10 May 2021

ADDENDUM NUMBER THREE (3)

- Project: 68 Inmate Housing Addition to Marshall County Justice Complex PN: 20078
- FROM: Dean and Dean/Associates Architects, P.A. 4400 Old Canton Road, Suite 200 Jackson, MS 39211 (601) 939-7717

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.

Clarifications

Item #1: Section 111930, Security Glass and Glazing, Paragraph 2.02.A, as follows:

Security glass type "S5" is not used on this project.

Architectural Specifications:

Item #1: Section 002113, Instructions To Bidders, paragraph 1.07 Proposals, subparagraph B, change last sentence to read as follows:

All bids are irrevocable offers to contract at the price bid, which may not be withdrawn until 30 days after bid opening.

Item #2: Section 004100, Bid Form, remove existing Bid Form issued in Addendum #2 and replace with the attached revised Bid Form.

Note: Changed time of holding bid price to 30 days in lieu of 60 days.

- Item #3: Section 012100 Allowances, paragraph 1.04 Allowance Schedule, add subparagraph 1.04.B to read as follows:
 - B. Utility Tap Fees Electrical and Sewer Tap Fees. Contractor shall include the sum/price of \$2,000 for required City of Holly Springs tap/connection fees. Temporary utilities and usage fees shall be provided by General Contractor as part of the bid price per Section 015000 and 015100. There will be no tap fees for water and gas service as the General Contractor will connect to existing services provided and stubbed out from existing Justice court project. Coordinate with contractor onsite for exact locations.
- Item #4: Section 099000, Painting and Coating, paragraph 2.04, subparagraph "I" to read as follows:
 - Spray a coat of Ashford Formula sealer and curing to freshly finished concrete (new). After construction of walls and finish spaces are complete, contractor to clean concrete surface and spritz another coat of Ashford Formula and burnish out finish for a uniform appearance.

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

- Item #5: Section 133420 Metal Building Wall and Roof Panels, paragraph 2.01 Manufacturers, add subparagraphs 2.01.A.14 & 15 to the section to read as follows:
 - 14. Majestic Metals, Inc., 192 American Way, Madison, MS 601-856-3600
 - 15. Reed's Metals, Brookhaven, MS, 601-823-6516

Architectural Drawings:

Item #1: D101 Demolition Floor Plan, as follows:

Change scale of drawing to read 3/32" = 1'-0"

Item #2: Sheet A305, Canopy Details, as follows:

Detail 2/A305 – Remove notes stating (By Others) from this detail. All concrete to be provided by General Contractor.

Item #3: Sheet A601, Door Schedule, as follows:

Door $128A - Remove 1 \frac{1}{2}$ hour rating on this door. Door is not required to be rated.

<u>Civil</u>

SEE ATTACHED CIVIL ITEMS PROVIDED BY ELLIOTT & BRITT ENGINEERING

Electrical

SEE ATTACHED ELECTRICAL ITEMS PROVIDED BY EDMONDS ENGINEERING

END OF ADDENDUM NUMBER THREE (3)

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.

SECTION 004100 BID FORM

THE PROJECT AND THE PARTIES

1.01 TO:

- A. Owner
 - 1. Marshall County Board of Supervisors Holly Springs, MS

1.02 FOR:

- A. 68-Inmate Housing Addition Marshall County Justice Complex Holly Springs, MS
- B. Project Number: 20078

1.03 DATE: _____ (BIDDER TO ENTER DATE)

1.04 SUBMITTED BY: (BIDDER TO ENTER NAME AND ADDRESS)

A. Bidder's Full Name ______ Address ______ City, State, Zip _____

1.05 OFFER

- A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Bid Documents prepared by Dean and Dean/Associates Architects for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:
- B. Base Bid 68-INMATE HOUSING ADDITION

dollars

(\$_____), in lawful money of the United States of America.

C. Alternate #1 (Steel Roof Framing in Lieu of Bar Joist) (Note: add or deduct) Add _____ or Deduct _____

_ dollars

- D. We have included the required security deposit as required by the Instruction to Bidders.
- E. We have included the required performance assurance bonds in the Bid Amount as required by the Instructions to Bidders.

), in lawful money of the United States of America.

- F. All applicable federal taxes are included and State of Mississippi taxes are included in the Bid Sum.
- G. All Cash Allowances described in Section 012100 are included in the Bid Sum.

1.06 ACCEPTANCE

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- A. This offer shall be open to acceptance and is irrevocable for thirty (30) days from the bid closing date.
- B. If this bid is accepted by Owner within the time period stated above, we will:
 - 1. Execute the Agreement within seven days of receipt of Notice of Award.
 - 2. Furnish the required bonds within seven days of receipt of Notice of Award.
- C. If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.
- D. In the event our bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

1.07 CONTRACT TIME

- A. If this Bid is accepted, we will:
- B. Complete the Work in calendar days from the commencement of work date set in the Notice to Proceed. (Bidder to enter number of calendar days.)

2.01 CHANGES TO THE WORK

- A. When Architect establishes that the method of valuation for Changes in the Work will be net cost plus a percentage fee in accordance with General Conditions and Supplemental Conditions identified in Section 007300.
 - 1. 10 percent overhead and profit on the net cost of our own Work.
 - 10 percent on the cost of work done by any Subcontractor. 2.
 - 3. Markup for profit and overhead will not be allowed for items to be paid from project allowances identified in Section 012100.

