

Addendum #: Addendum #5
Issue Date: 04/19/2024

The following additions, clarifications and revisions have been made to the Contract Documents:

#### **CLARIFICATIONS:**

- 1. See attached RFI log.
- 2. No further addenda are expected. There is no change to the bid date or time.
- 3. The bid form has been reissued in this addendum; prime bidders shall submit bids with the form provided in this addendum.
- 4. See attached Addendum for Klinger and Associates

#### **REVISIONS:**

- 1. REISSUE Section 00 24 00 BID PACKAGES in its entirety. Changes noted in red
- 2. **REISSUE** Section 00 41 23 Bid Form in its entirety. Changes noted in red
- 3. **REVISE** Section 00 21 13 Instructions to Bidders at the end of 1.1.C insert the following:
  - a. "The Construction Manager may reassign the Contracts to the Owner if required by law or may refuse assignment if a legal or contractual conflict prevents Construction manager from accepting assignment of any Contract. In such case, the Construction Manager shall manage said Contract in the same manner as Contracts assigned to the Construction Manager. By submitting a bid, Contractors agree they will either accept assignment to the Construction Manager or enter into a contract directly with the Owner (managed by the Construction Manager) using an AIA agreement written for this purpose"
- 4. **REVISE** Section 00 21 13 Instructions to Bidders at the end of 1.17.A insert the following:
  - **a.** Same as above
- 5. REVISE Section 00 70 00 General Conditions at the end of 1.11.E insert the following:
  - **a.** Same as above
- 6. **REVISE** Section 01 10 00 Summary at the end of 1.4.B.4 insert the following:
  - a. Same as above
- 7. **REVISE** section 01 21 00 Allowances 1.3 B insert the following:
  - a. Use of allowances requires prior written approval from the Construction Manager.
- 8. **REVISE** section 01 22 00 Unit Prices 1.5 add item D as follows.
  - a. Use of allowances requires prior written approval from the Construction Manager.

#### SECTION 01 12 00 - BID PACKAGES

#### **PART 1 - GENERAL**

#### 1.1 GENERAL

- A. This section provides a guideline of the scope of work to be included with each bid package. This section includes scope and instructions which may not be specifically called out elsewhere in the Project Manual, Plans or Specifications. All bidders should read this section carefully in its entirety. This section is not all inclusive and is to be read in conjunction with the entire set of project documents. It is each Contractor's responsibility to submit a complete bid.
- B. Contractors may submit a bid on more than one bid package but a separate signed bid form in a separate envelope is required for each bid package submitted complying with the provisions of section 00 11 13 Advertisement to Bid and section 00 21 13 instruction to bidders.
- C. Where items are noted to be "provide(d)" or "include(s)" that shall indicate furnish, install, unloading, shack-out Shake-out, fasteners, incidentals, and all work necessary for a complete system unless specifically noted otherwise.
- D. This specification shall have precedence for assignment of Scope of Work prior to and above any assignments of Scope of Work in the Drawings, Specifications, or elsewhere in the Contract Documents.

#### 1.2 BID PACKAGES

List of Bid Packages:

- Bid Package 01 Electrical Distribution Equipment Supply [previously bid/awarded]
- 2. Bid Package 02 Generator Supply [previously bid/awarded]
- 3. Bid Package 03 General Trades
- 4. Bid Package 04 Civil Package
- 5. Bid Package 05 Asphalt Paving
- 6. Bid Package 06 Site Concrete
- 7. Bid Package 07 Building Concrete
- 8. Bid Package 08 Precast
- 9. Bid Package 09 Masonry
- 10. Bid Package 10 Roofing
- 11. Bid Package 11 Detention Equipment
- 12. Bid Package 12 Fire Protection
- 13. Bid Package 13 Plumbing
- 14. Bid Package 14 HVAC
- 15. Bid Package 15 Electrical

### 1.3 BID PACKAGE SCOPES OF WORK

- A. Scope applicable to all bid packages:
  - Include all costs associated with Textura Payment Management System (Reference 01 2900a Oracle-Textura)

- 2. All trade/bid packages are responsible for clean-up of areas disturbed by them during completion of their final punch list work.
- 3. All bid packages are responsible for their own daily clean-up to the dumpsters supplied.
- 4. Provide all *licensed* survey, staking and layout as necessary to complete the bid package Scope of Work. Construction Manager will provide onsite benchmarks.
- 5. Provide all field measuring necessary for fabrication, installation, and as-built drawings as necessary to complete the bid package Scope of Work
- 6. Provide all unloading, hoisting, shakeout, and material handling of items installed in the Scope of Work
- 7. Provide all scaffolding, temporary shoring, guying, supports, bracing, and additional means and methods necessary to complete the bid package Scope of Work
- 8. Provide testing as specified for your Scope of Work
- 9. Provide scheduling and coordination of any Owner third party testing agencies for all specified testing by Others pertaining to your Scope of Work
- 10. Provide all training and owner demonstration as required as specified for your Scope of Work
- 11. Provide all maintenance stock/extra materials as specified for your Scope of Work
- 12. Include all delegated design as specified for your Scope of Work. This includes all engineering (by a licensed engineer) as well as the cost of design.
- 13. Include all mockups as specified for your Scope of Work including removal of any non-in-situ mockups.
- 14. Include all costs associated with meeting minimum insurance requirements outlined in 00 2000 Sample Subcontract Agreement. This includes the costs of additional waivers and endorsements that might be required to meet specified requirements.
- 15. All bids shall reflect the project schedule (Reference 00 3113a Schedule), phasing and site logistics plan (Reference 01 5000a Site Logistics Plan) including adequate staffing, timely material procurement, acceleration, and additional mobilizations.
- 16. All items provided under this Scope of Work shall be provided per Contract Documents. Manufacturer's standard details, finishes, insurance, etc. shall not be relied upon as the basis of pricing. Architects' determination shall be final and adjustments to the contract as a result of Architects' determination shall not be considered. Submit substitution and RFI requests regarding non-standard items prior to bid in compliance with section 00 2113 INSTRUCTION TO BIDDERS.
- 17. Include coordination and scheduling of all tier subcontractors under this Scope of Work
- 18. Damage to graded areas outside the temporary road areas shall be corrected at the expense of the trade package that incurred the damage.
- 17.19. All bid packages shall provide bids in full compliance with all notes and details of the "G" sheets of the contract documents.

### B. Bid Package 01 – Electrical Distribution Equipment Supply [PREVIOUSLY AWARDED]

- 1. Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications:
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 262416 Panel Boards Complete
- 3. Alternates: See section 012300 Alternates
- Allowances:
  - a. NA
- 5. Scope of Work:
  - a. Include supply and delivery of complete new main distribution panel (MDP) per E500 Electrical one line and as specified.
  - b. Include extra materials/attic stock as specified.

- c. Include any and all costs associated with storage of electrical equipment until the electrical equipment is delivered to the jobsite. No jobsite storage will be available. Refer to 00 3113a Schedule.
- d. Include all delivery and freight costs to project site.
- e. Include coordination of delivery and unloading/installation of equipment with the Construction Manager and Electrical Contractor.
- f. Include standard quality-control/quality assurance testing and confirm functionality of all equipment prior to shipping.
- g. Provide all submittals, shop drawings, product data, warranties, etc. for your equipment. Warranties are to begin on the date of substantial completion of the project. Warranties are to begin on the date of substantial completion of the project.
- h. Provide Owner demonstration as specified.
- i. Include any and all costs associated with manufacturer's start-up of equipment including manufacturer's field service testing.
- j. A Letter of Intent will be issued upon award of contract. A subcontract agreement will be issued after the executed Owner GMP agreement.
- k. Include completion of Coordination study to assure gear compliance

## C. <u>Bid Package 02 – Generator Supply [PREVIOUSLY AWARDED]</u>

- 1. Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications:
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 263213 Engine Driven Generators Complete
  - d. 263600 Transfer Switches Complete
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. NA
- 5. Scope of Work
  - a. Supply and deliver emergency standby generator 250kW Diesel generator in enclosure with sub-base fuel tank for installation by Others. Refer to drawings and Specifications.
  - b. Supply and deliver AUTOMATIC TRANSFER SWITCHES ATS-LS AND ATS-OS for installation by others
  - c. Supply and deliver docking station per E500 for installation by Others.
  - d. Include extra materials/attic stock as specified.
  - e. Include any and all costs associated with storage of electrical equipment until the electrical equipment is delivered to the jobsite. No jobsite storage will be available. Refer to 00 3113a Schedule.
  - f. Include all delivery and freight costs to project site.
  - g. Include coordination of delivery and unloading/installation of equipment with the Construction Manager and Electrical Contractor.
  - h. Include standard quality-control/quality assurance testing and confirm functionality of all equipment prior to shipping.
  - i. Provide 12-month maintenance service by manufacturer's designated service organization as specified.
  - j. Provide all submittals, shop drawings, product data, warranties, etc. for your equipment. Warranties are to begin on the date of substantial completion of the project. Warranties are to begin on the date of substantial completion of the project.
  - k. Provide Owner demonstration as specified.

- I. Include any and all costs associated with manufacturer's start-up of equipment including manufacturer's field service testing.
- m. A Letter of Intent will be issued upon award of contract. A subcontract agreement will be issued after the executed Owner GMP agreement.

#### D. Bid Package 03 – General Trades

- Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications (listed items are complete unless noted otherwise):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 003132 Geotechnical Data
  - d. 051200 Structural Steel Framing
  - e. 052100 Steel Joist Framing
  - f. 053100 Steel Decking
  - g. 054000 Cold-Formed Metal Framing
  - h. 055100 Metal Stairs
  - i. 061000 Rough Carpentry
  - j. 064116 Plastic Laminate Faced Architectural Cabinets
  - k. 072100 Thermal Insulation [As applicable]
  - I. 078413 Penetration Firestopping [complete] [As applicable]
  - m. 078443 Joint Firestopping [complete] [As applicable]
  - n. 079200 Joint Sealant [As applicable]
  - o. 079216 Pick-Proof Joint Sealants [Complete]
  - p. 081113 Hollow Metal Doors and Frames
  - q. 081416 Flush Wood Doors
  - r. 083100 Access Door and Panels Removed
  - s. 083323 Overhead Coiling Doors
  - t. 083613 Sectional Doors
  - u. 084313 Aluminum-Framed Storefronts
  - v. 084413 Glazed Aluminum Curtain Walls
  - w. 086200 Unit Skylights
  - x. 087100 Door Hardware
  - y. 087113 Automatic Door Operators
  - z. 088000 Glazing
  - aa. 088300 Mirrors
  - bb. 090561 Common Work Results for Flooring Preparation
  - cc. 092116 Gypsum Board Assemblies
  - dd. 092216 Non-Structural Metal Framing
  - ee. 092900 Gypsum Board
  - ff. 092900.13 Security Mesh
  - gg. 093000 Tiling
  - hh. 096513 Resilient Base and Accessories
  - ii. 096519 Resilient Tile Flooring
  - jj. 096723 Resinous Flooring and Wall Coatings
  - kk. 096813 Tile Carpeting
  - II. 098000 Acoustic Treatment
  - mm. 099123 Painting
  - nn. 099656 Interior Epoxy Coatings
  - oo. 101400 Signage
  - pp. 102113 Toilet compartments
  - qq. 102641 Ballistics Resistant Panels

- rr. 102800 Toilet and Laundry Accessories
- ss. 104300 Emergency Aid Specialties
- tt. 104400 Fire Protection Specialties
- uu. 105113 Metal Lockers
- vv. 105617 Wall Mounted Standards and Shelving
- ww. 105626.13 Mobile Storage Shelving Units
- xx. 107516 Ground-Set Flagpoles
- yy. 111100 Commercial Laundry Equipment
- yy.zz. 114000 Food Service Equipment
- 22.aaa.122413 Roller Window Shades
- aaa.bbb. 123623.13 Plastic-Laminate-Clad Countertops
- bbb.ccc. 123661 Simulated Stone Countertops
- ccc.ddd. 312000 Earth Moving [As Applicable]
- ddd.eee. 316613 Stone Column Ground Improvement
- eee.fff. 323113 Chain Link Fences and Gates
- fff.ggg. 329200 Turf and Grasses
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. Include an allowance of **\$35,000** for a project job trailer. This allowance includes setup, monthly rental, pick-up, and return charges for the on-site office trailer at the discretion of the Construction Manager. This allowance should cover furnishings, office supplies, internet, phone, drinking water, etc
  - **b.**a. Include an allowance of **\$5,000** allowance for miscellaneous materials/equipment to be used at the discretion of the Construction Manager
  - **E.** Include an allowance of **\$20,000** for general waste, masonry/concrete, and dumpsters necessary to accommodate waste for other bid packages.
  - **d.c.** Include an allowance of \$35,000 for winter/weather conditions and temporary heat. Allowance to cover propane, utility usage charges, temporary filters, and other costs incurred from winter conditions. A minimum of 45 degrees shall be maintained in all parts of the building that are enclosed. This allowance does not include rental for temporary heaters listed the "general requirements" section of this bid package scope of work.
  - d. Include an allowance of \$35,000 for temporary floor protection.
  - e. Include an allowance of **\$50,000** for slab moisture mitigation including shot blasting and major floor preparation.
  - f. Include an allowance of \$50,000 for lime stabilization for building pad and pavements.
  - g.f. All allowances will be for use as directed by the Construction Manager.
  - h.g. Any allowances listed below above are independent of any items listed below in Section 5 Scope of Work. Allowances are not intended to cover the costs of any items listed in the Scope of Work.
  - h. Refer to unit prices below for additional allowance items to be included in base bid.
  - i. Each allowance shall be a separate line item within the schedule of values for each pay application.
  - i-j. Refer to 01 21 00 Allowances for additional information.
- 5. Unit Prices
  - a. Unit Price 3a Laborer Hours
    - 1) **Description**: Include laborer trade labor hours to be used at the discretion of the Construction Manager. The Bidding Contractors for this bid package are required to include the quantity allowance listed below <u>in their base bid price</u>. Adjustments to the Contract shall be made by in-field measurements will be made via additive or deductive change order for the unit price listed on the bid form.
    - 2) Base bid Quantity: 450 hours
    - 3) Unit of Measurement: Labor hours, based on T&M tickets
  - b. Unit Price 3b Carpenter Hours

- Description: Include Carpenter trade labor hours to be used at the discretion of the Construction Manager. The site Bidding Contractors for this bid package are required to include the quantity allowance listed below in their base bid price. Adjustments to the Contract shall be made by in-field measurements will be made via additive or deductive change order for the unit price listed on the bid form.
- 2) Base bid Quantity: 50 hours
- 3) Unit of Measurement: Labor hours, based on T&M tickets
- Refer to section 01 2200 for additional information
- 3)c. Refer to 6. Scope of Work
  - 1) Scope breakouts below are provided for organization purposes only. Bidders for this package shall provide a complete bid for all items listed under this bid package Scope of Work.
  - 2) This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages."
  - a. General Requirement Items
    - Provide temporary toilets for the duration of the project per OSHA standards, section 01 5000 Temporary Facilities and Controls and the site logistics plan. Include removal of waste and maintenance. Remove when directed by Construction Manager
    - Provide temporary heaters for winter heating season during construction activities.
       A minimum of 45 degrees shall be maintained in all parts of the building that are enclosed.
    - 3) Furnish, install, and relocate construction fence and gates as shown on the site logistics plan. Fence posts to be driven *not sandbagged*.
  - b. Final Clean
    - 1) Provide all labor, cleaning supplies, and equipment for final construction cleaning
    - 2) Sweep & mop all hard floors or provide machine clean at contractor's option
    - 3) Vacuum of carpets
    - 4) Sweep and/or vacuum of shop/storage areas/mechanical rooms
    - 5) Dust clean all interior walls.
    - 6) Clean/wipe down of vinyl all wall base
    - 7) Clean/wipe down all doors, frames, and hardware
    - 8) Clean/wipe down toilet partitions and accessories
    - 9) Clean/wipe down wall tile and grout
    - 10) Clean/wipe down stairs and railings
    - 11) Clean/wipe down outside surfaces of HVAC units
    - 12) Clean/wipe down outside surfaces of mechanical equipment
    - 13) Clean/wipe down outside surfaces of mechanical panels
    - 14) Removal dust and dirt from overhead light fixtures
    - 15) Clean/wipe down all exposed piping (concealed piping shall not be required to be cleaned).
    - 16) Clean/wipe down all restroom fixtures, accessories, and mirrors
    - 17) Clean/wipe down interior window frames
    - 18) Clean/wipe down borrow lites frames
    - 19) Clean/wipe down of all borrow lite, interior storefront, and door glazing
    - 20) Clean/wipe down the interior glass of exterior windows
    - 21) Clean/wipe down exterior and interior of all cabinets
    - 22) Clean/wipe down of all counters
    - 23) Clean/wipe down of all sills
    - 24) Clean/wipe down of all casework
    - 25) Clean/wipe down of all solid or laminated surfaces
    - 26) Cleaning storefront entrance/vestibule frame and glass
    - 27) Clean/wash all exterior glass

### 27)28) Clean all Detention equipment and accessories

28) Clean/wipe/vacuum elevator cab including floors, walls, ceilings, and light fixtures

- c. Aggregate Piers
  - Provide and design aggregate pier foundation supports per plans and specs
  - 2) Piers shall be installed to subgrade elevation, refer RFI 97.
  - 1)3) Spoils to be removed by civil bid package.
- d. Landscaping
  - 1) Provide complete landscaping per Contract Documents
  - 2) Provide all seeding, *mulching*, *crimping*, and turf as shown. *Provide hydraulic seeding* at contractor's option per L001 specifications part 3.5.
  - 3) Provide all temporary and permeant seeding of all areas disturbed in the construction area per the plans. Areas outside the work area disturbed by this contractor shall be reseeded and restored to original condition by this contractor bid package.
  - 4) Provide starter fertilizer for seeded areas
  - 5) Provide weed barriers
  - 6) Provide all final grading to +/- 0.10 foot. All verification of grades, slopes, and drainage prior to installations
  - 7) Provide all soil preparation including amending soil, providing positive drainage, as well as removal and disposal of all weeds, vegetation and rocks as required. *Refer to L001 specifications part 3.2. Refer to RFI 28.* 
    - a) Civil bid package to provide all topsoil unless noted otherwise
    - 7-b) Provide all over digging and all planting soil. Remove excess spoils. Refer to RFI 48 and 49
  - 8) Provide all mulching and ground cover. *refer to C001 seeding note 2. Provide all trap rock and shredded hardwood mulch*
  - 9) Provide pre-emergent to all planting beds prior to mulching
  - 10) Provide all edging at landscape beds as shown and specified. Provide all excavation and backfill required for landscaping edging
  - 11) Provide all plantings including shrubs, decorative grasses, perennials and trees as shown
  - 12) Provide all staking, guying and mulching of trees
  - 13) Provide tree wraps and water bags as shown
  - 14) Provide all watering, mowing and maintenance service as specified for planting and seeding
  - 15) Provide warranty on items provided under this scope of work as specified. *Refer to L001 landscape specifications including part 1.4 warranty*
  - 16) Provide soil testing per L001 landscaping specifications part 1.2 B if required
  - 17) Provide all layout and location of plantings, landscape beds, landscape features and all items provided under this scope of work.

