTE (2)-2" C. FROM I.T. CLOSET 176 TO BOTH CONTROL CENTRAL 117 AND HOUSING CONTROL 141.

1 T101 FLOOR PLAN - TELECOMMUNICATIONS
SCALE: 1/8" = 1'-0"

80 INMATE HOUSING ADDITION FOR
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