2.02 ADDENDA

- The following Addenda have been received. The modifications to the Bid Documents noted A. below have been considered and all costs are included in the Bid Sum.
 - 1. Addendum # _____ Dated _____.
 - 2. Addendum # _____ Dated _____.
 - 3. Addendum # Dated .
 - Addendum # _____ Dated _____.

 Addendum # _____ Dated _____.
 4. Addendum #
 - 5.

2.03 BID FORM SUPPLEMENTS

- A. The following information is included with Bid submission:
 - Subcontractors: Mechanical, Electrical, Plumbing. 1.
- The following Supplements are attached to this Bid Form and are considered an integral part of В. this Bid Form:
 - Document 004336 Supplement A Subcontractors: Include the names of the listed 1. Subcontractors. Attach Supplement A to the Bid Form.

2.04 BID FORM SIGNATURE(S)

A. The Corporate Seal of

(Bidder - print the full name of your firm) was hereunto affixed in the presence of:

(Authorized signing officer, Title)

B. If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

END OF BID FORM

NEW 68-INMATE HOUSING ADDITION AT THE MARSHALL COUNTY JUSTICE COMPLEX HOLLY SPRINGS, MISSISSIPPI ADDENDUM NO. 3 May 10,2021

May 10,20

1. CLARIFICATION:

The C900 shown on Civil Sheet C.4 is acceptable in the place of Ductile Iron Piping. C900 carries the same pressure rating as Ductile Iron.

All other provisions of the Contract Documents and Construction Drawings shall remain unchanged and in full effect.

This addendum shall be attached to and become part of the Contract Documents referred to herein.

DATE: May 10, 2021

Britt, PE/PS Larry

Consulting Engineer

RECEIVED:

This Addendum should be signed and dated by Bidder and submitted as proof of receipt with the submission of bids. The Bidder, by identifying the addendum number in the bid proposal and by the signing and submission of their bid, shall serve as proof of receipt of this addendum. Failure to comply may result in disqualification.

DATE: _____

Signature

May 10, 2021

ADDENDUM NO. 3

PROJECT:	Marshall County Jail Addition	
	Holly Springs, Mississippi	

FROM: Edmonds Engineering, Inc. 1900 Lakeland Drive, Suite 1 Jackson, Mississippi 39216

The following additions, changes, clarifications and/or substitutions to the Project Drawings/Specifications 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.

- Item No. 1: Added Sheet E006 Security Riser.
- Item No. 2: Drawing, Sheet T101: Added Floor Plan Keynotes 10, 11, 12 & 13; Added General Notes "B" & "C"; Added exterior camera at Secure Corridor 149
- Item No. 3: Specification Section 283000, Part 3 Execution, 3.5(A): Edited first sentence to add "and owner approval".

END OF ADDENDUM NO. 3

SECTION 283000 VIDEO SURVEILLANCE SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. CCTV: Closed-circuit television.
- B. DVR: Digital video recorder.
- C. NVR: Network video recorder.
- D. VMC: Virtual matrix controller.
- E. VI: Video intelligence.
- F. SMS: Security management/access control system.

1.3 SUBMITTALS

- A. Product Data: Include detailed manufacturer's specifications for each component specified. Include data on features, ratings, and performance.
- B. Shop Drawings:
 - 1. Include dimensioned plan and elevation views of components and enclosures and details of control panels. Show access and workspace requirements.
 - 2. Wiring Diagrams: Power, signal, and control wiring. Differentiate between manufacturer- installed and field-installed wiring.
- C. Coordination Drawings: Plans drawn to scale and coordinating locations of video equipment. Show the following:
 - 1. Ceiling suspension assembly members.
 - 2. Method of attaching hangers to building structure.
 - 3. Location of items requiring installation coordination, including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and other architectural features.
- D. Field Test Reports: Indicate and interpret test results for compliance with performance requirements of installed systems.
- E. Maintenance Data: Include the following:
 - 1. Detailed operating instructions covering operation of stored video retrieval and long term storage of video recordings.
 - 2. Routine maintenance requirements for system components.
 - 3. Lists of spare parts and replacement components recommended to be stored at the site for ready access.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. The Video Surveillance System Installer shall be licensed and shall meet all applicable regulations. The Contractor shall be a firm normally employed in the low voltage and video cabling industry.
 - 2. The Contractor must be certified by the manufacturer of the products, adhere to the engineering, installation and testing procedures and utilize the authorized manufacturer components and distribution channels.
 - 3. The Contractor shall be certified by the manufacturing company in all aspects of design, installation and testing of the products described herein. Each Contractor shall furnish with their submittal, a letter from the manufacturer indicating they are a dealer in good standing.
 - 4. The Contractor shall be experienced in all aspects of this work and shall be required to demonstrate direct experience on recent systems of similar type and size. The Contractor shall own and maintain tools and equipment necessary for successful installation and testing of video surveillance distribution systems and have personnel who are adequately trained in the use of such tools and equipment. A resume of qualifications shall be submitted with the Contractor's proposal indicating the following:
 - a. A list of five recently completed projects using the product proposed of similar

type and size with contact names and telephone numbers for each.