### e. Fencing & Gates

- 1) Provide all fencing including rails, gates, posts, mesh, excavation, concrete foundations, mounting plates, fasteners, attachments, and additional items as necessary for a complete fencing system.
- 2) Provide removal of fence spoils
- 3) Provide fence and gates for dumpster enclosure *including vinyl inserts*
- 4) Provide all detention fencing including razor wire and wire line arms
- 4)5) Provide all concrete footings at fence posts and midspan eyebolt installations.

# f. Steel Fabrication and Erection

- 1) Provide and erect all structural, miscellaneous steel and associated items as required for a complete system
- 2) Provide all steel columns
- 3) Provide all steel beams

- 4) Provide all steel Joists
- 5) Provide all steel decking and headed studs.
- 6) Provide all tubes, channels, bent plates, angle framing, perimeter steel angles, bridging, bracing and related steel components
  - a) Supply all top of CMU wall channel braces/kickers for installation by masonry bid package. Refer to G130 for typical details.
  - b) Provide steel angles and framing as required to brace precast panels to joists/deck per S513 details 10 and 11
  - c) Provide all steel angles and light gauge steel clips/enclosure pieces for masonry and precast head of walls
  - d) Provide all WT members for deck bearing per details on S510 including welding of deck to members/bearing embeds as shown.
  - 6)e) Provide continuous support angle and bent sill plate for detention coiling door sill support per A801/A12 and S512/13 including screw anchors
- 7) Furnish and deliver anchor bolts, setting plates, bearing plates, steel shims, and loose lintels for installation by concrete, *precast*, and masonry bid package
  - a) Supply and deliver embeds to concrete bid packages respectively for monument sign precast panel per S002/2
  - <del>7)</del>b) Supply and deliver all steel embed plates for WT bearing per S510/17 typical
- 8) Furnish and install roof *and slab* opening frames and support
- Provide cutting of metal decking for floor and roof openings. Coordinate with other all trades.
- 10) Provide all prefabricated metal ladders. *Include bent steel plate at hatch to roof*
- 11) Furnish and deliver all steel lintels. Include installation of all lintels with a piece weight over 200 lbs *and any lintels welded to structural members*.
- 12) Furnish and deliver all steel items that are shown to be embedded/grouted into masonry walls
  - 12)a) Supply all top of CMU wall embed and bent plates for installation by masonry bid package. Refer to G130 for typical details.
- 13) Furnish and deliver all steel items that are shown to be embedded/grouted into castin place concrete
  - 13)a) Supply and deliver embed plates at overhead doors jambs/heads per A801/A12,C12
- 14) Furnish and deliver *interior* pipe bollards for installation by others other trade packages.
- 15) Provide all field measuring necessary for fabrication, installation, and as-built drawings as necessary to complete the bid package Scope of Work
- 16) Provide all layout and surveyor staking as required for installation of items included in this Scope of Work. Include layout, field measure, and pre-installation survey for this Contractor's work. Benchmarks/primary control points to be provided by others
- 17) Provide fasteners for your scope of work including epoxy and expansion anchors as required. *Provide all erection bolts and screws to meet erectors requirements*.
- 18) Include all submittals, shop drawings, samples, and delegated design included in specifications assigned to this Scope of Work per the Contract Documents including structural connections. Provide engineering and shop drawings including seal by a structural engineer registered in the project state.
- 19) Includes erection for all steel unless noted as FURNISH/SUPPLY only above
- 20) Provide shop primed coat for all steel unless noted otherwise
- 21) Provide shop galvanizing, anodizing, and coatings of items furnished under this Scope of Work per Contract Documents
- 22) ""All setting of leveling nuts as needed at anchor bolts. CORE will have one leveling nut per base plate at the correct elevation" provide complete anchor bolt and

- embed survey for embeds installed in masonry, cast-in-place and precast assemblies and provide to CM.
- 23) Provide all labor, rigging, hoisting, flagging, tag lines, spotters, equipment, and loose hardware as necessary for complete system erection. This Contractor shall not rely upon the Construction Manager to make equipment available for this Contractor's use.
- 24) Provide all delivery, hauling permits, escorts, and freight charges as necessary for delivery of items provided under this Scope of Work
- 25) Provide all welding necessary to install items provided under this Scope of Work including all shear and moment connections.
- 26) This Contractor is solely responsible for all coordination of shop welds and field welds, drawings showing shop and field welds are for reference. This steel provider shall provide coordinated bid.
- 27) This Contractor shall provide final detailing, calculations, engineering, and engineer 's stamp for all steel connections.
- 28) Provide all temporary bracing as required for the erection of items furnished under this Scope of Work.
- 29) Provide field and office coordination with all other trades for submittals and in-field installation.
- 30) Include coordination and scheduling with Owner's testing and inspection Agency
- 31) Include touch-up paint/galvanizing coat and patching at connections and other areas damaged by this Contractor. Include touch up painting of field welds
- 32) Provide all unit skylight support framing/curb framing per S513/07 including joist reinforcement, channel and HSS curb.
  - a) Install burglar bars at skylights supplied by detention package
- 33) Provide all parapet steel including where noted on S514
- 34) Provide all interior and exterior stairs, railings, guardrails, brackets, pans, stringers, mezzanine guardrails and etc.
- 35) Provide bent steel closure plates at day room interior security storefronts where precast panels connect precast embeds per A602/A2, A602/C2, A850/F4 and similar locations. Weld to HM detention frame as shown. Frames to be installed prior to plate installation.
- 36) Provide all mezzanine level steel framing, deck and etc for a complete system.
- 37) Provide all steel channels at edge of mezzanine slabs (A530/A10 and S401/07 typical) and other locations if applicable
- 38) Provide all catwalk steel including framing, handrails, etc for a complete system.
- 39) Provide and install/field weld storm shelter louver steel plates (S510/14 typical).
- 40) Provide all pour stops
- 41) Provide all grinding and bondo of all welds provided by this Scope of Work for a finished ready to paint system.
- 42) Provide all mechanical chase frames
- 43) Provide safety cables for any 2<sup>nd</sup> level that require fall protection including at mezzanines. Provide mounting brackets, additional uprights and cable.
- 44) Provide bent steel plates at control room glazing at C10, C8, C6, C4, & C2 on A850 and similar conditions.
- 45) Provide storm shelter steel per \$201/02
- 46) Provide all permanent steel shown to brace/support items to precast such as S515/01, 02 typical
- 47) Provide all medallion support steel per S514/08 including steel plate standoffs
- 48) Provide opening framing/support framing for roof hydrant per S513/3

#### g. Rough Carpentry

Provide all interior and exterior wood blocking, sheathing, nailers, and framing.

- 2) Provide all exterior sheathing including sheathing at back of metal stud framed parapets, behind metal panels, *skylight curbs*, and at soffits per A430/E7 typical
- 3) Provide all wood blocking
  - a) Provide wood blocking at knee walls per G130 wall type P7.
  - 3)b) Provide fire treated OSB at padded walls per A530/H5
- 4) Provide blocking at parapets
- 5) Provide blocking at roof area dividers/roof height transitions
- 6) Provide blocking at roof penetrations
- 7) Provide blocking at roof expansion joints
- 8) Provide blocking at roof hatches
- 9) Provide blocking at roof ladders
- 10) Provide blocking at all roof curbs
- 11) Provide blocking at exhaust fan roof penetrations
- 12) Provide blocking at skylights
- 13) Provide blocking at scuppers
- 14) Provide blocking at gutters
- 15) Provide blocking at soffits
- 16) Provide blocking at fascia(s)
- 17) Provide all wood blocking around all doors, storefronts, curtain walls, louvers, borrow-lites and other openings as shown
  - a) Blocking located in precast shall be provided under precast bid package
- 18) Provide bracing for all door frames to prevent racking during drywall installation
- 19) Provide all blocking for all millwork including base cabinets, wall cabinets, full height cabinets, shelving/brackets, countertop brackets and window sills
- 20) Provide all for blocking for all handrails
- 21) Provide blocking for all toilet partitions
- 22) Provide blocking for all restroom accessories
- 23) Provide blocking for all TV brackets and message monitors
- Provide blocking for network rooms including sheathing for mounting networking equipment to walls *including A101 keynote 6*
- 25) Provide blocking for all interior and exterior signage
- 26) Provide blocking for all window treatments and roller shades. *Refer to A431/G8 for typical detail.*
- 27) Provide blocking for all fire extinguisher cabinets, first aid cabinets, and fire extinguisher brackets,
- 28) Provide blocking for Knox Box
- 29) Provide blocking for all IV and cubical curtain tracks, refer to A200/H11 for typical detail
- 30) Provide blocking for all mounting wall stops, automatic operator push buttons, card readers and all other wall mounted door hardware
- 31) Provide blocking all marker boards, tack boards, sliding markerboards, map rails, and other visual display items
- 32) Provide blocking for access doors/panels
- 33) Provide blocking for all lockers as shown including locker base per A700/<del>04</del> *D4 typical*
- 34) Provide all in-wall blocking for all wall hung items including items furnished by Owner
- 35) Metal strap blocking may be used in lieu of wood blocking at Contractor 's option
- 36) Provide all fasteners and bolts as necessary to install items included in this Scope of Work
- 37) Include all necessary coordination of in-wall blocking locations with Subcontractors and other trades

- 38) Provide temporary guardrails for all areas required per OSHA standards including but not limited to all staircases, and interior raised platforms such as the mezzanines. Include all required maintenance until installation of permanent guardrails. Refer to project schedule.
- 39) Provide all covers and barricades at slab openings and other areas required by OSHA standards or CORE<sup>1</sup>'s safety manual. Include all required maintenance until installation of permanent items. Refer to project schedule.
- 40) All wood in contact with concrete shall be pressure treated. All wood in concealed spaces shall be fire treated
- 41) Provide temporary door openings at the 1<sup>st</sup> floor exterior doors for material access, with 2x framing, plywood, and hardware.
- 42) Include 2x wood stud framed temporary enclosures with 10 mil string reinforced visqueen for exterior openings. Construction temporary enclosures to resist high wind loads present at the project site. Include maintenance and repair of openings as necessary.

42)43) Provide void insulation fill at top of precast wall and deck per A430/E9

43) Provide temporary ramp on roof between elevation changes.

## h. Fire Stopping & Security Joint Sealants

- 1) Provide penetration and assembly firestopping.
- 2)1) Provide all security/pick-proof sealants/caulking for penetrations and assemblies including pick proof caulking in the secure perimeter per A100 general security note 4.
- 2) Provide all security caulking *and backer rod* at hollow metal frames (detention and non-detention).
- 3) Provide all pick proof/security caulking at stainless steel frames
- 4) Provide all pick proof/security caulking at aluminum frames.
- 5) Provide all pick proof/security caulking at door thresholds, see A801/A6 typical
- 3)6) Provide all pick proof/security caulking at overhead coiling/sectional doors
- 7) Provide all *security* caulking at detention toilet units, toilet accessories and other equipment
- 8) Provide all pick proof/security caulking at security glazing/frames
- 9) Provide pick proof/security caulking for precast panels.
- 10) Provide all foam-in place insulation in precast panels where both side of panel are sealed with pickproof/security caulking.
- 11) Provide all additional pick resistant sealant at all interior chamfer that receive rubber wall base per Contract Documents. Refer to A400 precast general note 7
- 12) Provide pick proof/security continuous sealant and backer rod around wall sleeves penetrating wall, deck and roof assemblies.
- 13) Provide pickproof/security caulking of masonry expansion joints
- 14) Provide all security caulk at head of wall, bottom of wall and wall transitions for drywall/CMU/Precast partitions. Refer to G130 for typical details.
- 15) Provide pick proof/security caulking at columns per A102 keynote 16
- 16) Provide pick proof/security caulking at backsplashes at secure perimeter and where noted.
- 17) Provide security sealant at metal plank ceiling per A200 detail H10
- 18) Provide pick proof/security caulk at top of resilient, cove and epoxy base
- 19) Provide pick proof/security caulking at mezzanine deck slab joints per S510/16, 17 typical
- 20) Provide pick proof/security caulking where slab on grade abuts precast within the secure perimeter per A430 detail A8 typical
- 21) Provide pick proof/security caulking at exposed non-welded steel connections. Refer to A530/A10 for typical details
- 22) Provide pick proof/security caulking around interior bollards per A531/A8

#### 4)23) Supply paintable caulk where required

### i. Aluminum, Glass & Glazing

- 1) Provide all glass and glazing systems per drawings and specifications
- 2) Provide all *non-security* exterior aluminum framed storefronts including all glass, mullions, framing, and associated items
- 3) Provide all *non-security* interior aluminum framed storefronts including all glass, mullions, framing and associated items
- 4) Provide all *non-security* aluminum framed curtain walls including all glass, spandrel glass, mullions, framing and associated items
- 5) Provide all insulated panels
- *6)* Provide all unit skylights including all curbs, internal gutters, thermally broken construction and related fall protection screens
  - 6-a) Provide metal liner panel, receiver, trims and sealant at skylights per A151 detail A4 typical
- 7) Provide all insulated-properties, color, coatings, opacity, tinting, fire ratings, and tempering door glass and frames as specified
- 8) Provide all gaskets, clips, anchors, jointing, drainage, flashings, anchoring, shims, back rods, sealants, glazing tape, break metal trims, miscellaneous glazing materials, caulking (including exterior and interior primary caulking), and related appurtenances as necessary for a complete watertight system
- 9) Provide all aluminum doors and frames and related door lites, aluminum sidelites, transoms and borrowed lites. This includes all related lites/glazing
- 10) Install all hardware and cores for aluminum doors provided by othersfurnished by door supplier. Card reader, power supplies, wall switches, battery backups, will be installed by others. Furnish and install all pull/push sets, thresholds and weatherstripping
- 11) Include coordination of all doors and frame hardware preparation including for access control and security and detention hardware. Include coordination of raceways with access controls
- 12) This Contractor is responsible for reviewing the door hardware submittal to confirm compatibility with material supplied by this Contractor and notifying the CM of any discrepancies. Include coordinating of raceways with access controls *and security and detention hardware*.
- 13) Includes all locks and cylinders for Aluminum doors as required. Includes coordination of Keying with Owner and Door Hardware Supplier *and security and detention hardware*.
- 14) Provide all auto operators, push buttons, and bollards for mounting buttons
- 15) Provide all glass for wood doors, non-detention hollow metal doors and non-detention hollow metal framed openings including all sidelites, transoms, and borrow lites
- 16) Provide all bullet proof/resistant glazing and bullet films-Removed
- 17) Provide all insulation and taping where insulation is located behind spandral glass or other glazing systems include where shown on A430/E4
- 18) This Contractor shall remove and dispose of temporary partitions installed in glazing openings by others. Include hauling of all removed material to dumpsters provided by general trades.
- 19) Provide all *non-security* sealants, backer rods, break metal, gasketing, and flashings necessary for complete systems provided under this Scope of Work. This includes primary interior and exterior caulk as shown and specified
- 20) Provie all anchors, shims, flashing, clips, glazing tape, drainage, accessories, fasteners, and adjusting per the specifications and manufacturers<sup>17</sup> recommendations

- 21) Provide all testing per specification including water testing and per manufacturers recommendations.
- 22) Provide all warranties as specified and manufacturers!' recommendations.
- 23) Provide all mockups
- 24) Provide all field measuring necessary for fabrication, installation and as-built drawings as necessary to complete the bid package Scope of Work
- 25) Provide all shop drawings and engineering as required
- 26) Provide removal of all stickers, buttons, and clean up of errant caulking at all items installed under this Scope of Work. Final cleaning by others
- 27) Provide all safety etching/labels must be visible and note covered by mullions at all safety glazing
- 28) Provide pre-installation conference with manufacturer rep
- 29) Provide all lifts, scaffolds, and hoisting for this Scope of Work
- 30) Provide colors from manufacturer's full range. Include all cost premiums associated with providing specified colors.
- 31) All items provided under this Scope of Work shall be provided per Contract Documents. Manufacturer's standard details, finishes, insurance, etc. shall not be relied upon as the basis of pricing. Architects' determination shall be final and adjustments to the contract as a result of Architects' determination shall not be considered. Submit substitution and RFI requests regarding non-standard items prior to bid in compliance with section 00 2113 INSTRUCTION TO BIDDERS.
- 32) Ensure all material is installed without damage. Damaged material will be sent back for repair or replacement.
- All detention glazing and frames to be provided by Detention Bid Package
- 34) Provide black aluminum wire mesh insect screen and frame at overhead doors. See RFI 95
- 35) Provide field water spray test per section 08 44 13 part 3.2
- 33)36) Provide prefinished aluminum closure flashing/sill/jambs to match curtainwall, refer to A800 detail E12 for typical detail

### j. <u>Architectural Millwork</u>

- 1) Provide all finish carpentry and millwork
- 2) Provide all casework including base, wall, full height and other built-in cabinets including all hardware and hardware preps
- 3) Provide all wood shelving with associated standards, supports, brackets, and coat rods
- 4) Provide all plastic laminate ADA panels with finished ends
- 5) Provide all PLAM and solid surface sills
- 6) Provide all PLAM, solid surface, and quartz counters, countertops and backsplashes including all exposed and concealed brackets
- 7) Provide caulking *for this Scope of Work including* for all backsplashes *and window sills*
- 8) Provide reception desk complete, reception desk to be shop fabricated to greatest extent feasible
- 9) Provide all wood, trims, closure panels, caps, and accent pieces
- Provide all wood handrails and handrail brackets. Provide al wood handrails for steel stairs. NA
- 11) Provide all seaming of countertops per manufacturer's requirements and include caulking as required.
- 12) Provide all locks at cabinet doors, cabinet drawers, tote cabinets, doors, etc. *include keyed a-like if required during a keying meeting with client to review cabinets* All locks shall be keyed alike. Include all specified keying and keying meetings with the Owner
- 13) Provide all cardboard protection over all countertops

- 14) Provide all sink cut outs, grommets, medallions, finished ends, scribes, closure pieces, trash pullouts, shims, filler panels/pieces, end panels, edge-banding, fasteners, anchors, caulking and other items as necessary for a complete system
- 15) All trim to be pre-finished (when called out to be stained and varnished. Primer only when called to be painted)
- 16) Provide all field measuring necessary for fabrication, installation and as-built drawings as necessary to complete the bid package Scope of Work
- 17) Provide all survey, staking and layout as necessary to complete the bid package Scope of Work. Construction Manager will provide onsite benchmarks
- 18) Provide all unloading, hoisting, shakeout, and material handling of items installed in the Scope of Work
- 19) All items provided under this Scope of Work shall be provided per Contract Documents. Manufacturer's standard details, finishes, insurance, etc. shall not be relied upon as the basis of pricing. Architects' determination shall be final and adjustments to the contract as a result of Architects' determination shall not be considered. Submit substitution and RFI requests regarding non-standard items prior to bid in compliance with section 00 2113 INSTRUCTION TO BIDDERS.
- 20) Provide colors from manufacturer's full range if not specified. Include all cost premiums associated with providing specified colors.
- 21) Include coordination as required with plumber for sink cut out templates
- 22) Include puttying of nail holes in shop stained wood trim
- 23) provide plastic lamination shelves, adjustable standards, closet rods and brackets per contract documents. Include PVC edge banding where shown. Refer to A700 for typical details

22\24) Provide all fabric wrapped tack surface per contract documents.