- b. A list of test equipment proposed for use in verifying the installed integrity of metallic cable systems on this project.
- c. A technical resume of experience for the Contractor's Project Manager and on
 - site installation supervisor who shall be assigned to this project.
- d. A list of technical product training attended by the Contractor's personnel that shall install the video surveillance system shall be submitted.
- e. Any subcontractor who shall assist the video surveillance Contractor in

performance of this work shall have the same training and certification as the

video surveillance Contractor.

- B. Product Options: Drawings indicate size, profiles, and dimensional requirements of television equipment and are based on the specific system indicated. Other manufacturers' products complying with requirements may be considered. Refer to Division 1 Section "Substitutions." Systems that are manufactured and installed by a factory office and are not available through multiple distribution channels will not be accepted.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- D. Comply with NFPA 70.
- E. Comply with 47 CFR 15, 17, and 76.

1.5 PROJECT REQUIREMENTS

- A. Provide a complete and operable video surveillance system consisting of IP digital cameras, NVR components and software to store 30 days of recorded video.
- B. The video surveillance system shall integrate with the touch screen security control system

for instant live video viewing from selection of icons on the touch screen control system.

- C. Service Conditions for Outdoor Equipment: Equipment shall be rated for continuous operation under the following environmental conditions, unless otherwise indicated:
 - 1. Temperature: -22° F to 122° F.
 - 2. Relative Humidity: 0 to 95 percent.
 - 3. Weather: Enclosure housings to prevent entry of moisture due to melting ice build-up or driven rain or snow.
- D. Service Conditions for Indoor Equipment: Equipment shall be rated for continuous operation under the following environmental conditions, unless otherwise indicated:
 - 1. Temperature: 32° F to 122° F.
 - 2. Relative Humidity: 0 to 95 percent.

1.6 COORDINATION

- A. Coordinate layout and installation of video surveillance equipment and suspension system components with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression-system components, and partition assemblies.
- B. Contractor is responsible for all work required on this project for connection of NVR, cameras and power supplies. Contractor shall be responsible for the complete installation of all security cameras. The camera system shall have a complete and seamless integration with the Electronic Security System.

1.7 WARRANTY

- A. Special warranty specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
 - 1. Written warranty, signed by manufacturer and installer agreeing to correct system deficiencies and replace components that fail in materials or workmanship for a period of one (2) years following date of substantial completion. This warranty shall be in addition to, and not limiting, other rights Owner may have under other provisions of the Contract Documents.
 - 2. Warranty shall include all parts and components of the Closed Circuit Television System.

1.8 EXTRA MATERIALS

- A. Furnish extra materials as described below, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents. Provide not less than one of each item listed below. Deliver extra materials to Owner.
 - 1. Fuses: One for every 10; each type and rating.
 - 2. Cameras: One for every 10; each type and focal length installed.

PART 2 - PRODUCTS

2.1 GENERAL

- A. The cabling shall be installed per requirements of the manufacturer and the Project Documents, utilizing material meeting all applicable standards. The Contractor is responsible for providing all incidental and/or miscellaneous hardware not explicitly specified below as required for a complete and operational system.
- B. Materials shall be as listed or shall be approved equivalent products of other manufacturers meeting the intent and quality level of the specifications. All approved equivalent products shall be published by addendum and shall be submitted fourteen days prior to bid date for Architect/Engineer review.
- C. Testing: All installed cabling shall be tested 100% at specified performance after installation by the Contractor.
- D. All equipment and materials used shall be standard components, regularly manufactured, regularly utilized in the manufacturer's system.
- E. All systems and components shall have been thoroughly tested and proven in actual use.
- F. Network Video Recording Software shall be from an original equipment manufacturer with extensive experience in the Analog and Digital Video Surveillance.
- G. All systems and components shall be provided with the availability of a toll free 24-hour technical support phone number from the manufacturer. The phone number shall allow for immediate technical assistance for either the dealer/installer or the end user at no charge.
- H. All systems and components shall be provided with an explicit manufacturer warranty.

2.2 DATA CLOSET (MDF/IDF) TERMINATION HARDWARE

- A. Security Contractor shall provide where required one stand up rack at building headend closet location to receive video management system. Rack shall be black in color and have vertical management on both sides of rack. Coordinate rack location with other technology racks being installed in room. Coordinate rack location with owner prior to installation to confirm mounting is acceptable. Mount rack securely to floor and overhead tray.
- B. Security Contractor shall provide one (1) 23" High Definition monitor at each closet location to be able to view NVRA/MCA/I server(s) display.
- C. Security Contractor shall provide combination keyboard/monitor shelf at each NVR location.
- D. Security Contractor is responsible to coordinate with owner's technology department on acquiring network connections as well as any network configuration information such as IP numbers that will be required to connect NVR servers to owner network.
- E. Video Surveillance System should not depend on owner's network. Security Contractor is responsible for new video system network cabling, network switches of sufficient size and capability to support NVRs, Workstations, IP Cameras, IP Servers (VMC) or other video surveillance components.
- F. Security Contractor shall provide 4000VA UPS unit at each rack (4 servers) or 1000VA per server location to support VMC equipment. Contractor shall only install devices to a maximum fill of no more than 80% of capacity and allow one (1) RU between devices. Any additional servers at one location will require another rack. Security Contractor is required to subcontract a licensed Electrical Contractor to provide 120VAC electrical power at locations where UPS's are installed.
- G. Contractor shall provide and install one infrastructure protection camera in each IDF and

MDF room where Video Surveillance System equipment is installed. Infrastructure protection cameras shall be provided even if not identified on plans.

- 1. In NVR only IDF/MDF installations, Contractor shall install specified IP mini-dome camera.
- 2. Infrastructure protection cameras shall be programmed to record when motion is sensed and with 30 seconds of pre-alarm recording.

2.3 CABLE AND INSTALLATION

- A. The Contractor shall provide and install all CAT6 cabling for signal and POE power to each camera.
- B. Power circuits for UPS equipment dedicated to Video Equipment shall be the responsibility of the security contract. Power circuits are to be installed by a licensed electrical contractor subcontracted by the security contractor.

2.4 NETWORK VIDEO RECORDERS

- A. The Network Video Recorder (NVR) shall enable the user to record based upon surveillance recording needs. It shall be capable of continuous, motion detection, schedule or event-based recording. The NVR shall feature an event log, event search, along with event notification that can send an email or alert when an event occurs.
- B. The NVR shall support H.265 to reduce file size requirements.
- C The NVR camera selection and recording shall be integrated with the touch screen security control system to allow camera image call-up upon selecting a camera icon or an intercom icon on the touch screen monitor.
- D The NVR software shall be capable of being loaded on any connected workstation on the network and centrally manage all the NVR and camera functions. The software shall enable viewing of up to 64 live cameras on a single screen and support up to 256 devices with a maximum of 1,024 channels.
- G. All NVR equipment shall include a three year parts warranty.

2.5 CAMERAS

- A. **Camera Mounting Brackets and Hardware**: Contractor shall provide all mounting hardware and brackets appropriate to mount cameras, and camera support equipment. Where plans indicate type, Contractor shall provide indicated type. Where not indicated, Contractor shall provide mount that is physically and aesthetically appropriate. All camera mounts shall be provided from camera manufacturer to match finish and style of attached camera.
- B. Pan/Tilt/Zoom Cameras: IP PTZ camera with 2.1 Megapixel resolution minimum. The system shall provide the capability of controlling and viewing pan- tilt-zoom cameras over the network as well as allowing on site viewing and control. Tamper resistant with all movable parts enclosed behind a protective cover.
 - 1. Integrated dome.
 - 2. POE+ or 24 VAC operation.
 - 3. Operating temperature range -22° F to 140° F.
 - 4. Day/night camera with 23X optical zoom (min.) and 16X digital zoom.
 - 5. Smart auto tracking that can detect and track progressively moving objects within the camera's coverage area.
 - 6. 1920 x 1080 (1080p) 2.1 Megapixel resolution (minimum) full IP digital camera.

C. Fixed Position Indoor/Outdoor Dome Cameras:

- The fixed camera dome shall be an IP camera with a varifocal lens and 4.0 Megapixel resolution as a minimum. The camera shall be Vandal proof and include WDR and IR illumination in total darkness up to 65 feet.
- 2. The camera position shall have a three direction adjustment, allowing for adjustment of pan, tilt and lens rotation (roll), for any angle of view required. The cameras shall have PoE (802.3af) capability.
- 3. The camera dome shall meet or exceed the following design and performance specifications.

Megapixel	4.0
Day/Night/Function	True D/N w/Mechanical Cut Filter
Digital Noise Reduction	3D DNR
Electronic Shutter	1/3 – 1/10,000 sec
Flip	Digital Horizontal/Vertical
IR Array Range (ft)	65
Lux (B/W)	0.0
Lux (Color)	0.1
Wide Dynamic	Yes
Video Streaming	Dual
Pan Angle	0 Deg – 355 Deg
Tilt Angle	0 Deg – 75 Deg
Outdoor rating	IP66 minimum
Vandal-proof rating	IK10 minimum
POE	802.3af
Warranty	3 years

PART 3-EXECUTION

3.1 EXAMINATION

- A. Examine pathway elements intended for cable. Check raceways, cables trays, and other elements for compliance with space allocations, installation tolerances, hazards to cable installation, and other conditions affecting installation.
- B. Examine walls, floors, roofs, equipment bases, and roof supports for suitable conditions where video equipment is to be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Outdoor Installation: Comply with ANSI C2, "National Electrical Safety Code."
- B. Install surge suppressors where power-operated devices are not protected against voltage transients by integral surge suppressors specified in UL 1449. Install surge suppressors at the devices' power-line and signal terminals. All exterior building cameras shall include surge suppressors at the cable entrance or at the termination location closest to the cable entrance to the building.
- C. Wiring Method: Install cables in raceways and as otherwise indicated. Conceal raceways and wiring except in unfinished spaces.
- D. Fire Wall Penetrations: The Contractor shall avoid penetration of fire rated walls and floors wherever possible. Contractor shall also seal all floor, ceiling and wall penetrations in fire or smoke barriers and in the wiring closet.
- E. Wall Penetrations: Where penetrations are necessary, they shall be sleeved with metallic conduit and resealed with an Underwriter Laboratories (UL) approved sealant. Provide three sided pre-finished metal hood and seal to wall where conduit penetrates exterior wall.
- F. Do not install wall mounted cameras into metal fascia. Ensure they are mounted into brick, and sealed top and sides (not bottom).
- G. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Provide and use lacing bars and distribution spools.
- H. Pulling Cable: Do not exceed manufacturer's recommended pulling tensions. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
- Splices, Taps, and Terminations: For power and control wiring, use numbered terminal strips in junction, pull, and outlet boxes; terminal cabinets; and equipment enclosures. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