### k. Non-Detention Hollow Metal Doors, Frames, & Hardware

- 1) Provide all *non-detention* hollow metal doors, wood doors, hollow metal frames and finish hardware.
- 2) Provide all *non-detention* hollow metal borrow lites and storefronts.
- 3) Wood doors to be supplied prefinished
- 4) Hollow metal doors and frames to be supplied primed, Supply touch-up kits
- 5) Provide all lite kits/glazing stops for field glazing for items provided under this Scope of Work.
- 6) Provide all construction cores and control keys for use during construction at exterior doors. Core to be returned at the end of the project.
- 7) Provide *non-security* mastic at door thresholds
- 8) Include supply of aluminum door hardware for installation by glazier
- 9) Include coordination of all doors and frames hardware prep including for access controls, *security and detention hardware*, and aluminum doors.
- 10) Provide all door and window bucks, spreaders, etc. for masonry and drywall installations to occur and maintain openings
- 11) Provide bituminous coatings for grouted hollow metal frames removed
- 12) Include all specified keying and keying meetings with the Owner. Include collaboration in keying meeting with the Contractor and Owner representatives.
- 13) Provide all field welding necessary to install hollow metal storefronts and borrow lites.
- 14) Provide welded hollow metal frames, knocked down frames are not permissible for the project schedule.
- 15) Provide rated doors and frames, and all associated labels and tagging, as required for those in rated assemblies. *This includes storm rated doors/frames/hardware*
- 16) Include all required accessories including silencers, supports, anchors, inserts, bolts, fasteners, glazing stops, and etcetera. All door hardware is to be labeled by opening to match the hardware schedule.

- 17) Provide all field measuring necessary for fabrication, installation and as-built drawings as necessary to complete the bid package Scope of Work
- 18) Ensure all doors, frames, hardware, etc. are undamaged upon delivery
- 19) Provide all survey, staking and layout as necessary to complete the bid package Scope of Work. Construction Manager will provide onsite benchmarks
- 20) Provide all unloading, hoisting, shakeout, and material handling of items installed in the Scope of Work
- 21) Provide all non-security sealant, backer rod and caulking for standard hollow metal frames and borrow lites.
- 20)22) All items provided for anchoring of frames and hardware to be as specified including any required detention grade items as outlined in the Contract Documents.

## I. Overhead Coiling and Sectional Doors

- 1) Provide doors that comply with project manuals including wind load strength, slat material, factory finishing, hood enclosures, guides, electric operators, manual crank operators, R-Value, etc
- 2) Provide structural steel three angle guides and track guides including all welding to embed plate per A801/C12 and A800/G6 typical
- 3) Include complete operators and control stations/switches installation. Coordinate with the electrical Subcontractor for power.
- 4) Coordinate with Contractor for steel and in-wall blocking support
- 5) Provide all locks as required. Coordinate keying with Owner and Contractor
- 6) Include Owner demonstration and training as required.
- 7) Provide all testing and final adjustments as required to ensure proper and safe operation.
- 8) Provide all field measuring necessary for fabrication, installation and as-built drawings as necessary to complete the bid package Scope of Work
- 9) Provide all survey, staking and layout as necessary to complete the bid package Scope of Work. Construction Manager will provide onsite benchmarks
- 10) Provide all unloading, hoisting, shakeout, and material handling of items installed in the Scope of Work
- 11) All items provided under this Scope of Work shall be provided per Contract Documents. Manufacturer's standard details, finishes, insurance, etc. shall not be relied upon as the basis of pricing. Architects' determination shall be final and adjustments to the contract as a result of Architects' determination shall not be considered. Submit substitution and RFI requests regarding non-standard items prior to bid in compliance with section 00 2113 INSTRUCTION TO BIDDERS.
- 12) Provide colors from manufacturer's full range if not specified. Include all cost premiums associated with providing specified colors.
- 13) Provide insert screen per details
- 14) Provide all tracks, hardware, seals and etc. for a complete installation
- 12)15) Provide all non-security caulking around opening freames

#### m. Access Doors & Frames removed

1) =Provide all access doors and panels indicated on drawings and project manual

### n. <u>Metal Studs/Drywall/Insulation/Ceiling Package</u>

- Provide all heavy and light gauge metal stud framing including, studs, channels, furrings, joists, hat channels, bracing, bridging, kickers, deflection tracks, and all other cold formed framing.
  - 1)a) Provide wall stabilizer posts at knee walls. Refer to G130 wall type P7 for typical details.
- 2) Provide all delegated design and engineering for cold-formed metal stud framing including licensed engineer!'s stamp on shop drawings
- 3) Provide all gypsum board products *including moisture resistant gypsum where* required by Contract Documents.

- 4) Provide all cement tile backer board, provide taping if required by manufacturer
- 5) Provide all drywall at reception desk
- 6) Provide bullet resistant/ballistically rated fiberglass panels
- 7) Provide abuse/impact resistant drywall where noted
- 8) Provide security mesh in gypsum board/metal stud assemblies.
- 9) All drywall returns at windows/storefront/curtain wall as indicated. Separate mobilizations for this work may be required
- 10) Provide all taping and finishing of gypsum board products *per 092900 part 3.6 D*
  Provide level 1 finish above finished ceilings where concealed from view
- 11) Provide level 5 finish at the following locations per construction documents NA
- 12) Provide all *non-security* caulking of drywall assemblies to storefronts and curtain walls
- 13) Provide coordination with MEPFP trades for penetrations in walls
- 14) Provide all insulation unless noted otherwise including in-wall batt insulation, blown-in insulation and spray insulation

  14)a) Provide batt insulation at soffits per A430/E7 typical
- 15) Provide vapor barrier at building exterior walls where shown
- 16) Provide all acoustic ceilings and associated grids
  - a) Provide ACT-1 through ACT-3
- 17) Provide all gypsum ceilings and associated framing
  - a) Provide GB security ceilings
- 18) Provide all hard ceilings, soffits, and bulkheads and associated framing, wires, etc
- 19) Provide all wall angle, fasteners, trapeze hangers, hangers, hanger wires, hold down clips, main runners, tees, fasteners, seismic clips, etc. for a complete ceiling installation
- 20) Provide all uni-strut for bridging as required
- 21) Provide all stenciling and identification of rated assemblies provided under this Scope of Work Removed
- 22) Provide rough-ins for fire extinguisher cabinets and other Division 10 recessed items. *Refer to G130/A12 for typical detail.*
- 23) Provide all fasteners, corner beads, J-beads, hangers, clips, anchors, control joints, backplates, and other accessories as required for a complete installation of Items provided under this Scope of Work
  - 23)a) Provide Simpson clips where cold form framing attaches to structural steel (S514/01, 02 and 03 typical details) including all fasteners/welding required.
- 24) Provide all field measuring necessary for fabrication, installation and as-built drawings as necessary to complete the bid package Scope of Work
- 25) Provide all survey, staking and layout as necessary to complete the bid package Scope of Work. Construction Manager will provide onsite benchmarks
- 26) Provide all unloading, hoisting, shakeout, and material handling of items installed in the Scope of Work
- 27) All items provided under this Scope of Work shall be provided per Contract Documents. Manufacturer's standard details, finishes, insurance, etc. shall not be relied upon as the basis of pricing. Architects' determination shall be final and adjustments to the contract as a result of Architects' determination shall not be considered. Submit substitution and RFI requests regarding non-standard items prior to bid in compliance with section 00 2113 INSTRUCTION TO BIDDERS.
- 28) Provide colors from manufacturer's full range if not specified. Include all cost premiums associated with providing specified colors.
- 29) All trade packages are responsible for clean-up of areas disturbed by them during completion of their final punch list work
- 30) All bid packages are responsible for their own daily clean-up to the dumpsters supplied

- 31) Include all mockups as specified for your Scope of Work including removal of any non-in-situ mockups
- 32) Provide all maintenance stock/extra materials as specified for your Scope of Work
- 33) Provide all firestop and non-security caulking/putty for items provided under this scope of work. Provide all assemblies as detailed and per UL designation
  - a) Provide all mineral wool safing/deck infill
  - b) Provide all light gauge closure plates for head of wall assemblies provided under this scope of work.
  - c) Provide all non-security caulking/fill material for head of wall, base of wall and where this assembly abuts dissimilar assemblies such as precast, structural steel, masonry as determined by construction sequence.
- 34) Provide all framing for shades, coiling doors, overhead doors, and etc. pockets as required.
- 35) Provide suspended hard ceilings, including framing, wires, and etc.
- 36) provide all furring assemblies
- 32)37) Provide sheet metal plate at top of metal stud wall per S515/04

### o. FRP/Resin Panels Protection Panels NA

1) Provide all FRP plastic protection panels where shown including panels, adhesive, and trim pieces per Contract Documents

### p. Flooring & Tile Package

- 1) Provide all carpet where shown
- 2) Provide all walk off carpet
- 3) Provide all luxury vinyl tile where shown
- 4) Provide all rubber tile
- 5) Provide all static dissapativeeemedrveeemedrvechluterve17eemed17tive-tile static dissipative vinyl composition tile
- 6) Provide all resilient base *and cove base* where shown including locations where base is shown but flooring is provided by others (such as sealed concrete)
- 7) Provide all transitions including transitions from tile to other flooring systems
- 8) Provide all floor and wall tile including all tile cove base and tile backsplashes. Provide grout as specified for all tile work.
  - 8)a) Provide extra floor tile (RT1) per note 5/A910
- 9) Provide grout sealer
- 10) Provide crack isolation membrane with full coverage under floor tile
- 11) Provide all schlutereemedr trims at exposed tile edges
- 12) Provide all cleaning and removal of grout and setting materials from face of tile upon install completion
- 13) Provide all floor expansion joints as required for this Scope of Work
- 14) Provide all required minor floor preparation as necessary to prepare for flooring installation, including filling saw cuts in slabs (control joints) with specified material, filling construction joints and nail holes in slabs with specified material, filling column diamond box outs with specified material, and minor leveling and grinding. Include sweeping and cleaning flooring areas prior to floor installation.
- 15) Provide moisture testing as required per manufacturer instructions for items installed under this scope of work prior to installation; provide results to the Construction Manger in writing. Refer to section 09 6813 part 3.2 for additional information.
- 16) This Contractor is advised that a moisture vapor reducing admixture (MVRA) will be used in all slabs that are specified to receive resilient. This Contractor shall coordinate with admixture manufacture to confirm compatibility of specified flooring and adhesives with the proposed MVRA. MVRA manufacture shall hold the flooring warranty. Removed

- 17) Provide all miscellaneous accessories including resilient or aluminum edge/transition strips, reducers, adhesives, mastics, leveling compounds, setting materials, primers, leveling and patching compounds, and other accessories for a complete installation
- 18) Provide all *non-security* joint sealants to complete this Scope of Work. Includes caulking to all adjacent materials as required.
  - 18)a) Provide all non-security caulking at top of resilient/cove base
- 19) Provide all field measuring necessary for fabrication, installation and as-built drawings as necessary to complete the bid package Scope of Work
- 20) Provide all survey and layout as necessary to complete the bid package Scope of Work.
- 21) Provide all unloading, hoisting, shakeout, and material handling of items installed in the Scope of Work
- 22) Install flooring per the manufacturer's recommendations to maintain all warranties. Notify Construction Manager if manufacturer's recommendations conflict with any contract document provisions
- 23) All items provided under this Scope of Work shall be provided per Contract Documents. Manufacturer's standard details, finishes, insurance, etc. shall not be relied upon as the basis of pricing. Architects' determination shall be final and adjustments to the contract as a result of Architects' determination shall not be considered. Submit substitution and RFI requests regarding non-standard items prior to bid in compliance with section 00 2113 INSTRUCTION TO BIDDERS.
- 24) Provide colors from manufacturer's full range if not specified. Include all cost premiums associated with providing specified colors.
- 25) All trade packages are responsible for clean-up of areas disturbed by them during completion of their final punch list work
- 26) All bid packages are responsible for their own daily clean-up to the dumpsters supplied
- 27) Include all mockups as specified for your Scope of Work including removal of any non-in-situ mockups
- 28) Provide all maintenance stock/extra materials as specified for your Scope of Work
- 29) This contractor shall be required to inspect all flooring prior to installation, for any areas that are-deamed deemed by this contractor to require excessive floor prep, notify the Construction Manager in writing before doing the work. Floor prep done without CORE's approval will not be entitled to additional compensation

# q. Epoxy Flooring

- 1) Provide all epoxy flooring with integral cove base per Contract Documents
- Provide floor preparation as necessary to install epoxy floor on concrete subfloor containing moisture reducing admixture including light shot blast (brush blast) of concrete subfloor
- Provide all cleaning and non-security caulking of joints, sealants, transition strips, and attic stock as required.
  - 3)a) Provide all non-security caulk at top of epoxy base per details on A900
- 4) Provide all required, minor floor preparation as necessary to prepare for flooring installation, including machine scrub, filling saw cuts in slabs (control joints) with specified material, filling construction joints and nail holes in slabs with specified material, filling column diamond box outs with specified material, and minor leveling and grinding. Include sweeping and cleaning of flooring areas prior to flooring installation
- 5) If Subcontractor determines an area requires excessive floor prep, written notification to the Contractor (and written approval from the Contractor) is required before proceeding with the additional floor prep work. Extra floor prep done without Contractor's prior approval is not entitled to additional compensation.

- Protect surrounding finishes as needed during installation of items under this Scope of Work
- 7) Provide moisture testing as required per manufacturer instructions prior to installation; provide results to the Construction Manager in writing
- 8) Provide colors from manufacturer's full range if not specified. Include all cost premiums associated with providing specified colors.
- All trade packages are responsible for clean-up of areas disturbed by them during completion of their final punch list work
- 10) All bid packages are responsible for their own daily clean-up to the dumpsters supplied
- 11) Include all mockups as specified for your Scope of Work including removal of any non-in-situ mockups
- 12) Provide all unloading, hoisting, shakeout, and material handling of items installed in the Scope of Work
- 13) Provide all field measuring necessary for fabrication, installation and as-built drawings as necessary to complete the bid package Scope of Work
- 14) Provide all survey and layout as necessary to complete the bid package Scope of Work.

#### r. Painting

- 1) Provide painting of new walls, ceilings, soffits and bulkheads. *Provide block filler where required.* 
  - 1)a) Paint concrete walls where noted, refer to A601 booking desk details.
- 2) All walls and ceiling to receive one coat of primer and a minimum of two finish coats. If two finish coats do not provide adequate coverage, Contractor will furnish and install additional coats until adequate coverage is achieved. Provide primer and finish coats per Contract Documents.
- 3) Include final sealer on flooring areas scheduled to received sealed concrete floors as a final finish
- 4) Provide prepping and painting of all new hollow metal doors, *steel detention*, and frames
- Provide prepping and painting of all exposed steel including columns, beams, bracing, steel joists and decking
  5\(\frac{1}{2}\)a) Paint burglar bars and exposed steel at skylights per A151/A4 typical
- 6) Provide prepping and painting of all exposed pipes, ducts, hangers, *and all other* exposed MEP items
- 7) Provide painting of *interior* bollards
- 8) Paint exposed millwork brackets and ledgers. Refer to A700.
- 9) Provide all joint sealants required for a complete painting package including but not limited to all caulking of hollow metal doors and frames to adjacent surfaces, caulking of drywall to adjacent surfaces, caulking of drywall to masonry, caulking of all storefront doors and windows to drywall Removed
- 10) Paint precast panels per contract documents
- 11) Provide all painted floor lines
- 12) Paint underside of mezzanine floor
- 13) Paint all exposed gas and water piping per P000 keynote 20. This includes gas piping on roof and exterior of building.
- 14) Provide all non-floor epoxy coatings as specified and where required by Contract Documents
- 15) Paint all stairs, treads and stair railings, refer to A530 for typical details
- 16) Paint all guardrails, steel deck edges, steel bent plates at openings.
- 17) Paint all exposed embeds.
- 18) Paint downspout boots per detail on C125
- 19) Paint steel embed blocks per A531/C5.

### 12)20) Paint all detention items requiring field finishing

#### s. Signage

- Provide all interior and exterior signage including dimensional letters, panel signs and medallion signage.
- 2) Provide signage noted on G101 for storm shelter/tornado safe room
- 3) Provide signage permit per C100 keynote 5
- 1)4) all items to be prefinished/shop painted

### t. Toilet Partitions

1) Provide all toilet compartments and urinal screens

### u. <u>Toilet Accessories</u>

 Provide all non-detention toilet accessories per specification and toilet accessory schedule on A600

## v. <u>Fire Extinguishers & Cabinets</u>

- 1) Provide all first aid cabinets
- 2) Provide all fire extinguishers
- 3) Provide all fire extinguisher cabinets
- 4) Provide knox box with tamper switch
- 4)5) Includes final inspection and certified tagging of extinguishers

#### w. Lockers

- Provide all *prefinished* metal lockers including doors, padlock hasps, sloped top, number plates, coat hooks, hinges, filler panels, end panels and other accessories for a complete system.
- 2) All lockers to be all welded construction

### x. Window Shades & Curtains

- 1) Provide window shades per project documents.
- 2) Provide shades per materials, fabric and colors noted in interior finish schedule and specifications.
- 3) Drive chain and chain retainer to be installed in a manner where shades are fully operational and operate without impacting one another. Final retainers install location to be confirmed with the Contractor and Architect prior to start of installation.
- 3)4) Provide all connect all low voltage wiring required. Electrical contractor will provide power
- 4)5) Provide all survey and layout as necessary to complete the bid package Scope of Work.
- 5)6) Provide all field measuring necessary for fabrication, installation and as-built drawings as necessary to complete the bid package Scope of Work
- 6)7) Provide colors from manufacturer's full range if not specified. Include all cost premiums associated with providing specified colors.

## y. Flagpoles

- 1) Provide all flags poles including concrete base, excavation, backfill, setting, flags and accessories as specified and as required for a complete system
- 2) Include engineering

#### z. Kitchen Equipment

- 1) Provide all foodservice equipment
- 2) Provide all non-security caulking of equipment
- 1)3) provide all starters, VFDs, controls, special plugs, etc for equipment

#### aa. Equipment

- 1) Install and/or furnish equipment per equipment schedule on A600.
- 2) Install owner furnished visual display items including tack boards and marker boards
- 3) Provide all non-security caulking of equipment
- 1)4) provide all starters, VFDs, controls, special plugs, etc for equipment

## bb. <u>Commercial Laundry</u>

- 1) Install and/or furnish equipment per equipment schedule on A600
- 2) Provide commercial washer and dryer
- 3) Provide all non-security caulking of equipment
- 4) provide all starters, VFDs, controls, special plugs, etc for equipment

## cc. Mobile Storage Shelving (alternate)

- 1) Provide manual rolling storage unit per A102 keynote 14. Mount track on concrete slab.
- 2) Provide all grouting of rails for level installation
- 3) Provide fire retardant raised floor / ramp for ADA compliant installation
- 4) Provide all carriages, drive/guide system, wheels, face panels, shelves, accessories adjusting, cleaning and Owner demonstration as specified

## dd. Acoustic Treatments

- 1) Provide all acoustic wall panels AWP1
- 2) Provide all field measuring necessary for fabrication, installation and as-built drawings
- 3) Provide all unloading, hoisting, shakeout, and material handling of items installed in the Scope of Work
- 4) Provide all layout as necessary to complete the bid package Scope of Work.