J. Grounding: Provide independent signal circuit grounding recommended by manufacturer.

3.3 WIRING INSTALLATION

- A. General:
 - 1. Cabling between wiring closet and camera locations shall be made as individual home runs. No intermediate splices may be installed or utilized between the wiring closet and the camera location.
 - 2. All cable must be handled with care during installation so as not to change performance specifications.
- B. Placement: All cabling and associated hardware shall be placed so as to make efficient use of available space. All cabling and associated hardware shall be placed so as not to impair the Owner's efficient use of their full capacity.
- C. Cable Routes: All cabling placed in ceiling areas must be in conduit. Cable supports shall be permanently anchored to building structure or substrates. Provide attachment hardware and anchors designed for the structure to which attached and that are suitably sized to carry the weight of the cables to be supported. Attaching cable to pipes or other mechanical items is not permitted.

3.4 EQUIPMENT RACK CONFIGURATION

- A. Cable Placement: Cable installation in the wiring closet must conform to the Project Drawings. All cabling shall be routed so as to avoid interference with any other service or system, operation, or maintenance location. Avoid crossing areas horizontally just above or below any riser conduit. Lay and dress cables to allow other cables to enter the conduit/riser without difficulty at a later time by maintaining a working distance from these openings.
- B. Cable shall be routed as closely as possible to the ceiling, floor or corners to ensure that adequate wall or backboard space is available for current and future equipment. All cable runs within the wiring closet shall be horizontal or vertical within the constraints of minimum cable bending radii. Minimum bend radius shall be observed. Cables shall not be tie-wrapped to electrical conduit or other equipment.
- C. All incoming cables shall be routed on the cable tray if available and neatly dressed down to the patch panels.

3.5 VIDEO SURVEILLANCE SYSTEM INSTALLATION

- A. Install cameras at final locations defined by camera location tests and owner approval. Install cameras with 84-inch (2134-mm) minimum clear space below cameras and their mountings. Change type of mounting to achieve required clearance. Contractor shall coordinate with Owner if this minimum clearance cannot be achieved in location identified on plans.
- B. Set pan unit and pan-and-tilt unit stops to suit final camera position and to obtain the field of view required for camera.
- C. Install power supplies and other auxiliary components at control stations. Do not install such items near the devices they serve, unless otherwise indicated.
- D. Camera Adjustment and Testing

VIDEO SURVIELLANCE SYSTEM 28 3000 - 8

- 1. For each fixed camera, adjust the auto iris level and focus for max video out while having good video in both light and dark conditions.
- 2. Adjust field of view per Owner's direction.
- 3. At each camera location, eliminate or minimize camera vibration caused by either wind in outdoor settings or by general vibration at the camera.

3.6 OWNER COORDINATION

A. The Owner shall assist in establishing procedural guidelines and in defining terminology and conditions unique to the Owner's operation.

3.7 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals according to Division 16 Section "Electrical Identification."
- B. Labels: The Contractor shall label all outlets using permanent machine engraved labels approved by the Owner. Label patch panels in the wiring closet to match those on corresponding camera locations. The font shall be at least one-eighth inch (1/8") in height, block. All labels shall correspond to as-builts and to final test reports.