### ee. Expansion Joint Covers

1) Provide all architectural expansion joint covers including joint shown on A531/D8

## E. <u>Bid Package 04 – Civil Package</u>

- 1. Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications-(listed items are complete unless noted otherwise):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 003132 Geotechnical Data
  - d. 079200 Joint Sealant [As applicable]
  - e. 311000 Site Clearing
  - f. 312000 Earth Moving [As Applicable]
  - g. 321123 Aggregate Base Courses
  - h. 330500 Common Work Results for Utilities
  - i. 331415 Site Water Distribution Piping
  - j. 334100 Storm Utility Drainage Piping
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. Include a \$5,5000 \$5,000 allowance for field tile conflict and relocation and removing unknown obstructions.
  - b. Include a \$20,000 allowance for maintenance, regrading and dress up of temporary access roads/laydown areas as well as pavement aggregate subbase areas utilized as access/laydown areas. Include multiple mobilizations to accomplish this work. Refer to RFI 109.
  - c. Include an allowance of \$50,000 for lime stabilization for building pad and pavements.
  - b.d. Include an allowance of **\$10,000** for storm, water and sanitary connections and tap fees. Per RFI 53.
  - **E.e.** All allowances will be for use as directed by the Construction Manager.
  - f. Any allowances listed below- above are independent of any items listed below in Section 5

     Scope of Work. Allowances are not intended to cover the costs of any items listed in the Scope of Work.

- g. Each allowance shall be a separate line item within the schedule of values for each pay application.
- d.h. Refer to 01 21 00 Allowances for additional information.

### 5. Scope of Work

- 1) This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"
- Scope breakouts below are provided for organization purposes only. Bidders for this
  package shall provide a complete bid for all items listed under this bid package Scope
  of Work.

## a. Site Demolition and Earthwork

- 1) Provide all site demolition and clearing. Provide all associated haul-off and disposal
- Demolished items by this bid package shall not be disposed of in the General Trades dumpster
- 3) Include all site stripping, vegetation removal and disposal
- 4) Include all erosion control and SWPPP measures including daily maintenance for entire duration of the project while on-site and removal as directed by the Construction Manager. Include filing out and maintaining SWPPP inspection reports for the duration of erosion control measure installation while on-site. Erosion Control includes:
  - a) Silt Fence
  - b) Inlet protection/baskets for all existing and new inlets in the area of work
  - c) Temporary seeding of areas disturbed by this Contractor. *Temporary seeding per C001 seeding note 1. This contractor shall provide reseeding per L001 specifications part 3.8 if reseeding is required due to inadequate maintenance of the specified erosion control measures.*
  - d) Concrete Washout
  - e) Erosion Control Blankets, provide blankets at locations per C102 Erosion control note 7.
  - f) Ditch Checks/Straw Bales
  - g) Stabilized Construction Entrance
- 5) Include dust control measures as specified, include all temporary water costs including water connection, metering, trucking, and fees as necessary
- 6) Provide temporary aggregate roads/laydown/parking areas as noted on site logistics plan. Final grades to be within 1 inch of final elevations Removed
- 7) Roads shall be a Typar or Fabric separator with 6"""" depth recycled/reject with 3" depth CA-6 cap. Remove temp areas at project completion and replace with final pavement/sidewalk or topsoil. Placement and removal locations and timelines only as directed by the Construction Manager. Removed
- 8) Where temporary roads are noted at paved locations, this Contractor may at their option either install the permanent aggregate base above the temporary road (typar, 6""""-recycle/3""""-cap) or regrade repair and final grade the permanent aggregate base immediately prior to paving installation. All specified paving grades shall be maintained. Temporary roads will be utilized for construction traffic throughout construction and final paving will be installed near the end of the project as shown on the project schedule. Removed
- 9) Include all site/mass excavation work including grading, compaction, subgrade preparation and all work necessary to bring site to specified grades. Provide positive drainage away from all buildings, walls, columns, and walkways. Provide grass swales where noted.
- 10) Include stripping of topsoil at depths indicated on geotechnical report, specifications or drawings, whichever is deeper.
- 11) Stockpile topsoil onsite separately from fill soil.

- 12) Dispose of surplus topsoil on site by either deepening respread depths or respreading at location noted on site logistics plan on-site at direction of Construction Manager.
- 13) Provide topsoil for all planting beds and islands per L101
- 14) Include respreading topsoil to specified depths. Import additional topsoil if required
- 15) Include buildup of building pad to subgrade using suitable fill material in lifts as specified in either geotechnical report or specifications, whichever is stricter
- 16) Stockpile excess cut dirt separate from topsoil
- 17) Building up berms or loose excess soil on-site
- 18) Load, truck, haul-off and legally dispose of all unstable spoils
- 19) Include import of suitable fill material if necessary
- 20) Include proof rolling of structural fill areas with procedures recommended in the geotechnical report. Proof roll subgrade immediately after topsoil removal to determine field soil conditions
- 21) Include excavation and grading for new pavement and walk areas. All backfilling of sidewalks, pavement, and curb & gutter once these areas are complete.
- 22) Include "coring"/excavation as necessary to install aggregate base at walkways. *Refer to RFI 47.*
- 23) Provide compacted granular trench backfill where the gas service installed by others crosses paving areas
- 24) Provide all aggregate base for walks, curbs, *flumes*, concrete paving and other site concrete items
- 25) Provide all aggregate base for asphalt paving
- 26) Provide all underslab granular for building slabs This contractor shall undercut 24" of unsuitable soils to 5' outside the building pad and backfill it with imported granular material to the subgrade elevation. This will be a backfill depth will be 18" deep at the 6" slab, 20" deep at 4" slabs, etc as required to achieve the subgrade elevation. Refer to RFI 3.
- 27) This contractor is responsible for locating underground utilities by contracting and scheduling the local joint utility locating service prior to the execution of any earthwork, utility, and/or excavation work. All results to be provided to Construction Manager for as-built documentation purposes
- 28) This contractor is responsible for locating all <u>private</u> underground utilities by engaging a private utility location firm prior to the execution of any earthwork, utility, and/or excavation work. All results to be provided to Construction Manager for as-built documentation purposes
- 29) Provide all permits, fee and inspections for this Scope of Work *including any required* right of way permits
- 30) All flagging and traffic control for your scope of work. Provide a right of way permit if required
- Provide and maintain tree protection. Trees to be protected with snow fence in a perimeter at least twice the diameter of the tree canopy to avoid root damage
- 32) Include street cleaning for debris and mud tracked on streets by this Contractor's operations within 4 hours and daily
- 33) Repair or reroute all damaged or uncovered drain tiles caused by this scope of work Removed
- 34) This Contractor shall review the geotechnical report and comply with all requirements and recommendations
- 35) Provide rip rap at curb cuts and any locations not covered by the storm line item below.
- 36) This contractor shall haul off-site 175 CY of spoils generated by general trades contractor (aggregate piers).

- 37) Provide temporary aggregate roads/laydown/parking areas as noted on site logistics plan.
  - a) Roads at proposed seeded areas shall be a Typar or Fabric separator with 6" depth recycled/reject with 4" depth CA-6 cap. Remove temporary roads at these areas at project completion and replace with topsoil. Placement and removal locations and timelines only as directed by the Construction Manager.
  - b) Where temporary roads are noted at paved locations such as light duty pavement, heavy duty pavement, sidewalks, exterior housekeeping pads, etc this Contractor shall provide additional recycled/reject concrete or CA-6 below the permanent CA-6 base called for in the details on C111 to provide a minimum of 10" of aggregate regardless of alternate selection or pavement depth/type. A fabric separator shall be provided as well for all temporary road locations.
  - c) Repair, maintiance, and final regrading of all temporary roads prior to concrete installation will be addressed via contigency "B" for this bid package.
  - d) Temporary roads will be utilized for construction traffic throughout construction and final paving will be installed near the end of the project as shown on the project schedule.
  - e) This contractor at their option and at no additional cost provide CA-6 at all locations reject/recycled concrete is called for. All recycled/reject concrete shall be covered by a minimum cap of 4" of CA-6.

34)38) Provide all dewatering of rainwater as required to complete this Scope of Work. Comply with NOI standards, refer to RFI 45

#### b. Storm Sewer

- 1) Provide complete site storm system to within 5½ of the building. Include all piping, structures, castings, cleanouts, flared end sections, culverts, connections, excavation, beddings, backfill and additional items as required for a complete system
- 2) Provide compacted granular trench backfill at structural areas
- 3) Provide connection to existing manholes
- 4) Provide rip rap at outlets/culverts
- 5) Spoils to be hauled off-site, unless otherwise noted. Soils maybe used structural fill areas only if material complies with requirements in geotechnical report and specifications
- 6) Provide all dewatering of rainwater as required to complete this Scope of Work. Comply with NOI standards, refer to RFI 45
- 7) This Contractor shall review the geotechnical report and comply with all requirements and recommendations.
- 8) Provide all sewer connection fees, permits and inspections *including any required* right of way permits
- *9)* Provide all testing as specified
- 10) Provide all encasing or other approved means of separation of storm sewer as required at utility crossings
- 11) Provide downspout collection system to building and connection to storm sewer
- 12) Provide cast iron downspout boots per C125.
- 9)13) Provie all insulation shown on utilities beyond 5' from building

#### c. <u>Sanitary Sewer</u>

- 1) Provide complete sanitary sewer system to within 5½ of the building including all piping structures, *casings*, castings, cleanouts, connections, excavation, beddings, backfill and additional items as required for a complete system
  - a) Provide sanitary piping from future city pump station to grinder pump manhole.

- b) Provide grinder manhole and grinder pump
- 1)c) Extend sanitary from grinder pump/manhole to 5' outside of proposed building.
- 2) Provide compacted granular trench backfill at structural areas
- 3) Provide connection to existing manholes
- 4) Spoils to be hauled off-site, unless otherwise noted. Soils maybe used *for* structural fill areas only if material complies with requirements ins geotechnical report and specifications
- 5) Provide all sanitary fees, permits and inspections *including any required right of way* permits
- 6) Provide all testing as specified
- 7) Provide all dewatering of rainwater as required to complete this Scope of Work. Comply with NOI standards, refer to RFI 45
- 8) This Contractor shall review the geotechnical report and comply with all requirements and recommendations
- 8)9) Provie all insulation shown on utilities beyond 5' from building

### d. Water Service

- Provide complete water sewer service system. Water service shall be stubbed up 12" above finish floor inside the building by this contractor. Water service system includes but is not limited to all piping, hydrants, structures, castings, cleanouts, connections, thrust blocks, tees, valves, excavation, beddings, backfill and additional items as required for a complete system
- 2) Provide compacted granular trench backfill at structural areas
- 3) Provide connection to existing manholes NA
- 4) Spoils to be hauled off-site, unless otherwise noted. Soils maybe used *at* structural fill areas only if material complies with requirements ins geotechnical report and specifications
- 5) Provide tap fees, inspections, and permits for water service
- 6) Provide all testing as specified
- 7) Provide all dewatering of rainwater as required to complete this Scope of Work. Comply with NOI standards, refer to RFI 45
- 8) Provide all encasing or other approved means of separation water service as required at utility crossings
- 9) Provide all flushing and disinfection of water main piping as required
- 7)10) Provie all insulation shown on utilities beyond 5' from building
- 8)e. This Contractor shall review the geotechnical report and comply with all requirements and recommendations

### F. Bid Package 05 - Asphalt Paving

- Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 1.2. Reference 1.3 "Bid Package Scopes of Work", Line A "Scope Applicable to all bid package."
- 2.3. Applicable Specifications-(listed items are complete unless noted otherwise):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 003132 Geotechnical Data
  - d. 079200 Joint Sealant [As applicable]
  - e. 321216 Asphalt Paving
- 3.4. Alternates: See section 012300 Alternates
- 4.5. Allowances:
  - a. NA

### 5.6. Scope of Work

- a. Provide all bituminous/asphalt paving at depths, courses, and locations per plans and specifications
- b. Provide re-grading and repair of aggregate subbase prior asphalt installation. Aggregate base will be utilized for construction traffic and access Removed
- c. Provide sweeping/cleaning asphalt between courses as required
- d. Provide verification of grades prior to installation of paving
- e. Provide patching of existing asphalt as needed where it abuts new materials. Sawcut and remove as required.
- f. This Contractor shall review the geotechnical report and comply with all requirements and recommendations
- g. Aggregate base provided by civil bid package.
- h. Provide separate mobilization for binder course and surface course
- i. Provide all traffic control for this Scope of Work.
- j. Maintain erosion control measures provided by civil bid package while on-site
- g.k. This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"

## G. <u>Bid Package 06 – Site Concrete</u>

- 1. Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications-(listed items are complete unless noted otherwise):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 003132 Geotechnical Data
  - d. 079200 Joint Sealant [As applicable]
  - e. 312000 Earth Moving [As Applicable]
  - e.f. 321313 Concrete Paving
  - f.g. 321713 Parking Bumpers
  - g.h. 321723 Pavement Markings
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. NA
- 5. Scope of Work
  - a. Provide all new site concrete items including all forming, pouring, form removals, finishing, curing, admixtures, and concrete accessories as specified and necessary for a finished concrete system for the following items:
    - 1) Sidewalks
    - 2) Turndowns/Integral Curbs/thickened edges
    - 3) Curbs/Gutters
    - 4) Aprons
    - 5) Concrete Paving
    - 6) Dumpster Pads
    - 7) Paved Ditches/Flumes
    - 8) Provide monument sign foundations
    - 9) Provide all light poles bases including excavation and backfill
    - 9)10) Provide card reader pedestal foundations per SE102
  - b. Provide curb cuts
  - c. Provide specified concrete curing and finishes
  - d. Provide all steel reinforcement, wire fabric and accessories for concrete provided under this Scope of Work

- e. Provide new all new exterior housekeeping pads including transformer pad, generator pad, LP tank pad, etc. housekeeping pads by MEPs
- f. Provide all joint sawing.
- g. Provide all expansion and isolation joints where shown, provide jointing at locations specified or as shown
- h. Provide all caulking of concrete joints where specified. Clean joints prior to caulking with methods specified.
- i. Provide doweling and epoxying into existing = paving/buildings where shown
- j. Set-Provide HDPE pipe bollards provided by others. Include excavation, concrete base, concrete filling and backfill as shown
- k. Provide all detectable warning pads
- I. Provide dust control measures as specified, include all temporary water costs, water connection, metering, trucking, and fees as necessary.
- m. Load, truck, haul-off and legally dispose of all excess soil.
- n. Provide all dewatering as it pertains to this Scope of Work. *Comply with NOI standards, refer to RFI 45*
- o. Include coordination with Owner 's Testing Representative
- p. Include street cleaning for debris and mud tracked on streets by this Contractor's operations within 4 hours and daily
- q. This Contractor shall review the geotechnical report and comply with all requirements and recommendations
- r. Provide all pavement markings on concrete paving. Provide pavement marking on asphalt paving if applicable.
- s. Provide wheel stops/parking bumpers
- t. Provide all ADA parking spot signage and post mounted signage including concrete filled bollards, posts, and signs. Include backfill and excavation.
- u. Provide signage permit per C100 keynote 5.
- v. Maintain erosion control measures provided by civil bid package while on-site
- w. This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"

## H. <u>Bid Package 07 – Building Concrete</u>

- 1. Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications-(listed items are complete unless noted otherwise):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 003132 Geotechnical Data
  - d. 031000 Concrete Forming and Accessories
  - e. 032000 Concrete Reinforcing
  - f. 033000 Cast-in-Place Concrete
  - g. 072100 Thermal Insulation [As applicable]
  - h. 079200 Joint Sealant [As applicable]
  - i. 312000 Earth Moving [As Applicable]
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. NA
- 5. Scope of Work
  - a. Provide all new building concrete items including all forming, pouring, form removals, finishing, curing, sealers, admixtures, and concrete accessories as specified and necessary for a finished concrete system for the following items:

- 1) Building Slabs
- 2) Thickened slabs
- 3) Slab on deck
- 4) Concrete benches/bunks. Refer to A530/F7 for typical details
- 5) Provide all above grade slab concrete walls such as the booking desk wall.
- a.6) All other cast-in place concrete
- b. Provide all foundations including all forming, pouring, bracing, shoring, anchorage, form removals/stripping, finishing, curing, and concrete accessories as specified and necessary for a finished concrete system for the following items:
  - €.1) Continuous Footings
  - <del>d.</del>2) Grade Beams
  - e.3) Foundation walls
  - 4) Mat Slabs
  - £.5) Provide monument sign base/foundation per S002/02. Install embed provided by steel supplier. Pour curbs/plinths after installation of precast panel and provide silicone joint sealant.
- c. Install interior bollards with excavation, foundations, concrete filling, reinforcement and backfill supplied under general trades package.
- d. This Contractor shall provide the permanent aggregate base (4", 6", etc) as shown in details S501/10,11 over the backfilled aggregate that is installed by the civil contractor prior to slab installation. Refer to RFI 3.
- e. Provide back fill of all foundations, precast panels, and final grading after MEP installations.
- f. Provide sloping of floor drains and showers, floor drains, etc per Contract Documents
- g. Provide all door stoops including footings, foundation walls, isolated slabs, and aggregate fill
- h. Provide fine grading of all subgrades as required. Include verification of grades. Immediately notify the construction manager of any improper grades before installing material. Earthwork contractor to leave grades at +/- 0.1". Provide final grading of subgrade materials as required. This contractor shall note that subgrade will be use used for construction activities including aggregate pier, steel, and precast installation.
- i. Provide all excavation, benching, shoring, backfill, compaction and other earthmoving required to install items provided under this Scope of Work. Building Pad will be turned over to this Contractor "table topped" at proposed subgrade by the earthwork contractor.
- j. All suitable soils (as determined by testing agency) are to be left onsite and placed as directed by CORE. All unsuitable spoils or excess spoils to be hauled offsite and disposed of properly.
- k. Provide all foundation insulation including all below grade insulation at foundations and located under slabs
- I. Provide all slabs on grade including thickened slabs Duplicate item
- m. Provide vapor retarder for slab on grade. Include taping seams and penetrations as necessary
- n. Provide *all* recessed slabs for showers, drains, freezer, *padded rooms, etc* as required
- o. Include a moisture vapor reducing admixture (MVRA) such as vapor lock, concure or barrier 1 in all interior slabs. MVRA is required to meet schedule and allow for flooring installation. Include all additional pours, preparation prior to pouring, and additional manpower as required to properly finish flooring. The MVRA shall be required to hold the flooring warranty Removed
- p. Include flooring warranties, warranties to be provided by admixture manufacturer. Confirm admixture is compatible with specified flooring types. Include testing as required by admixture manufacture
- q. Provide all slab on decks Duplicate
- r. Provide all formed form stops *including at storm shelter slab*

- s. Provide all interior housekeeping pads. Include all surface prep, anchor bolts and bonding agents. Housekeeping pads by MEPFP unless noted otherwise
  - s.1) This bid package shall provide the concrete generator pad per S501/16
- t. This contractor shall set 1 nut per base plate to the required elevation
- u. This Contractor shall include patching, *grinding* and repairs of all ""honeycombed"" areas and areas notes as "smooth/exposed in Contract Documents such as the bookkeeping desk wall, concrete benches, concrete bunks, include all means and methods necessary to sufficiently consolidate concrete during concrete pours.
- v. Provide all openings and install sleeves provided by others in concrete work for other trades
- w. Provide all expansion, construction, isolation joints where shown, provide jointing at locations specified or as shown. Include all bond breakers and tooling of joints as required
- x. Provide all joint sawing.
- y. Provide all steel reinforcement, wire fabric and accessories for concrete provided under this Scope of Work
- z. Provide all *non-security* caulking of concrete joints were specified. Clean joints prior to caulking with methods specified.
- aa. Provide doweling and epoxying into slabs/foundations where shown
- bb. Provide all dewatering as it pertains to this Scope of Work. *Comply with NOI standards, refer to RFI 45*
- cc. Install all embedded concrete items furnished by others including anchor bolts, steel angles, steel plates, embed plates, etc

  ec.1) Install recess cuff rings supplied by detention package. Refer to A530/F7
  - Grout base plates for steel columns
- ee. Provide asphaltic coating at columns prior to concrete pour
- ff. Provide all layout for this Scope of Work
- gg. Provide all dewatering as it pertains to this Scope of Work removed duplicate item
- hh. Include street cleaning for debris and mud tracked on streets by this Contractor's operations within 4 hours and daily
- ii. Provide repair and maintenance of erosion control measures installed by others during these scopes of work
- jj. Regrade all ruts caused by construction activities prior to placement of topsoil aggregate base.
- kk. This Contractor shall review the geotechnical report and comply with all requirements and recommendations
- II. Provide fiber mesh where shown for items provided under this Scope of Work
- mm. Provide and install rubbing of exposed finished concrete for smooth finish
- nn. "Bird Seed" aggregate shall not be permitted on site for structural backfill or other applications as this impedes site staging and logistics.
- oo. Provide all rigid insulation form void materials and cardboard void forms
- nn.pp. This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"

#### I. Bid Package 08 – Precast

dd.

- Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications-(listed items are complete unless noted otherwise):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 034500 Precast Architectural Concrete
  - d. 072100 Thermal Insulation [As applicable]
  - e. 079200 Joint Sealant [As applicable]
- 3. Alternates: See section 012300 Alternates

- 4. Allowances:
  - a. NA
- 5. Scope of Work
  - a. Provide all insulated and un-insulated precast wall panels per plans and specifications.
    - a.-1) Provide monument precast sign per S002/02 including any temporary bracing necessary and embeds. Include coordination building concrete bid package.
  - b. Precaster's standard details, finishes, insurance, etc. shall not be relied upon as the basis of pricing. Engineer's determination shall be final and adjustment to the contract as a result of engineer's determination shall not be considered. Submit substitution and RFI requests regarding non-standard items prior to bid in compliance with section 00 2113 INSTRUCTION TO BIDDERS.
  - c. Includes all panel reinforcement, insulation, prestressing tendons, and concrete materials required for complete fabrication.
  - d. Include all labor, rigging, hoisting, flagging, tag lines, spotters, equipment, and loose hardware as necessary for complete system erection.
  - e. Include delivery, hauling permits, escorts, and freight charges as necessary for panel delivery.
  - f. Include street/sidewalk permits as necessary to this contractor's work. Precaster is responsible for any permits needed to deliver their product to the site.
  - g. Include layout, field measure, and pre-installation survey for this contractor's work.

    Benchmarks/primary control points to be provided by others.
  - h. Include coordination of all openings.
  - *i.* Includes *coordination of* window openings, door openings, mechanical, electrical, plumbing, fire protection, stairs, balconies, bar joists, and all structural elements.
    - i-1) Slope all sills at openings per contract documents for positive drainage.
  - j. Include block-outs/sleeves for all openings 10"x10' or larger
  - k. Include coordination of openings smaller than 10"x10" which are to be core drilled by the relevant trade
  - I. Sleeves and block-outs to be provided by this contractor for the openings. Removed duplicate item
  - m. Include shop drawings coordination with the Construction Manager and mechanical, electrical, plumbing, fire protection, steel and concrete contractors for all openings, blockouts, sleeve, cast-in items, etc. in conjunction with the project bidding and construction schedule. Refer to 00 3113a Schedule. Such coordination cannot start until after the other bid packages are awarded. Schedule precast shop drawings and fabrication accordingly.
  - n. Include treated wood blocking cast into panels as necessary for openings.
  - o. Include coordination of lifting and hanging devices at hollow-core planks precast assemblies as well as hanger tabs per specification.
  - p. Include coordination of installation for electrical conduit, boxes, fixtures, and devices that are furnished and installed by others and intended to be cast into precast panels at the precast supplier's plant. Include administrative time as necessary to facilitate the coordination of all electrical items to be cast into panels.
  - q. Include furnish and installation of all bearing plates and welding plates necessary for connections to structure.
    - r. Include furnish and installation of all plates embedded in precast unless noted otherwise..
      - 1) Cast in all embedded items provided by detention door supplier
  - r. Include furnish only of all bearing plates and weld plates cast into concrete, masonry or other assembles (to be installed/field welded by others) necessary for connections to structure. Provide all embedded items that are located in precast assemblies including:
    - 1) bearing plates
    - 2) weld plates

- opening closure plates such as those for coiling/section overhead doors, hollow metal door frames, hollow metal borrow lites, detention windows, detention doors, etc
- 4) connection plates for mezzanines, stairs, guardrails, etc
- 5) Embeds for mounting accessories, fixtures, equipment etc other than those mounted by steel embed blocks. Steel embed blocks on A531/C5 are supplied by detention package and installed by masonry bid package.
- s. Include installation of all items embedded into precast assemblies that are supplied by others unless noted otherwise including items/accessories supplied by detention supplier. See item P above for electrical.
- t. Includes all welding and connections made for a complete installation.
- Include welding of items cast into precast panels to other items cast into precast panels unless noted otherwise.
- v. Include welding of all items furnished by this contractor to other items furnished by this contractor unless noted otherwise.
- w. Include all structural inserts, headers, bolts, weld plates, angles, dowels, keyways, and korolath as shown on plans and specifications.
- x. Include additional rental for temporary bracing and deadmen as needed. Install deadmen as required for panel bracing. Include removal of deadmen if required. Refer to project schedule. Brace all panels to exterior side of building where possible.
  - \*.1) Refer to schedule (00 31 13a) included with addendum 1 for sequencing and activity durations. Temporary bracing is required until permanent connections/support are completed including completion of erection structural steel.
- y. Include dewatering as required for this Scope of Work. *Comply with NOI standards, refer to RFI 45*
- z. Provide coatings/primers/material per specification.
- aa. Include touch up paint/galvanizing coat for items installed by this contractor caused by this contractor's work.
- bb. Include all accent bands, reveal patterns, chamfers, *shop applied panel finishes*, and edging as indicated.
- cc. Trucks cannot be staged on-site due to site constraints, schedule deliveries accordingly.
- dd. Include any temporary shoring, temporary bracing, and temporary connections as required as well as any delegated engineering required. Include removal of temporary shoring, bracing, and connections as required.
- ee. Include patching of panels from picking eyes, hoisting methods, etc.
- ff. Include panel patching at all exposed locations for a complete finish. *Provide smoothing, grinding, patching, etc for all exposed precast walls that receive paint/finish for a finished product.*
- gg. Include all caulking and backer rod associated with precast panels. Removed
- hh. Include furnish and installation of grouting beneath wall panels, at hollowcore keyways and cores in hollowcore planks. NA
- ii. Include notched precast beams and pocket joints as indicated.
- jj. Include additional mobilization to set "leave out panels" noted on site logistics plan.
- kk. Include all submittals, mix designs, shop drawings, samples, and delegated design per the Contract Documents. Provide engineering and shop drawings signed and sealed by a licensed structural engineer in the State of Illinois.
  - kk.1) Provide design for future loading and addition per Contract Requirements
- II. Include embed layout drawings to be submitted one week from the date of approved shop drawings.
- mm. Include spot cleaning of concrete panels as specified. Remove all mud and dirt from panels caused from this contractor's delivery and installation process.
- nn. Include supply, installation, and removal of crane pads if required for this contractor's work.
- oo. Include removal of any unused materials furnished by this contractor.

- pp. Include mockups *and samples* as specified. Include removal of mockups from the site once directed by the Construction Manager.
- qq. Coordination for testing as outlined in any applicable specifications.
- rr. Precast supplier/erector shall hold PCI certification levels as indicated on drawings or within any applicable specifications.
- ss. Include daily clean-up of debris, waste, dirt, dust, waste, or other Construction impediments generated by this Scope of Work to the dumpsters supplied under the General Trades Package
- tt. Access into the footprint of the building will be allowed to erect the interior precast panels.

  Access points are shown on the site logistics plan. This contractor will be responsible for providing, installing, and removing any additional crane pads.
- uu. Provide all non-security precast caulking, back rod and all foam in place insulation inside precast assemblies. At locations where one side of panel receives pick proof caulking this Contractor shall provide the foam-in place insulation.
- ss.vv. This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"

## J. <u>Bid Package 09 – Masonry</u>

- Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications-(*listed items are complete unless noted otherwise*):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 042223 Architectural Concrete Unit Masonry
  - d. 042900 Engineered Unit Masonry
  - e. 072100 Thermal Insulation [As applicable]
  - f. 078413 Penetration Firestopping [As applicable]
  - e.g. 078443 Joint Firestopping [As applicable]
  - **f.h.** 079200 Joint Sealant [As applicable]
  - g. 083463 Detention Doors and Frames [As applicable]
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. NA
- 5. Scope of Work
  - a. Provide all concrete block and all items necessary for a complete masonry system per the Contract Documents.
  - b. Provide concrete masonry (CMU) walls including interior partitions, *structural masonry, and masonry foundations* where shown.
    - b.1) Provide all decorative and burnished face masonry
  - c. Provide all bullnose block and soaps per the Contract Documents
  - d. Provide all reinforcing steel, ladder reinforcement, and grout in masonry walls, bond beams, and masonry lintels.
  - e. Provide all masonry accessories including, ties/anchors, clips, fasteners, and all miscellaneous accessories necessary for complete masonry systems
    - e.1) Provide all mineral wool/sound insulation at head of masonry walls.
  - f. Provide all masonry and stone mortaring, provide mix designs per specifications. Mortar to be non-staining
  - g. Provide installation of all steel embeds, bearing plates, anchor bolts, fasteners, or other items embedded in masonry wall grout for connections to other assemblies. Embedded items furnished by others unless noted otherwise
    - 1) Install all top of CMU wall steel channels/kickers furnished by general trades bid package, refer to G130 for typical details.

- 2) Install all top of CMU wall embed and bent plates for furnished by general trades bid package. Refer to G130 for typical details.
- g.3) Install steel plates and anchor bars per A531/E4 including any required welding.
- h. Provide grouting of beam pockets in masonry walls
- i. Provide chemical clean and washdown of masonry walls as specified.
- j. Provide continuous sealant and backer rod around wall sleeves penetrating masonry items
- k. Provide neoprene bearing pads where structural components bear on masonry walls.
- I. Provide all masonry expansion joints as applicable. Caulking provided by general trades
- m. Install all detention and non-detention hollow metal frames at CMU openings. This contractor shall be responsible for installing embeds, anchors, grouting, temp shoring, checking of level, checking to confirm frames are square, and to assure all MEP rough-ins are maintained during the installation of the walls around all hollow metal detention and non-detention frames located in masonry walls.
- n. Provide grouting of *detention and non-detention* hollow metal frames *including where frames are located in/abut to precast such as A850/F4*. Do not use anti-freezing agents in grout of door frames. Provide all insulation in door frames prior to grouting these frames to allow for installation of door hardware (i.e. hinges, closers, etc.)
- o. Provide asphaltic coating on hollow metal frames set by others in masonry walls. Provide bituminous coatings for grouted hollow metal frames and steel embed blocks
- p. Provide the installation of lintels with a piece weight under 200 lbs. supplied by general trades.
- q. Provide field and office coordination with the Steel Fabricator and Erector, Building Concrete Contractor, Precast Supplier, Glazer, metal stud framer, and all other relevant trades.
- r. Provide temporary shoring and bracing of masonry walls as required to install items Provided in this Scope of Work
- s. Provide all layout and field measurement necessary to complete this Scope of Work.
- t. Provide coordination and scheduling of testing required for this Scope of Work with Owner!'s Testing and Inspection Agency
- u. For debris tracked on streets by this Contractor 's operations, the contractor shall provide all street sweeping as required for maintaining clean streets and adjacent drives *daily and* within 4 hours and. provide provide flagman as necessary.
- v. Provide daily clean-up of debris, waste, dirt, dust, waste, or other Construction impediments generated by this Scope of Work to the dumpsters supplied under the BP-04 General Trades
- w. Provide clean-up of areas disturbed by this Contractor during completion of this Contractors final punch list work.
- x. Provide all portions of specification sections 07 21 00 Thermal Insulation, 07 84 13 Penetration Fireproofing, and 07 92 00 Joint Sealants as they relate to this Scope of Work.
- y. Provide masonry mockup
- z. This Contractor shall bring temporary water onsite for their operations
- aa. Include all stenciling and identification of rated assemblies provided under this Scope of Work
- bb. Provide all firestop and non-security caulking/putty for items provided under this scope of work. Provide all assemblies as detailed and per UL designation
  - 1) Fire and non-fire caulked expansion joints (A500/H2 typical)
  - 2) Provide all mineral wool safing/deck infill
  - 3) Provide all light gauge closure plates for head of wall assemblies provided under this scope of work.
  - 4) Provide all non-security caulking/fill material for head of wall, base of wall and where this assembly abuts dissimilar assemblies such as precast, structural steel, masonry.
- cc. Install and provide all welding of burglar bars furnished by detention package at all chases and HVAC openings including the following:

- 1) Pipe chase bars at north and south chase of the mezzanine (A120/A10)
- 2) All interior wall, exterior wall, roof, floor, and duct opening greater than 6" within the secure perimeter area per A531/E4 and A100 general security note 6.

aa.dd. This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"

# K. <u>Bid Package 10 – Roofing</u>

- 1. Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications-(*listed items are complete unless noted otherwise*):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 072100 Thermal Insulation [As applicable]
  - d. 072700 Air Barries Carlisle
  - e. 074213.16 Metal Plate Wall Panels Dri-Design
  - f. 075323 EPDM Thermoset Single-Ply Roofing-Carlisle
  - g. 076200 Sheet Metal Flashing and Trim
  - h. 077100 Roof Specialties
  - i. 077200 Roof Accessories
  - j. 079200 Joint Sealant [As applicable]
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. NA
- 5. Scope of Work
  - a. Roofing
    - 1) Provide complete membrane roofing system
    - 2) Provide adhered EPDM roof membrane as specified
    - 3) Provide cover board including gypsum board cover boards
    - 4) Provide roof insulation cant strips, insulation adhesive, crickets, taping, sealants for complete roof insulation system. Construct roof to achieve proper drainage and slopes as indicated by the Contract Documents. Include tapered insulation as required
    - 5) Provide all rigid insulation at the *top/*back of roof parapets.
    - 6) Provide all flashings, counter flashings, termination bars, drip edges, detailing, sealants, and other all items required for a complete watertight roof system. Provide flashing membrane up and over parapet walls.
      - 6)a) Provide all saw cutting of reglets into precast wall and void sealant per A431/E10 typical
    - 7) Provide all flash-in and patch of roofing material at/around roof penetrations/openings as well as tie-in of these openings into the rest of the roof assembly for a complete and weathertight construction.
    - 8) Provide all prefinished sheet metal *and stainless-steel* copings/caps, scuppers, conductor heads, downspouts, facias, soffits, and drip edges
      8)a) Connect to cast-iron downspout boots provide by the civil bid package.
    - 9) Provide walk pads/pavers and *all* splash blocks
    - 10) Provide roof hatch(s) with guard rail system
    - 11) Include prefabricated roof curbs for all items supplied by this Scope of Work this bid package.
    - 12) Provide all anchors and fasteners necessary to complete this Scope of Work
    - 13) Provide specified manufacturer's and workmanship warranties.
    - 14) Provide temporary roofing measures required to maintain a fully watertight roof, this includes penetration/openings for skylights, roof drains, plumbing vent piping,

- mechanical unit curb openings, and other items that are shown on architectural, structural, and MEPFP plans. All roofs shall be weathertight at the end of each working day
- 15) All items supplied under this Scope of Work are to be pre-finished or finished as noted in by Contract Documents. All colors to be selected from manufacturer's full range unless noted otherwise
- 16) Include all hoisting, unloading, and transport necessary to install items provided under this Scope of Work
- 17) Include field testing per manufacturers- requirements and Contract Documents.

  This includes a water test at completion of roofing prior to turnover
- 18) Include coordination and scheduling with roofing manufacturer for field inspections
- 19) Include all permits and licenses required for this Scope of Work
- 20) Provide all dumpsters and daily clean-up for this Scope of Work. This Contractor shall not use the general trades dumpster. Removed
- 21) Provide all safety/fall protection on the roof per OSHA requirements/standards.

#### b. Metal Wall Panels

- 1) Provide complete metal wall panel system
- 2) Provide all trims, j-channels, starters, flashings, gaskets, counter flashings, z-closures, jambs, *cleats*, and sealants as necessary for a watertight system

  2)a) Provide J-channels and transition flashing where metal panels abut precast,
  - refer to RFI 144
- 3) Provide all metal soffit panels
- 4) Provide all z-gurts and furring behind metal panels
- 5) Provide all rigid insulation behind metal panels
- 6) Provide expansion joints were shown.
- 7) Provide all accessories, clips, fasteners, anchors, start track, shims, etc. for a complete installation
- 8) Provide all joint sealants, butle tapes, urethane sealants, etc. as it pertains to your scope of work. Includes caulking between panels/materials and adjacent materials as required
- 9) Ensure all material is installed without damage. Damaged material will be sent back for repair or replacement
- 10) Ensure all metal panels are installed level and plumb
- 11) All materials are to be prefinished
- 12) Includes all required Mockups of each system to be installed for water-tightness test. Refer to 07 42 13 part 1.7
- 13) Includes all coordination with other scopes to assure water-tight details form one scope to another
- 14) Pre-Install meeting to be scheduled by installer prior to start of work with manufacturer rep
- 15) All materials are to be prefinished Removed duplicate item
- 16) Provide all survey and layout as necessary to complete the bid package Scope of Work.
- 17) Provide all field measuring necessary for fabrication, installation and as-built drawings as necessary to complete the bid package Scope of Work
- 18) Provide all unloading, hoisting, shakeout, and material handling of items installed in the Scope of Work
- 19) Provide all scaffolding, temporary shoring, guying, supports, bracing, and additional means and methods necessary to complete the bid package Scope of Work
- 20) Include all delegated design as specified for your Scope of Work. This includes all engineering (by a licensed engineer) as well as the cost of design. Refer to 074213 part 1.4
- 21) Provide field touch up paint

- c. Air Barrier
  - 1) Provide all self-adhered membrane air barrier
  - 2) Provide all detail coats, finish coats, drainage mats, foam board, sealant cants, reinforcing fabric, and accessories as required for complete installation.
  - 3) Provide all detailing of footings top of foundations and outside corners.
  - Provide all coats as required to obtain a seamless membrane with the specified dry film thickness.
  - 5) Provide all preparation of gypsum board and plywood sheathing as necessary for air barrier installation including tapping of joints, caulking, and screw heads
  - 6) Wrap air and moisture barrier around all window bucks as detailed
  - 7) All adhesives, bonding agents, joint sealants, etc. are included for a complete installation.
  - 8) Provide all joint and penetration flashing tape as required. Including at metal wall anchors
  - 9) Provide all required fasteners per manufacturer 's requirements
  - 10) Provide all mock-ups and water testing as required.
  - 11) Provide all lifts required for this scope of work.
  - 12) Pre-installation meeting to be scheduled by installer prior to work the manufacturer rep
  - 13) A water test is required after installation to confirm watertightness of assembly regardless of if test is noted in specification or not. This is required for quality control. Test shall be as outlined recommended by manufacturer/standard writer.
- d. Scope breakouts above are provided for organization purposes only. Bidders for this package shall provide a complete bid for all items listed under this bid package Scope of Work
- 12)e. This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"

#### L. <u>Bid Package 11 – Detention Equipment</u>

- Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications-(listed items are complete unless noted otherwise):
  - a. Division 00 Complete
  - b. Division 01 Complete including 013513.16 Special Project Procedures for Detention Facilities
  - b.c. 042223 Architectural Concrete Unit Masonry[as applicable]
  - e.d. 055963 Detention Enclosures [as applicable]
  - d.e. 072100 Thermal Insulation [As applicable]
  - f. 079200 Joint Sealant [As applicable]
  - e.g. 08 3113.53 Security Access Doors and Frames
  - *h.* 083463 Detention Doors and Frames [As applicable]
  - f.i. 084413 Aluminum Glazed Curtain Wall Systems [As applicable]
  - g.j. 085113 Security Windows
  - h.k. 086510 Exterior Detention Windows
  - ₩ 087163 Detention Door Hardware
  - j.m. 088853 Security Glazing
  - k.n. 095753 Security Ceiling Assemblies
  - Lo. 102813.63 Detention accessories
  - m.p. 111916 Detention Gun Lockers
  - n.q. 111990 Detention Cell padding
  - o.r. 125500 Detention Furniture
  - p.s. 280500 Common Work Results [as applicable]
  - q.t. 280510 Cabinets and Enclosures for Electronic Security

- r.u. 281300 Access Control System
- 5-V. 282300 IP Video Communication System
- t.w. 282350 Electronic Security Systems Network Integration
- u.x. 283105 Auxiliary Control System
- v.y. 284600 Fire Detection and Alarm
- ₩.z. 284619 Security Automation System
- x.aa. 284620 Video Graphic User Interface System
- y.bb. 285123 IP Audio Communication System
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. NA
- 5. Scope of Work
  - a. Provide all detention equipment, furnishings, and accessories
    - 1) Provide items on detention equipment schedule per sheet A130
      - a.a) Provide stainless steel drawer and cabinet at package pass per A530/F5 and equipment schedule item E020 on A600
  - b. Provide all detention glass and glazing. Provide all security glazing in commercial openings if applicable.
  - c. Provide all detention bar grating and woven mesh including at mezzanine walkways and skylights
  - d. Provide all-detention enclosures per 05 5963 as follows
    - 1) All burglar bars shall be furnished under this bid package for installation by other bid packages including for skylights, chases, and HVAC openings.
    - 2) Provide woven rod mesh assemblies (at rec yard roll up door)
    - 1)3) Security Grilles shall be provided by HVAC bid package
    - 4) Perforated Plate security vents shall be provided by HVAC bid package
    - 5) Perforated plate security vents with backup plate shall be provided by HVAC bid package
    - 6) Tool resisting steel, perforated plate security vents shall be provided by HVAC bid package
  - e. Provide all detention windows
    - d.1) Provide stainless steel talk through frames with bullet resistant glazing and paper pass cutouts. Refer to details H4 and G5 on A600 and A4 on A601 for typical conditions
  - e.f. Provide all detention wall systems
  - f.g. Provide all cell safety padding
  - h. Provide all security electronics, including paging system, CCTV, door controls, etc including
    - 1) Provide cabinets and enclosures for electronic security including:
      - a) Provide free standing racks and accessories
      - b) Provide NEMA rated wall mounted equipment enclosures
    - 2) Provide access control system including:
      - a) Access system controllers and power supplies
      - b) Access system workstation and monitor
      - c) Access system software
      - d) HID multiclass proximity card readers
      - e) Single sided badge printer, camera, and tripod
      - f) HID proximity cards
    - *Provide IP video communication system including:* 
      - a) IP detention grade cameras
      - b) Surveillance workstation computers
      - c) Monitors
      - Video management system software, application servers and storage arrays at specified resolution

- e) Power supplies
- *f)* Surge protection
- g) Microphones
- 4) Provide electronic security systems network integration including:
  - a) Layout of network scheme
  - b) Linking requirements
- 5) Provide auxiliary control system including:
  - a) Cell and dayroom lighting relays
  - b) Receptacle control relays
  - c) Water Control relays
  - d) Relay control cabinets wired and completely tested
- *6)* Provide security automation system including:
  - Programmable Logic Controllers/door relay racks or cabinets wired and completely tested
  - b) PLC software
  - c) PLC programming
  - d) Network switching equipment.
  - e) Wall and desk mounted duress stations
  - f) Door release push buttons
  - g) Uninterruptible Power Supplies
  - *h)* Spares as required.
- 7) Provide video graphic user interfaces including:
  - a) Touch Screen operator stations including CPU, monitor and misc. equipment
  - b) programming software and Servers
  - c) Touch screen system programming as specified
  - d) Security management system including CPU, monitor and report printer
  - e) security management system software
  - f) Security management system programming
  - g) Software review
- 8) Provide IP audio communication system including:
  - a) Audio racks wired and completely tested
  - b) Intercom master stations
  - c) Paging speakers, back boxes, and security grills
  - d) Paging Horns
  - e) Intercom stations
  - f) Call buttons
  - g) Intercom/camera pedestal
- 9) Provide all specialty back boxes for this Scope of Work including equipment racks, cabinets, camera housings and speaker back boxes
- 10) Include factory testing as specified/required by manufacturer
- g.11) Provide individual UPS power for all security electronic control station and head end equipment
- h.i. Provide all detention gun lockers
- i.j. Provide all control stations
- k. Provide (furnish, install, deliver, etc) all detention doors and frames including where frames are abut masonry and precast. Refer to schedule on A801
  - 1) Provide all stainless-steel frames such as frame type SS on A801/F10 including all welding and grinding of welds.
  - j-2) Provide all detention frames shown on A801/F10 including metal glazing stops with tamper resistant screws and glazing tape at control room windows
- k./. Provide all detention door hardware

- I-m. Supply and deliver all precast embeds to precaster Supply and deliver all items that are to be cast-in/grouted into precast, masonry or cast in-place concrete to that respective bid package. Include coordination.
- m.n. Provide security access doors/panels at detention areas.
- n. Furnish and deliver all detention door frames and borrow lites for installation by Masonry bid package.
- o. Install all detention frames where frames abut precast.
- p. Weld and grind smooth all field welds for items installed under this scope of work.
- q. This Contractor shall submit all required items per 01 3513.16 part 1.4. Inability to meet any requirements of this specification shall be ground for disqualification of the submitted hid
- r. Provide all tamper proof fasteners
- s. All trade packages are responsible for clean-up of areas disturbed by them during completion of their final punch list work
- t. All bid packages are responsible for their own daily clean-up to the dumpsters supplied
- u. Provide all survey and layout as necessary to complete the bid package Scope of Work.
- v. Provide all field measuring necessary for fabrication, installation, and as-built drawings as necessary to complete the bid package Scope of Work
- w. Provide all unloading, hoisting, shakeout, and material handling of items installed in the Scope of Work
- x. Provide testing as specified for your Scope of Work
- y. Provide scheduling and coordination of any Owner third party testing agencies for all specified testing by Others pertaining to your Scope of Work
- z. Provide all training and owner demonstration as required as specified for your Scope of Work
- aa. Provide all maintenance stock/extra materials as specified for your Scope of Work
- bb. Include all mockups as specified for your Scope of Work including removal of any non-insitu mockups
- cc. All items provided under this Scope of Work shall be provided per Contract Documents. Manufacturer's standard details, finishes, insurance, etc. shall not be relied upon as the basis of pricing. Architects' determination shall be final and adjustments to the contract as a result of Architects' determination shall not be considered. Submit substitution and RFI requests regarding non-standard items prior to bid in compliance with section 00 2113 INSTRUCTION TO BIDDERS.
- dd. Provide all security-plank security ceiling systems including perimeter support c-channel molding pre-finished with expansion anchors
- **ee.** Provide all bullet proof/resistant glazing and bullet films including security glazing SG-3B with associated curtain wall frame at road patrol. Refer to A300/H10, A430/E7, andA431/G8/E8 for typical details
- ff. Provide all aluminum voice/talk-thru and frame security glazing including associated stainless-steel sills. Refer to A530/F2 for typical details.
- **gg.** Provide curtain wall stainless steel plate for ballistic properties at ballistically rated aluminum frames per A430 and A431/G8 typical details
- **hh.** Provide detention locking gate hardware for the gate within the outdoor detention enclosure
- *ii.* Provide security screen at overhead doors per A801/C12
- **jj.** Provide all non-foodservice/food grade stainless-steel countertops including hat channels, backsplashes, sound deadening material, refer to A700 D2 for detail.
- **kk.** Provide all special inspections for items installed under this scope of work per section 20 0548 part 3.3
- **II.** This bid package may submit requested modifications to the sample subcontract prior to contract execution, the Owner and reserves all rights to reject this bid if terms are not mutually agreeable by the Construction Manager and Owner.

# ec..mm. This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"

#### M. <u>Bid Package 12 – Fire Protection</u>

- 1. Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications-(listed items are complete unless noted otherwise):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 072100 Thermal Insulation [As applicable]
  - d. 078413 Penetration Firestopping [As applicable]
  - e.e. 078443 Joint Firestopping [As applicable]
  - d.f. 079200 Joint Sealant [As applicable]
  - e.g. 083100 Access Door and Panels [As applicable]
  - **f.h.** 200548 Seismic Controls for MEPFTR Systems
  - g.i. All division 21 specifications complete
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. NA
- 5. Scope of Work
  - a. Include new sprinkler system complete per Contract Documents. Systems shall meet all applicable codes. The system shall start at the last control valve on the backflow preventer.
  - b. Include all specified flow tests and hydraulic calculations.
  - c. Include engineered fire sprinkler drawings.
  - d. All new sprinkler heads to be centered in acoustical ceiling tiles or spaces shall be installed as specified. Include concealed heads as required where exposed heads will conflict with cabinets and other adjacent finishes.
    - 1) Provide institutional heads were noted.
    - 2) Provide sprinkler guards/protection where noted
    - el.3) Provide additional heads as required to provide complete coverage for all stairs, overhead doors, coiling doors, etc.
  - e. Include fire department connection and piping
  - f. Include system risers with control valves, main drains, gauges, thrust blocks, flow switches, and all accessories necessary for a complete system.
  - g. Include testing, certification, and drain of system. Provide leak testing as specified.
  - h. Piping shall not be run above electrical or IT equipment at mechanical rooms and IT rooms
  - i. Include installation of all electronic flow and tamper switches. Wiring and final connection by Electrical Contractor.
  - j. Include coordinating and scheduling with all local utilities and authorities having jurisdiction. Include all trade permit and inspection fees.
  - k. Include coordination with the Owner's Commissioning Agent.
  - Include core drilling of all openings smaller than 10"x10" in hollow core planks precast
    assemblies for penetrations necessary to complete this Scope of Work. Include sleeves for
    these openings.
  - m. Include cutting/patching, sleeves, and/or core drilling of all wall penetrations for this Scope of Work
  - n. Provide all labeling and identification required for this scope of work required.
  - o. Provide all layout of roof penetrations to be cut in by steel bid package
  - p. Include access doors/panels as required to access items installed under this Scope of Work.
  - q. Provide coordination drawings and include all required coordination with other MEPFP trades.

- r. Include daily clean-up of debris, waste, dirt, dust, waste, or other Construction impediments generated by this Scope of Work to the dumpsters supplied under the General Trades bid package.
- s. Include clean-up of areas disturbed by this Contractor during completion of this Contractors final punch list work.
- t. Provider sprinkler coverage per G000 general note 12
- u. Provide all firestop, caulking, puddy, sleeves, mineral wool sleeve infill, sealant, etc at all pipe penetrations through walls, ceilings, floors, and roofs for penetrations by this Contractor. Provide all assemblies as detailed and per UL designation
- v. Provide all special inspections for items installed under this scope of work per section 20 0548 part 3.3
- w. Provide all housekeeping pads for items provided by this Bid Package. Include all surface prep, anchor bolts and bonding agents.
- 5-x. This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"

#### N. Bid Package 13 - Plumbing

- 1. Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications-(listed items are complete unless noted otherwise):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 072100 Thermal Insulation [As applicable]
  - d. 078413 Penetration Firestopping [As applicable]
  - e.e. 078443 Joint Firestopping [As applicable]
  - d.f. 079200 Joint Sealant [As applicable]
  - e.g. 083100 Access Door and Panels [As applicable]
  - **f.h.** 200548 Seismic Controls for MEPFTR Systems
  - g.i. 312000 Earth Moving [As Applicable]
  - h.j. All division 22 specifications complete
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. NA
- 5. Scope of Work
  - a. Provide all interior plumbing per Contract Documents.
  - b. Provide all excavation, backfill, compaction, and spoil removal for this Scope of Work. Include import of backfill material as required.
  - c. Provide dewatering for this Scope of Work Comply with NOI standards, refer to RFI 45
  - d. All plumbing water work shall begin the blind flange stubbed up inside the building by the utility contractor.
  - e. Provide, install, flush, test, and certify all backflow preventers including the BFP for the fire sprinkler system.
  - f. Provide new sanitary, drain, and vent system including, support valves, and all miscellaneous accessories starting from site utility cap-off located 5' outside the building footprint for a complete system. Provide final connection to site utilities.
    - f.1) Civil bid package to provide grinder pump and manhole.
  - g. Provide building storm sewer system and all miscellaneous accessories starting from site utility cap-off located 5' outside the building footprint for a complete system. Provide final connection to site utilities.
  - h. Provide all gas piping starting at gas meter (detail on P401/7 is not updated). Provide all regulators, roof supports, hangers, etc.

- i. Provide all plumbing fixtures, valves, solenoid valves, pumps, sump pumps, and plumbing accessories per Contract Documents.
- j. Provide blocking at plumbing fixtures
- k. Provide all insulation required for this Scope of Work.
- I. Provide condensate piping for mini-splits and other HVAC equipment if required.
- m. Provide coordinating and scheduling with all local utilities and authorities having jurisdiction. Provide all trade permit and inspection fees.
- n. Provide all start-up and Owner Training per Contract Documents
- o. Provide coordination with the Owner's Commissioning Agent.
- p. Provide all plumbing hookups and connections for equipment provided by others.
  - p.1) Provide gas to commercial dryer
- q. Provide core drilling of all openings smaller than 10"x10" in hollow core planks precast assemblies for penetrations necessary to complete this Scope of Work. Include sleeves for these openings.
- r. Provide cutting/patching, sleeves, and/or core drilling of all wall penetrations for this Scope of Work
- s. Provide access doors/panels as required to access items installed under this Scope of Work.
- t. Provide coordination drawings and include all required coordination with other MEPFP trades.
- u. Provide all layout of roof penetrations to be cut in by general trades
- v. Provide daily clean-up of debris, waste, dirt, dust, waste, or other Construction impediments generated by this Scope of Work to the dumpsters supplied under the General Trades package.
- w. Provide clean-up of areas disturbed by this Contractor during completion of this Contractors final punch list work.
- x. All trade packages are responsible for clean-up of areas disturbed by them during completion of their final punch list work
- y. Provide all labeling and identification required for this scope of work required.
- Provide all survey, staking and layout as necessary to complete the bid package Scope of Work.
- aa. Provide all field measuring necessary for fabrication, installation and as-built drawings as necessary to complete the bid package Scope of Work
- bb. Provide all unloading, hoisting, shakeout, and material handling of items installed in the Scope of Work
- cc. Provide testing as specified for your Scope of Work
- dd. Provide all training and owner demonstration as required as specified for your Scope of Work
- ee. Include coordination and scheduling of all tier subcontractors under this Scope of Work
- ff. Provide water management system per 22 4600
- gg. Provide grease interceptor as shown. Provide exterior grease waste and vent piping to interceptor.
- hh. Provide sand and oil separator as shown
- ii. Provide exterior "soiled" piping from building to interceptors.
- jj. Provide all heat trace for items under this Scope of Work per contract documents.
- kk. Provide and set elevation of all floor drains, trench drains, shower pans, etc. Coordinate with flooring for elevations.
- *II.* Provide onyx shower pans
- mm. Provide all drain pans as required.
- nn. Provide roof hydrant as shown.
- oo. Provide all motorized ball valves, pneumatic controls, and connections to security system
- pp. Provide all flush valves with "FDD", electric controllers, actuator, transformer wiring, tubing, SOV, electronic controlled fixtures, PIEZO electric push buttons for a complete system.

- qq. Provide all firestop, caulking, puddy, sleeves, mineral wool sleeve infill, sealant, etc at all pipe penetrations through walls, ceilings, floors, and roofs for penetrations by this Contractor. Provide all assemblies as detailed and per UL designation
- rr. Provide all special inspections for items installed under this scope of work per section 20 0548 part 3.3
- ss. Provide all housekeeping pads for items provided by this Bid Package. Include all surface prep, anchor bolts and bonding agents.
- ee. This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"

#### O. Bid Package 14 - HVAC

- 1. Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications-(listed items are complete unless noted otherwise):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - b.c. 055963 Detention Enclosures [as applicable]
  - d. 072100 Thermal Insulation [As applicable]
  - e. 078413 Penetration Firestopping [As applicable]
  - e.f. 078443 Joint Firestopping [As applicable]
  - d.g. 079200 Joint Sealant [As applicable]
  - e.h. 083100 Access Door and Panels [As applicable]
  - **f.i.** 200548 Seismic Controls for MEPFTR Systems
  - g.j. All division 23 specifications complete
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. NA
- 5. Scope of Work
  - a. Provide all heating, ventilating, air conditioning, hydronics, and temperature control work per the Contract Documents.
  - b. *Provide* HVAC system and ductwork cleaning per Contract Documents.
  - c. Include rods, plates, washers, HSS/steel support, and any unistrut support for the mechanical units supports.
  - d. Provide all roof curbs and rails as required for you this scope of work.
  - e. Provide all louvers including "architectural" louvers. Provide all flashings, fasteners, and sealants at louver openings.
  - f. Provide all start-up, Owner training, and maintenance service per Contract Documents.
  - g. Provide all manufacturer field services per Contract Documents
  - h. Provide all labeling and identification required for this scope of work required.
  - i. Provide all controls and programming, rough-in and wiring, certified testing, and balancing as required for a fully functioning system. Include temporary controls as needed to control units started prior to permanent network/data.
    - Provide vandal resistant thermostat covers as shown
    - i-2) Provide connection of BAS system to water management system if shown/specified
  - j. Provide HVAC water treatment, including system flush and measuring as required by the Contract Documents. Include all material required for the system flush. Any alternate methods shall be approved by the design team via a Substitution Request and all associated costs (i.e. water softener, salt, etc.) shall be included.
  - k. Provide extended warranties as required to meet Specifications in conjunction with the Project Schedule. Warranties shall start on the day the certificate of Substantial Completion is executed. Units to be started prior to Substantial Completion in accordance with the project schedule for startup, test and balance, and commissioning.