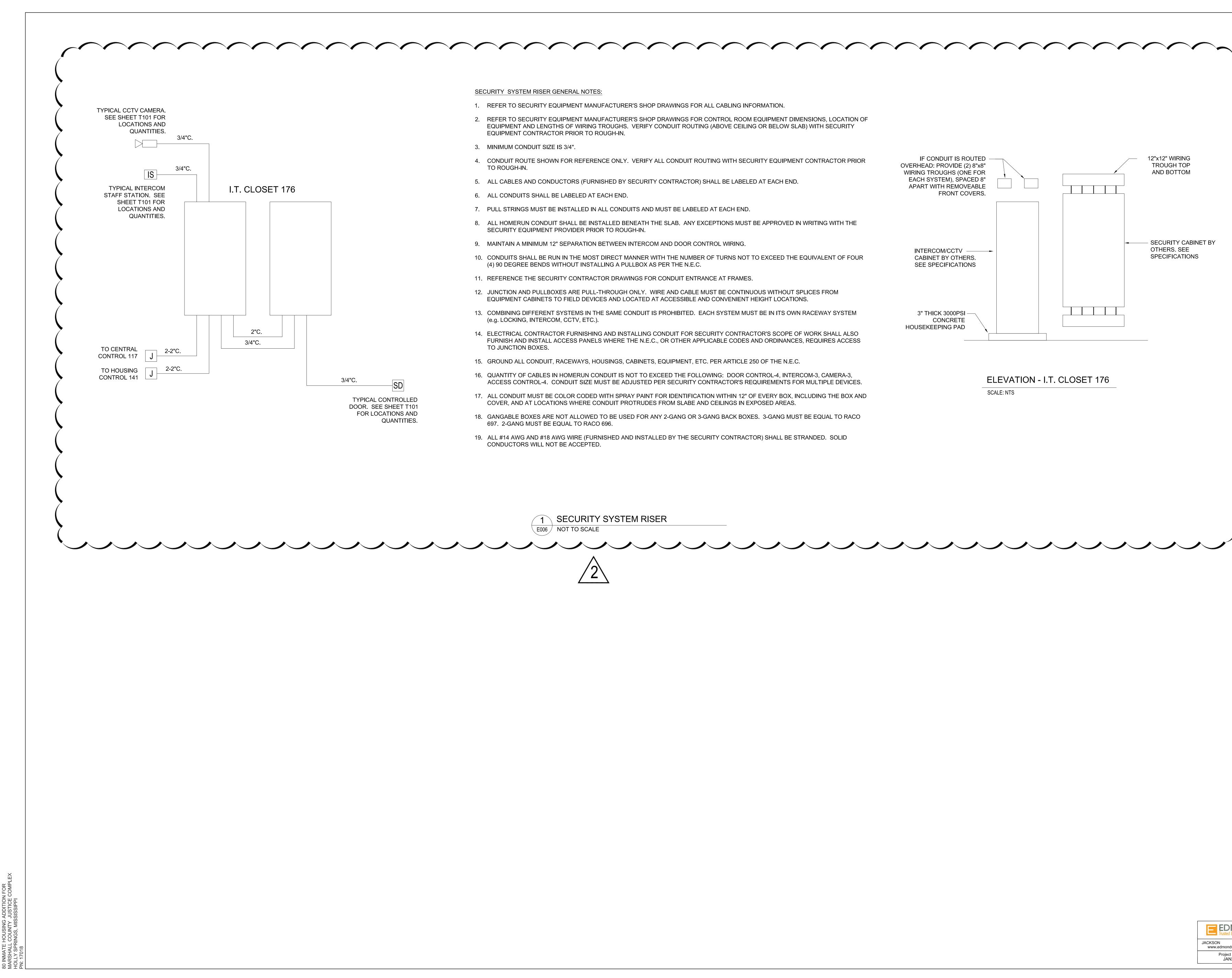
3.8 END-USER TRAINING

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain camera equipment.
 - 1. Train Owner's personnel on procedures and schedules for camera viewing, recorded video play back, motion recording adjustment, troubleshooting, servicing, and maintaining equipment.
 - 2. Demonstrate methods of determining optimum alignment and adjustment of components and settings for system controls.
 - 3. Schedule training with Owner, with at least seven days advance notice.
 - 4. Conduct a minimum of six hours training as specified in instructions to Owner's employees in Division 1 Section "Contract Closeout."

3.9 ON-SITE ASSISTANCE

A. Occupancy Adjustments: When requested by Owner, provide on-site assistance in tuning and adjusting the system to suit actual occupied conditions and to optimize performance. Provide up to two adjustments at Project site for this purpose, without additional cost.

END OF SECTION 28 3000



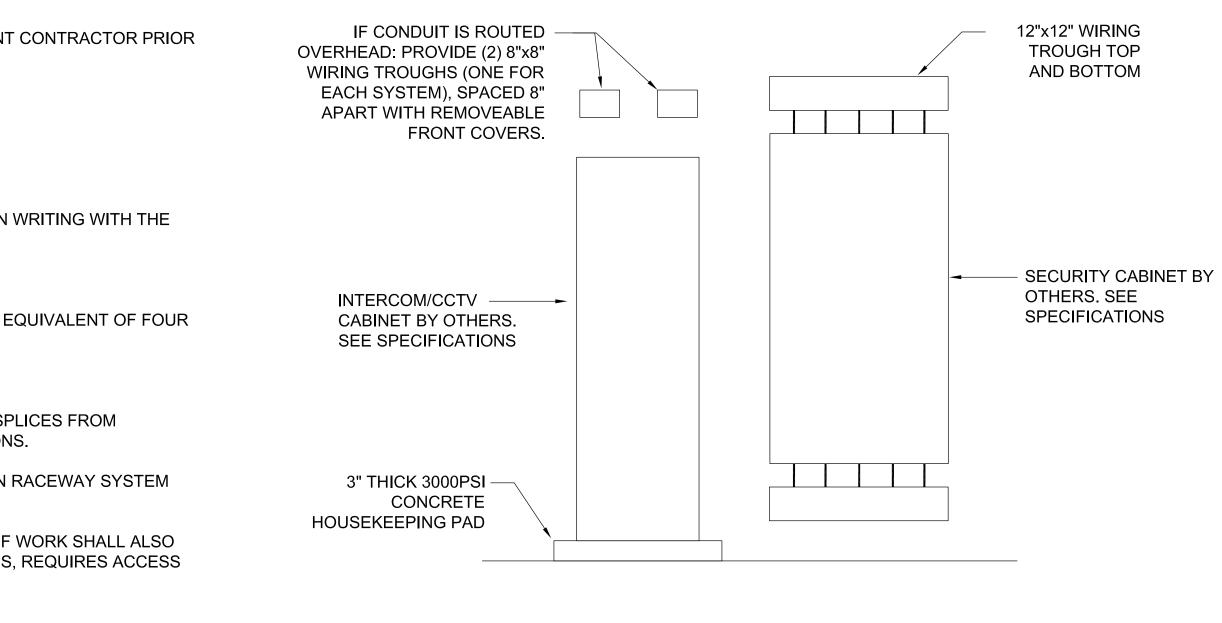
SECURITY SYSTEM RISER GENERAL NOTES:

- 1. REFER TO SECURITY EQUIPMENT MANUFACTURER'S SHOP DRAWINGS FOR ALL CABLING INFORMATION.
- 2. REFER TO SECURITY EQUIPMENT MANUFACTURER'S SHOP DRAWINGS FOR CONTROL ROOM EQUIPMENT DIMENSIONS, LOCATION OF EQUIPMENT AND LENGTHS OF WIRING TROUGHS. VERIFY CONDUIT ROUTING (ABOVE CEILING OR BELOW SLAB) WITH SECURITY EQUIPMENT CONTRACTOR PRIOR TO ROUGH-IN.
- 3. MINIMUM CONDUIT SIZE IS 3/4".
- 4. CONDUIT ROUTE SHOWN FOR REFERENCE ONLY. VERIFY ALL CONDUIT ROUTING WITH SECURITY EQUIPMENT CONTRACTOR PRIOR TO ROUGH-IN.
- 5. ALL CABLES AND CONDUCTORS (FURNISHED BY SECURITY CONTRACTOR) SHALL BE LABELED AT EACH END.
- 6. ALL CONDUITS SHALL BE LABELED AT EACH END.
- 7. PULL STRINGS MUST BE INSTALLED IN ALL CONDUITS AND MUST BE LABELED AT EACH END.
- 8. ALL HOMERUN CONDUIT SHALL BE INSTALLED BENEATH THE SLAB. ANY EXCEPTIONS MUST BE APPROVED IN WRITING WITH THE SECURITY EQUIPMENT PROVIDER PRIOR TO ROUGH-IN.
- 9. MAINTAIN A MINIMUM 12" SEPARATION BETWEEN INTERCOM AND DOOR CONTROL WIRING.
- 10. CONDUITS SHALL BE RUN IN THE MOST DIRECT MANNER WITH THE NUMBER OF TURNS NOT TO EXCEED THE EQUIVALENT OF FOUR (4) 90 DEGREE BENDS WITHOUT INSTALLING A PULLBOX AS PER THE N.E.C.
- 11. REFERENCE THE SECURITY CONTRACTOR DRAWINGS FOR CONDUIT ENTRANCE AT FRAMES.
- 12. JUNCTION AND PULLBOXES ARE PULL-THROUGH ONLY. WIRE AND CABLE MUST BE CONTINUOUS WITHOUT SPLICES FROM EQUIPMENT CABINETS TO FIELD DEVICES AND LOCATED AT ACCESSIBLE AND CONVENIENT HEIGHT LOCATIONS.
- 13. COMBINING DIFFERENT SYSTEMS IN THE SAME CONDUIT IS PROHIBITED. EACH SYSTEM MUST BE IN ITS OWN RACEWAY SYSTEM (e.g. LOCKING, INTERCOM, CCTV, ETC.).
- 14. ELECTRICAL CONTRACTOR FURNISHING AND INSTALLING CONDUIT FOR SECURITY CONTRACTOR'S SCOPE OF WORK SHALL ALSO FURNISH AND INSTALL ACCESS PANELS WHERE THE N.E.C., OR OTHER APPLICABLE CODES AND ORDINANCES, REQUIRES ACCESS TO JUNCTION BOXES.
- 15. GROUND ALL CONDUIT, RACEWAYS, HOUSINGS, CABINETS, EQUIPMENT, ETC. PER ARTICLE 250 OF THE N.E.C.
- 16. QUANTITY OF CABLES IN HOMERUN CONDUIT IS NOT TO EXCEED THE FOLLOWING: DOOR CONTROL-4, INTERCOM-3, CAMERA-3, ACCESS CONTROL-4. CONDUIT SIZE MUST BE ADJUSTED PER SECURITY CONTRACTOR'S REQUIREMENTS FOR MULTIPLE DEVICES.
- 17. ALL CONDUIT MUST BE COLOR CODED WITH SPRAY PAINT FOR IDENTIFICATION WITHIN 12" OF EVERY BOX, INCLUDING THE BOX AND COVER, AND AT LOCATIONS WHERE CONDUIT PROTRUDES FROM SLABE AND CEILINGS IN EXPOSED AREAS.
- 18. GANGABLE BOXES ARE NOT ALLOWED TO BE USED FOR ANY 2-GANG OR 3-GANG BACK BOXES. 3-GANG MUST BE EQUAL TO RACO 697. 2-GANG MUST BE EQUAL TO RACO 696.
- 19. ALL #14 AWG AND #18 AWG WIRE (FURNISHED AND INSTALLED BY THE SECURITY CONTRACTOR) SHALL BE STRANDED. SOLID CONDUCTORS WILL NOT BE ACCEPTED.