- Provide early equipment start-up as required per the Project Schedule to provide required cooling, heating, temperature, humidity control, and space acclimation. for new gym floor installation.
- m. Provide all construction filters for equipment provided under this Scope of Work. Filters are to be replaced immediately prior to occupancy. Furnish, install, and maintain temporary filter media over all returns pulling air during construction.
- n. Provide all labor, rigging, hoisting, flagging, tag lines, spotters, equipment, and loose hardware as necessary for complete system installation.
- o. Provide coordinating and scheduling with all local utilities and authorities having jurisdiction. Include all trade permit and inspection fees.
- p. Provide coordination with the Owner's Commissioning Agent.
- q. Provide all hookups and connections for equipment provided by others. Include core drilling of all openings smaller than 10"x10" in hollow core planks precast assemblies for penetrations necessary to complete this Scope of Work. Include sleeves for these openings.
- r. Provide all layout of roof penetrations to be cut in by steel bid package
- s. Provide cutting/patching, sleeves, and/or core drilling of all wall penetrations for this Scope of Work
- t. Provide access doors/panels as required to access items installed under this Scope of Work.
- Provide coordination drawings and include all required coordination with other MEPFP trades.
- v. Provide daily clean-up of debris, waste, dirt, dust, waste, or other Construction impediments generated by this Scope of Work to the dumpsters supplied under the BP-04 General Trades
- w. Include clean-up of areas disturbed by this Contractor during completion of this Contractors final punch list work.
- x. Provide vehicle exhaust system including piping, controls, fittings, alarms, etc for a fully functioning system
- y. All louvers, dampers and installations of items under this scope of work shall comply with storm shelter requirements for items located in storm shelter.
- z. Provide fire/smoke dampers. Provide all backends/adapters as necessary to tie-in dampers to VESDA system if shown/specified.
- aa. Provide all water heater flues and intakes per M101.A plan note M17
- bb. Provide all duct insulation and insulation for this Scope of Work
- cc. This bid package shall weld all ductwork to adjacent steel if required. Provide final ductwork connection to bar frames as noted. Provide all welding of items installed under this scope of work to adjacent steel if noted.
- dd. Provide all steel angles at duct openings per E531/E4
- ee. Provide all security Grilles per section 05 5963 part 2.4
- ff. Provide all perforated Plate security vents per section 05 5963 part 2.5
- gg. Provide all perforated plate security vents with backup plate per section 05 5963 part 2.6
- hh. Provide all tool resisting steel, perforated plate security vents per section 05 5963 part 2.7
- ii. Provide all firestop, caulking, puddy, sleeves, mineral wool sleeve infill, sealant, etc at all pipe penetrations through walls, ceilings, floors, and roofs for penetrations by this Contractor. Provide all assemblies as detailed and per UL designation
- jj. Provide all special inspections for items installed under this scope of work per section 20 0548 part 3.3
- kk. Provide all housekeeping pads for items provided by this Bid Package. Include all surface prep, anchor bolts and bonding agents.
- w.ll. This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"

# P. <u>Bid Package 15 – Electrical</u>

- 1. Overview Bidder shall perform a complete scope of work for this bid package in accordance with all contract documents, drawings, specifications, and the elaborations below. This scope of work shall include all labor, materials, equipment, and related items necessary to complete the work.
- 2. Applicable Specifications-(listed items are complete unless noted otherwise):
  - a. Division 00 Complete
  - b. Division 01 Complete
  - c. 072100 Thermal Insulation [As applicable]
  - d. 078413 Penetration Firestopping [As applicable]
  - e.e. 078443 Joint Firestopping [As applicable]
  - d.f. 079200 Joint Sealant [As applicable]
  - e.g. 083100 Access Door and Panels [As applicable]
  - **f.h.** 200548 Seismic Controls for MEPFTR Systems [As Applicable]
  - g.i. All division 26 specifications complete
  - h.j. All division 27 specifications complete
  - i.k. 280500 Common Work Results [As Applicable]
  - <u>j.-/.</u> 280510 Cabinets and Enclosures for Electronic Security [As Applicable]
  - k.m. 281300 Access Control System [As Applicable]
  - **1.** Lance Lance H. Lance Lan
  - m.o. 282350 Electronic Security Systems Network Integration [As Applicable]
  - n.p. 283105 Auxiliary Control System [As Applicable]
  - o.q. 284600 Fire Detection and Alarm—[As Applicable] [Complete]
  - p.r. 284619 Security Automation System [As Applicable]
  - q.s. 284620 Video Graphic User Interface System [As Applicable]
  - r.t. 285123 IP Audio Communication System [As Applicable]
  - s.u. 312000 Earth Moving [As Applicable]
- 3. Alternates: See section 012300 Alternates
- 4. Allowances:
  - a. Include an allowance of \$8,000 for temporary electrical usage/meter fees/charges including electrical delivery, electrical supply, taxes, and other fees incurred for temporary power during construction operations. This allowance shall not be used for power to the project trailer as this is in the base bid scope.
  - b. All allowances will be for use as directed by the Construction Manager.
  - Any allowances listed below above are independent of any items listed below in Section 5

     Scope of Work. Allowances are not intended to cover the costs of any items listed in the Scope of Work.
  - d. Each allowance shall be a separate line item within the schedule of values for each pay application.
  - e.e. Refer to 01 21 00 Allowances for additional information.
- 5. Scope of Work
  - a. This contractor shall furnish and install power, new service, lighting, panels, outlets, devices, feeders, relay panels, inverters, security, and security/data rough-in, breakers, feeders, site lighting, lighting controls, wire mold, power and final connections to devices such as overhead doors, coiling doors kitchen equipment and other equipment supplied by others for a complete electrical scope of work.
    - 1) Provide severs, racks, cable trays, j-hooks and all other necessary rough-in.
    - 2) Provide power and connections to all plumbing provided valve control systems and fixtures.
    - 3) Provide site conduits to monument signs, telecom, handholds, flagpole lights, monument sign lights, generator system, backlit medallions, lift stations, grinder stations, etc for fully functional systems.
    - a.4) Provide rough-in, wiring and final connection for water management system if applicable.
  - b. Provide installation of bid package 1 and 2.

- b.1) Provide all setting, wiring, crane, and all items necessary to install the generator, ATS, and main switch board if not explicitly noted in bid package 1 and 2 to provide a fully functioning electrical system.
- c. Provide diesel fuel for *full* initial fueling of generator
- d. Provide all downstream/branch-circuit panelboards from the main distribution panel
- e. Provide all conduit and rough-in for detention security monitoring and access control items
  - 1) This contractor shall be responsible for all 120/208/240 VAC branch circuits including conduit, wiring and connections from power distribution panels, terminal strips and/or receptacles in electronic control panels and/or electronic system devices.
  - 2) Provide complete raceway system for security electronics. The raceway system shall include but not be limited to conduit, wire troughs and flex conduit.
  - 3) Include receiving head end equipment racks on site.
  - 4) Include setting of head end equipment racks and cabinets on site, with connections to raceway system.
  - 5) Provide all field device installation and terminations
  - 6) Provide aiming and focusing of cameras.
  - e-7) Provide rough-in for video visitation system, video arraignment systems, video teleconferencing systems, A/V systems and tele/data systems
- f. Provide complete fire alarm system including all panels, devices, *power supplies*, wiring and delegated design.
  - f-1) Provide VESDA system complete including any necessary sample piping. Include all coring for sample piping.
- g. Include temporary power for the new building and construction trailer.
  - 1. Provide buried conduit and removal at project completion for the construction trailer.
  - 2. Include utility fees associated with setting up and deactivating temporary service.
  - 3. Include (3) three-phase temporary power connections for other trades.
  - 4. Include connections for temporary HVAC equipment.
  - Furnish, install, and maintain temp lighting at all areas of construction per OSHA standards.
- h. Electrical contractor to review all MEPFP drawings to ensure power is provided to all devices per these drawings. Steel angles and beam framing provide by steel bid package.
- Provide wiring to emergency switches supplied and installed by other trades; coordinate with plumbing and mechanical contractors; reference the plumbing and mechanical drawings.
- j. Include all excavation, backfill, compaction, and spoil removal for this Scope of Work. Include import of backfill material as required.
- k. Include all layout and surveyor staking as required for installation of items included in this Scope of Work
- *I.* include electrical control, power, and alarm conduit, and wiring for fire protection pumps and equipment.
  - 1) Provide power, conduit and final connection to grinder pump.
  - 2) Connect all sprinkler monitory devices to fire alarm per FP101 keynote F1
  - 3) Connect waterflow alarm to fire alarm per FP101 keynote F9. Provide power/rough in and final connection to alarm.
  - 1-4) Provide low volugate wiring frokm duct detector to remote test station per FP101 keynote F17
- m. Provide site conduits and hand holes for telecom/fiber/data per site plan C120
- n. Coordinate with the low voltage contractor for final camera and access control installation and rough-in needs. Rough-in by this contractor shall align with the project specification requirements. Refer to both the architectural plans, and detention equipment & door hardware schedule in addition to the electrical plans, for complete access control and electrified door hardware information and locations.
- o. Include wiring and final connection to all electronic flow and tamper switches.

- p. Includes annual inspections/testing as specified
- q. Include dewatering as necessary to install items provided under this Scope of Work. *Comply with NOI standards, refer to RFI 45*
- r. Include preparation, wiring, pads, conduit, cabinets, and other electrical accessories for electrical power and telecom services as specified in the Contract Documents.
- s. Include coordinating and scheduling with all local utilities and authorities having jurisdiction. Include all trade permit and inspection fees.
- t. Include all specified start-up and Owner training.
- u. Include extended warranties as required to meet Specifications in conjunction with the Project Schedule. Warranties shall start on the day the certificate of Substantial Completion is executed. Units to be started prior to Substantial Completion in accordance with the project schedule for startup, test and balance, and commissioning.
- v. Include early equipment start-up as required per the Project Schedule to provide required cooling, heating, temperature, humidity control, and space acclimation—for new gym floor installation.
- w. Include coordination with the Owner's Commissioning Agent.
- x. Include all electrical hookups and connections for equipment provided by others. Include core drilling of all openings smaller than 10"x10" in hollow core planks precast assemblies for penetrations necessary to complete this Scope of Work. Include sleeves for these openings.
- y. Provide all layout of roof penetrations to be cut in by steel bid package
- z. Provide all labeling and identification required for this scope of work required.
- aa. Include cutting/patching, sleeves, and/or core drilling of all wall penetrations for this Scope of Work
- bb. Include access doors/panels as required to access items installed under this Scope of Work.
- cc. Provide coordination drawings and include all required coordination with other MEPFP trades.
- dd. Include street cleaning for debris tracked on streets by this Contractor's operations.
- ee. Include daily clean-up of debris, waste, dirt, dust, waste, or other Construction impediments generated by this Scope of Work to the dumpsters supplied under the General Trades
- ff. Include clean-up of areas disturbed by this Contractor during completion of this Contractors final punch list work.
- gg. This Contractor shall include furnishing all cast-in electrical components and installation at the precast provider's plant. This includes items and field fixtures that this bid package is providing rough-ins for and/or field fixture installation but are supply by others such as the security electronics system. The electrical bid package shall assume hotel and per diem is required for their workers.
  - 1) The electrical bid package shall note all electrical boxes on the precast shop drawings.
  - 2) The electrical bid package shall have all cast-in electrical fixtures prepared in advance before panel production. The electrical bid package can put the fixtures together in their shop and bring them to the plant for production, or assemble them at the plant at their option.
  - 3) The electrical bid package shall ensure all electrical boxes are completely duct taped and marked on the tape each piece# that they go into.
  - 4) The electrical bid package shall include 5% extra material on hand in during production in the event that during casting some changes have to be made to avoid any interference with other items in the panel.
  - 5) The electrical bid package shall be at the precast plant during production of the panels to inspect them and make sure that the electrical boxes are located correctly in the panel.
  - 6) All electrical materials shall be delivered to the precast plant a couple of days before the production by the electrical bid package.

- hh. Provide power and final connection for overhead door operators. Provide all conduit, cabling and final connections for the security electronic controls including items required to provide the door remote controls in central control
- ii. Provide all disconnects, VFDs, Starters, motors, controls, actuators, etc, for a fully functioning system that are not shown explicitly to be provided by other bid packages on Contract Documents. This contractor shall review and confirm the responsibility for these items prior to bidding and submit an RFI if necessary items are not shown. No change orders will be issued for items related to this effort
- jj. provide firestop box inserts for boxes as required per G136
- kk. Provide protection of existing underground water and gas lines were proposed underground conduit crosses these existing lines.
- II. Install TV monitors (E015) and message monitors (E016) provided by Owner. Provide TV/Monitor brackets. Blocking by general trades. Refer to A130 equipment schedule.
- mm. Provide all firestop, caulking, puddy, sleeves, mineral wool sleeve infill, sealant, etc at all pipe penetrations through walls, ceilings, floors, and roofs for penetrations by this Contractor. Provide all assemblies as detailed and per UL designation
- nn. Provide all special inspections for items installed under this scope of work per section 20 0548 part 3.3
- oo. Provide all housekeeping pads for items provided by this Bid Package unless noted otherwise. Include all surface prep, anchor bolts and bonding agents. Housekeeping pad for generator to be provided by concrete package per S501/16
- pp. Install control panel for grinder pump per P401/10
- qq. Provide all lighting mounted under cabinets, refer to A700/D6
- #.rr. This bid package shall provide all applicable items noted under part 1.3 A of this specification "scope applicable to all bid packages"

# Q. WORK BY OWNER/ NOT IN CONTRACT

- 1. Bid package 1 and 2 complete
- 2. Sanitary lift station, force main, and access drive per C110 keynote 22
- 3. Gas service to proposed building *including Ameren tap fees/service design fees*.
- 4. Laboratory and field testing for concrete, masonry, and steel.
- 5. Shielding of overhead power lines
- 6. Job Trailer
- 7. Third party commissioning
- 8. Major dewatering such as well points/underground pumping
- 9. Phase 2 kitchen equipment and freezer
- 10. office furniture
- 4.11. video visitations monitors

#### END OF SECTION 01 12 00

# **SECTION 00 41 23 - BID FORM**

# PART 1 - BID FORM

1.1	BID INFORMATION
A.	Bidding Subcontractor:
В.	Project Name: Edgar County Public Safety Center
C.	Project Location: 12636 950th Road Paris, IL 61944
D.	Owner: Edgar County
E.	Architect: Klinger & Associates, PC
F.	CORE Project Number: 22-01-011
G.	Construction Manager: CORE Construction Services of Illinois, Inc.
1.2	BID PACKAGES
	The undersigned Bidder, having carefully examined the Procurement and Contracting Requirement Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Klinger Associates, PC. and the Architect's consultants, having visited the site, and being familiar with all condition and requirements of the Work, hereby agrees to furnish all material, labor, equipment, and services for the following bid package (check only the applicable bid package, limit 1 bid package per bid form), including all scheduled allowances, necessary to complete the construction of above-named Project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:
	Bid Package 03 – General Trades Bid Package 04 – Civil Package Bid Package 05 – Asphalt Paving Bid Package 06 – Site Concrete Bid Package 07 – Building Concrete Bid Package 08 – Precast Bid Package 09 – Masonry Bid Package 10 – Roofing Bid Package 11 – Detention Equipment Bid Package 12 – Fire Protection Bid Package 13 – Plumbing Bid Package 14 – HVAC Bid Package 15 – Electrical
	Dollars (\$).

The above base bid amount may be modified by amounts indicated by the Bidder for Alternates and Unit Prices.