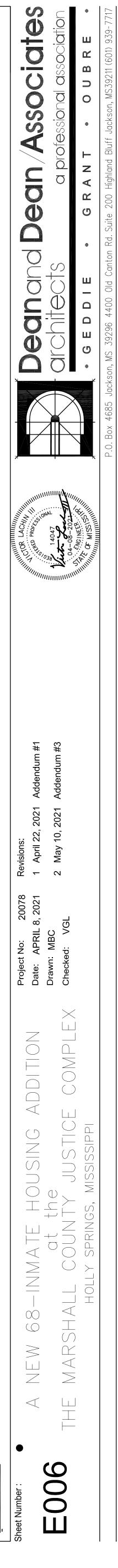




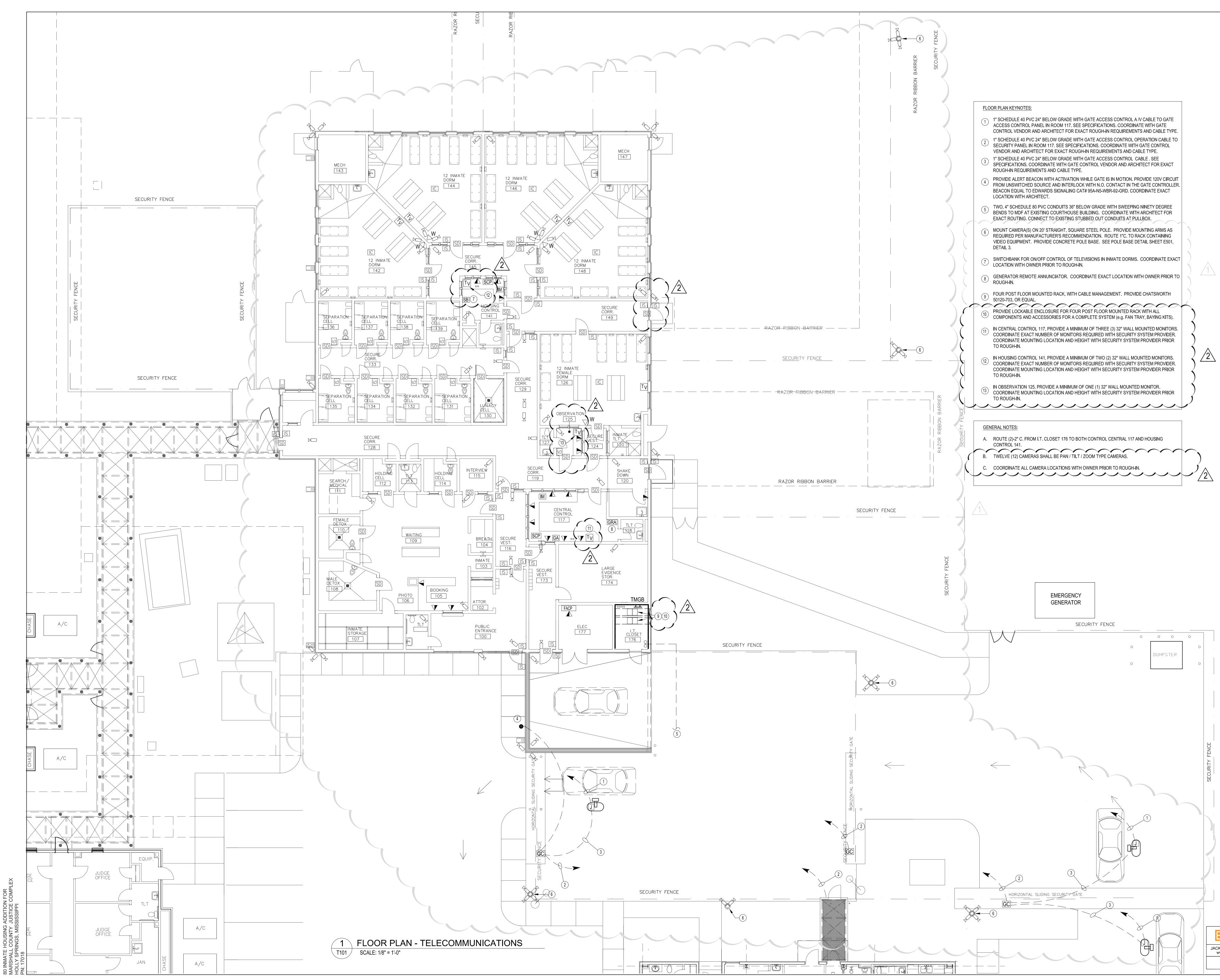




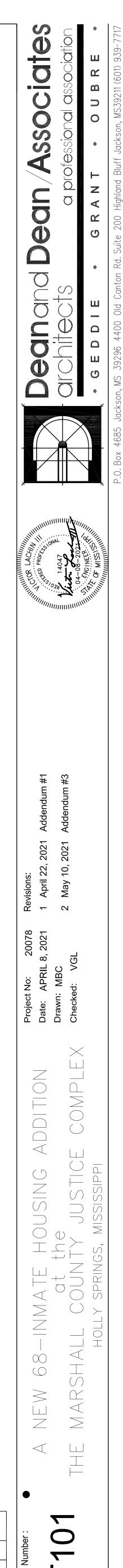
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