- C. Bidders submitting on multiple bid packages must do so with separate bid forms for each bid package.
- D. The above base bid shall include all allowances specified for the noted bid package per section 00 24 00 Bid Packages

# 1.3 ALTERNATES

		ic I bay sanyporen	<del>1 lieu of 2 bays</del>			
				<del>Add</del>	Dollars (\$	<del>)</del>
Alternate 2:	Add m	nobile storage shelv	<del>ving in records s</del>		D. II /A	,
				<del>Add</del>	Dollars (\$	<del>)</del>
Alternate 3:	Add al	I <del>l landscaping plant</del>	<del>tings</del>	٨٨٨	Dollars (\$	١
Altamata 4	Dama	un forma lin on / incom		_		/
Alternate 4:	Remo	ve form liner/ impr	oved finishes or	<del>notea precast</del> ———Deduct	•	
				Deduce	Donars (\$	/
Alternate 1:	Remo	ve form liner/ impr	oved finishes on	noted precast	panels and provide as-cast fin	ish for al
	panels		•	•		-
				Deduct	Dollars (\$	)
Alternate 2:	Provid	le concrete paving	in lieu of asphal	t at standard a	nd heavy duty pavement locat	ions
	noted	on C110 per paven	nent details on (	C111		
				Add/Deduct	Dollars (\$	)
Circle add	or dod			nformation		
1.4 UNI	T PRICES			ntormation		
	T PRICES			mormation		
Unit Pri	T PRICES	S		mormation		
<b>Unit Pr</b> i Bid Pa	T PRICES	<b>S</b> Laborer Hours BP3 – General Tra	ades	niormation		
<b>Unit Pr</b> i Bid Pa \$ Pe	T PRICES  ice 3a:  ackage  r Unit:	<b>S</b> Laborer Hours BP3 – General Tra	ades Per SF	niormation		
<b>Unit Pr</b> i Bid Pa \$ Pe	T PRICES  ice 3a: ackage r Unit: luded:	S  Laborer Hours  BP3 – General Tra	ades Per SF	niormation	Dollars (\$	)
Unit Pri Bid Pa \$ Pe Qty to be inc	T PRICES  ice 3a: ackage r Unit: luded:	S  Laborer Hours  BP3 – General Tra	ades Per SF	niormation	Dollars (\$	)
Unit Pri Bid Pa \$ Pe Qty to be inc Total Allov	r PRICES ice 3a: ackage r Unit: luded: vance:	S  Laborer Hours  BP3 – General Tra	ades Per SF	niormation	Dollars (\$	)
Unit Pri Bid Pa \$ Pe Qty to be inc Total Allov	r PRICES ice 3a: ackage r Unit: luded: vance:	Laborer Hours  BP3 – General Tra  450 HR  Carpenter Hours	ades Per SF <b>In base bid</b>	niormation	Dollars (\$	)
Unit Pri Bid Pa \$ Pe Qty to be inc Total Allov  Unit Pri Bid Pa	r PRICES ice 3a: ackage r Unit: luded: vance:	Laborer Hours  BP3 – General Tra  450 HR  Carpenter Hours	ades Per SF <b>In base bid</b>	niormation	Dollars (\$	)
Unit Pri Bid Pa \$ Pe Qty to be inc Total Allov  Unit Pri Bid Pa	T PRICES ice 3a: ackage r Unit: luded: vance: ice 3b: ackage r Unit:	Laborer Hours  BP3 – General Tra  450 HR  Carpenter Hours  BP3 – General Tra	ades Per SF <b>In base bid</b> ades	niormation	Dollars (\$	)

Refer to section 01 22 00 Unit Prices for additional information General trades bidder shall include the total allowance values listed above in their base bid price

# 1.5 VOLUNTARY COMBINATION DEDUCT

A.	The undersigned bidder may provide at their option, a voluntary deduct if the Owner accepts the following bid packages from this bidder (indicate applicable packages below):
	Bid Package 03 – General Trades Bid Package 04 – Civil Package Bid Package 05 – Asphalt Paving Bid Package 06 – Site Concrete Bid Package 07 – Building Concrete Bid Package 08 – Precast Bid Package 09 – Masonry Bid Package 10 – Roofing Bid Package 11 – Detention Equipment Bid Package 12 – Fire Protection Bid Package 13 – Plumbing
	Bid Package 14 – HVAC
	Bid Package 15 – Electrical
Dec	luct to the total of the base bids:
В.	The above deduct shall be applied to the total sum of the noted packages. In example:
	Bid Package 1 base price = \$10
	Bid Package 2 base price = \$10  Voluntary Combo Deduct = \$-2
	Total combo price if base bid price 1 and 2 is accepted = \$18
C.	The deduct above should be the same on each bid package bid form submitted that comprises the combination price. In the example above, write -\$2 on the bid forms for bid package 1 and bid package 2. In the event of a conflict, the greater amount shall govern.
D.	Each bid package shall be a stand-alone price. Rejection of a voluntary combination deduct offered by a bidder shall not be the basis of an increase to any bid package's base bid price.

# 1.6 BID GUARANTEE

A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within **10** days after a written Notice of Award, if offered within **60** days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, constituting 5 of the Base Bid amount above:

B. In the event Owner does not offer a Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

#### 1.7 TIME OF COMPLETION

A. The undersigned Bidder proposes and agrees hereby to complete the Work of the Contract Documents as shown in the schedule in section 00 31 13 – Project Schedule.

#### 1.8 ACKNOWLEDGEMENT OF ADDENDA

A.	The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of
	this Bid:

1.	Addendum No. 1, dated	·	
2.	Addendum No. 2, dated	·	
3.	Addendum No. 3, dated	•	
4.	Addendum No. 4, dated	·	
5.	Addendum No. 5, dated	•	
6.	Addendum No. 6, dated	·	
7.	Addendum No. 7, dated	·	
8.	Addendum No. 8, dated	·	
9.	Addendum No. 9, dated	·	
<del>6.</del> 10.	Addendum No. 10, dated		

B. Note all addenda issued. If addendum number is not applicable or was not issued for this project write "NA" or leave that line blank.

#### 1.9 CONTRACTOR'S LICENSE

A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

# 1.10 SUBMISSION OF BID

A.	Respectfully submitted this day o	f, 2024.
В.	Submitted By:corporation).	(Name of bidding firm or
C.	Authorized Signature:	(Handwritten signature).
D.	Signed By:	(Type or print name).
E.	Title:	(Owner/Partner/President/Vice President).
F.	Street Address:	
G.	City, State, Zip:	

H.	Email:	·
l.	Phone:	
J.	License No.:	
К	Federal ID No :	(Affix Corporate Seal Here)

**END OF SECTION 00 41 23** 



Job #: 8-22-01-011 Edgar County Jail TBD SPRINGFIELD RD PARIS, Illinois 61944

# **RFI LOG**

‡ Subje	ect	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impa
.49 Roof H	Hydrant Frame	Closed	None	Springer, Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24					
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 04:39 pm C Detail 10 on P400 shows angle framing support I		re isn't any thi	ng noted on S203	at the hydrant loca	ation on the r	oof, please clari	ify support framing	sizing.				
A:	Levi Bauer (CORE Construction - Peoria) Respond General trades shall provide roof hydrant suppor		n CDT										
A:	Amanda Springer (Klingner & Associates, P.C) Re REVISE: The roof hydrant shown on P400 has a s			ems shown cloud	ed on sheet S203.								
.48 Power	r to mezzanine OH door	Closed	None	Springer, Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24					
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 04:26 pm C E202 doesn't appear to show any power to the o		zzanine level. S	Section 08 3323 ir	ndicates this door h	nas an electri	c operator						
A:	Amanda Springer (Klingner & Associates, P.C) Re REVISE: Added power to door operator. Refer to u		:13 am CDT										
.47 Door[	DV1	Closed	None	Springer, Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24					
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 03:42 pm C Door DV1 has hardware set 2 noted in the door h E201 does not show any power to this door.		access controlle	ed door.									
A:	Amanda Springer (Klingner & Associates, P.C) Re REVISE: Added power for door hardware. Refer to		:14 am CDT										
.46 Door 1	101	Closed	None	Springer, Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24					_
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 03:37 pm C Door 101 (main lobby entrance) is hardware set electrical power plan E201 or the security electro	1.0 in section 087100, there is		equipment sched	ule for this door inc	cluding electr	ric strikes, powe	er supplies, card rea	ders, etc but ther	e is nothing	shown on eith	er the	
	These doors also have auto operators and no jun	ction boxes appear to be show	n on E201 at th	is opening									
A:	Amanda Springer (Klingner & Associates, P.C) Re REVISE: Added power for door hardware. Refer to		:14 am CDT										
.45 Showe	er Floor Drains	Closed	None	Springer, Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24					_
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 02:40 pm C Showers 130 and 132 appear to use a onxy show installed flat at the shower locations? the slab pl	er base to provide slope per A				-			ave a sloped floor.	I'm assumir	ng the slab sho	uld be	

Amanda Springer (Klingner & Associates, P.C) Responded Fri Apr 19, 2024 at 09:14 am CDT CLARIFY: The floor slab should be flat at the Onyx shower pans and at the ramp (shown by hatch pattern on sheet A130). Beyond these extents, slope floor per structural to the floor drains near toilets. ADD 5

Closed Date Ball In Court Location Schedule



# Subject

CORE Construction Services of Illinois, Inc.

Status Responsible

Received Assignee

Job #: 8-22-01-011 Edgar County Jail TBD SPRINGFIELD RD PARIS, Illinois 61944

Cost

Cost

F Subje		Contractor	From	Assignee	Date Initiated	Manager	Due Date	Closed Date	Ball In Court	Location	Impact	Cost	Impa
.44 metal	l panel J-channel	Closed	None	Springer, Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24					
Q:	Levi Bauer Sent Mon Apr 15, 2024 at Is J-channel or an expansion joint req	02:13 pm CDT uired where the metal panels abut the p	precast panels per	- A500/D2, D6, A	3, A5, etc? There's r	no sealant sho	ow here either to	close off the pane	ıl.				
A:	Levi Bauer (CORE Construction - Peor Roofing bid package to provide flashi	ria) Responded Fri Apr 19, 2024 at 09:27 ng and J-Channel	7 am CDT										
A:	CLARIFY: In the plan details, transition	ates, P.C) Responded Fri Apr 19, 2024 at n flashing is required and noted to seal metal panels at precast. Leave ¾" gap t	air barrier to prec			ealant are requ	uired where the	two materials mee	et. If it is not feasib	le to order c	ustom size en	d panels, a	
.43 preca	ast parapet detail	Closed	None	Springer, Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24					
Q:	Levi Bauer Sent Mon Apr 15, 2024 at per the 95% review regarding the par 1. how is the insulation attached to th 2. is wood blocking required over the 3. detail calls for fire treated but belie	rapet detail: ne precast? top of the parapet? there's a fastener s	hown here but no	blocking.									
	parapet detail.pdf												
	Amanda Springer (Klingner & Associa	ates, P.C) Responded Fri Apr 19, 2024 at	:09:15 am CDT										
A:	CLARIFY: The rigid insulation encapsu	ates, P.C) Responded Fri Apr 19, 2024 at ulating the back side and top of the prec ng shown on the exterior of the concrete	ast concrete walls							oentry.			
	CLARIFY: The rigid insulation encapsum REVISE: The fire treated wood blocking	llating the back side and top of the prec	ast concrete walls			pical for all co				oentry.			_
	CLARIFY: The rigid insulation encapsulation	ulating the back side and top of the prec ng shown on the exterior of the concrete Closed	ast concrete wall: e precast wall pan None	els shall be exte	rior rated. This is ty	pical for all co	nditions and de	tails. See Section 0		pentry.			_
42 Lighti	CLARIFY: The rigid insulation encapsulation	ulating the back side and top of the precing shown on the exterior of the concrete Closed  O1:48 pm CDT  111 but A200 shows 4. can you confirm ates, P.C) Responded Fri Apr 19, 2024 at	e precast wall pan  None  1 E101 is correct?	els shall be exte	rior rated. This is ty	pical for all co	nditions and de	tails. See Section 0		pentry.			_
42 Lighti Q: A:	CLARIFY: The rigid insulation encapsulation	ulating the back side and top of the precing shown on the exterior of the concrete Closed  O1:48 pm CDT  111 but A200 shows 4. can you confirm ates, P.C) Responded Fri Apr 19, 2024 at	e precast wall pan  None  1 E101 is correct?	els shall be exte	rior rated. This is ty	pical for all co	nditions and de	tails. See Section 0		pentry.			_
42 Lighti Q: A:	CLARIFY: The rigid insulation encapsulation	Closed  01:48 pm CDT 111 but A200 shows 4. can you confirm ates, P.C) Responded Fri Apr 19, 2024 at cated on E101. ADD 5	None  E101 is correct?  O9:15 am CDT	Springer, Amanda Springer, Amanda	04/15/2024 04/15/2024	Levi Bauer  Levi Bauer	04/20/2024 04/20/2024	04/19/24 04/19/24	161000 Rough Car		oesn't show s	loped slabs	-
42 Lighti  Q: A:	CLARIFY: The rigid insulation encapsulation	closed  O1:48 pm CDT  111 but A200 shows 4. can you confirm these, P.C) Responded Fri Apr 19, 2024 at cated on E101. ADD 5  Closed  O1:36 pm CDT	None  E101 is correct?  O9:15 am CDT  None	Springer, Amanda  Springer, Amanda	04/15/2024 04/15/2024	Levi Bauer  Levi Bauer	04/20/2024 04/20/2024	04/19/24 04/19/24	161000 Rough Car		oesn't show s	loped slabs	-
42 Lighti	CLARIFY: The rigid insulation encapsulation	Closed  01:48 pm CDT 111 but A200 shows 4. can you confirm ates, P.C) Responded Fri Apr 19, 2024 at cated on E101. ADD 5  Closed  01:36 pm CDT required for holding 2 and 3 in the booking ates, P.C) Responded Fri Apr 19, 2024 at cated on E101.	None  E101 is correct?  O9:15 am CDT  None	Springer, Amanda  Springer, Amanda	04/15/2024 04/15/2024	Levi Bauer  Levi Bauer	04/20/2024 04/20/2024	04/19/24 04/19/24	161000 Rough Car		oesn't show s	loped slabs	

Date Initiated RFI

**Due Date** 



	ject	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
	The Drop-in Deal tray and the package on the same sheet, can these be move		•	ied in the detent	ion accessory spec	10 2813.63 b	ut are in the reg	ular equipment scl	nedule rather than	n the detenti	ion equipment	t schedule	
	Amanda Springer (Klingner & Associate REVISE: The deal tray (E021) has been	·		security windov	v and specified in ne	ew spec section	on 085653.						
A:	REVISE: The package pass (E020) has I	been moved to the Detention Equipme	nt Schedule.										
	ADD 5												
.39 Visita	ation System/Monitors	Closed	None	Springer, Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24					
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 0. Can a specification be shared for the vi	•	owner furnished a	nd contractor in	stalled on A130 iter	n 9 and would	I like to confirm	what rough-in is re	quired and install	ation instruc	ctions.		
A:	Levi Bauer (CORE Construction - Peoria For bidding purposes, the video visitati	a) Responded Fri Apr 19, 2024 at 09:31 ion monitors shall be assumed to be pr		ner's Vendor.									
	Electrical bid package to provide all rou	ugh-ins											
A:	Amanda Springer (Klingner & Associate CLARIFY: The video visitation monitors Telecom sheets show data outlets requ	shown in these details are identified in	the Detention Ed			h and Contrac	tor Installed. Th	ie Owner is working	g with a selected v	vendor for th	e visitation m	onitors.	
38 Evide	ence processing 123 opening	Closed	None	Springer,	04/15/2024		04/20/2024	04/19/24					
	erice processing 125 opening	Closed	None	Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24					
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 0 on A101 there's a 3' gap on the south v	1:14 pm CDT							n on the mechanic	cal sheets ab	oout what this	is.	
	Levi Bauer Sent Mon Apr 15, 2024 at 0	1:14 pm CDT wall but there's no cased opening show							n on the mechanio	cal sheets at	pout what this	is.	
	Levi Bauer Sent Mon Apr 15, 2024 at 0 on A101 there's a 3' gap on the south v Can you clarify what is required at this Amanda Springer (Klingner & Associate	1:14 pm CDT wall but there's no cased opening show location. es, P.C) Responded Fri Apr 19, 2024 at 0 oom #123, the equipment shown on the	n there. A102 sho	ows some kindof	piece of equipment	t but there's n	o elevation prov	vided or information					_
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 0: on A101 there's a 3' gap on the south v Can you clarify what is required at this Amanda Springer (Klingner & Associate CLARIFY: Within Evidence Processing re	1:14 pm CDT wall but there's no cased opening show location. es, P.C) Responded Fri Apr 19, 2024 at 0 oom #123, the equipment shown on the	n there. A102 sho	ows some kindof	piece of equipment	t but there's n	o elevation prov	vided or information					-
Q: A:	Levi Bauer Sent Mon Apr 15, 2024 at 0: on A101 there's a 3' gap on the south v Can you clarify what is required at this Amanda Springer (Klingner & Associate CLARIFY: Within Evidence Processing re Equipment Schedule found on sheet A:	1:14 pm CDT wall but there's no cased opening show location. es, P.C) Responded Fri Apr 19, 2024 at 0 com #123, the equipment shown on the 130. ADD 5  Closed  1:03 pm CDT	on there. A102 sho 09:16 am CDT e south wall is lat None	ows some kindof beled on the enla Springer, Amanda	piece of equipment orged plan detail sh	t but there's n	o elevation prov	vided or information					_
<b>Q:</b>	Levi Bauer Sent Mon Apr 15, 2024 at 0 on A101 there's a 3' gap on the south v  Can you clarify what is required at this Amanda Springer (Klingner & Associate CLARIFY: Within Evidence Processing re Equipment Schedule found on sheet A: onry Wall Heights  Levi Bauer Sent Mon Apr 15, 2024 at 0' Does the "top of CMU wall on 1st floor"  Amanda Springer (Klingner & Associate	1:14 pm CDT wall but there's no cased opening show location. es, P.C) Responded Fri Apr 19, 2024 at 0 com #123, the equipment shown on th 130. ADD 5  Closed  1:03 pm CDT 'note apply to wall types M8 and M12? es, P.C) Responded Fri Apr 19, 2024 at 0	on there. A102 shows the south wall is laborated by the south	ows some kindof beled on the enla Springer, Amanda	piece of equipment arged plan detail sh 04/15/2024 and M12	t but there's n own on sheet Levi Bauer	o elevation prov	vided or information					_
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 0: on A101 there's a 3' gap on the south v  Can you clarify what is required at this  Amanda Springer (Klingner & Associate CLARIFY: Within Evidence Processing re Equipment Schedule found on sheet A: onry Wall Heights  Levi Bauer Sent Mon Apr 15, 2024 at 0: Does the "top of CMU wall on 1st floor"  Amanda Springer (Klingner & Associate	1:14 pm CDT wall but there's no cased opening show location. es, P.C) Responded Fri Apr 19, 2024 at 0 com #123, the equipment shown on th 130. ADD 5  Closed  1:03 pm CDT 'note apply to wall types M8 and M12? es, P.C) Responded Fri Apr 19, 2024 at 0	on there. A102 shows the south wall is laborated by the south	ows some kindof beled on the enla Springer, Amanda	piece of equipment arged plan detail sh 04/15/2024 and M12	own on sheet  Levi Bauer  ADD 5	o elevation prov	vided or information					-
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 0: on A101 there's a 3' gap on the south v  Can you clarify what is required at this  Amanda Springer (Klingner & Associate CLARIFY: Within Evidence Processing re Equipment Schedule found on sheet A: onry Wall Heights  Levi Bauer Sent Mon Apr 15, 2024 at 0: Does the "top of CMU wall on 1st floor"  Amanda Springer (Klingner & Associate CLARIFY: Type 'M' partitions are full hei	1:14 pm CDT wall but there's no cased opening show location. es, P.C) Responded Fri Apr 19, 2024 at 0 com #123, the equipment shown on th 130. ADD 5  Closed  1:03 pm CDT 'note apply to wall types M8 and M12? es, P.C) Responded Fri Apr 19, 2024 at 0 ght to bottom of deck. M12S is the stor  Closed  1:19 am CDT	on there. A102 sho 09:16 am CDT the south wall is lat None S8 and S6 are list 09:16 am CDT The shelter wall. Ro	ows some kindof beled on the enla Springer, Amanda eed but not M8 a efer to sheet G1: Springer, Amanda	piece of equipment arged plan detail sh 04/15/2024 and M12	own on sheet  Levi Bauer  ADD 5	o elevation prov	vided or information					_



	ect	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impac
	Electrical bid package to provide power/	conduit and connection as directed	d										_
A:	Amanda Springer (Klingner & Associates CLARIFY The conduits to the lift station a			to the lift statio	n during a potentia	outage. This	has been updat	ed on Sheet E100 I	Electrical Site Plan	ADD 5			-
135 Site co	onduit on south side of building	Closed	None	Springer, Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24					
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 11: Per the attached there conduits shown of are these required? Coundit on south side of blg.pdf		uilding that don't app	pear on E100									
A:	Levi Bauer (CORE Construction - Peoria) Electrical bid package to provide condui												
A:	Amanda Springer (Klingner & Associates CLARIFY: The conduits shown on C120 a			ctrical Site Plan A	.DD 5								
134 Condu	uit to Monument Sign	Closed	None	Springer, Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24					_
Q:	Levi Bauer Sent Mon Apr 15, 2024 at 11: C120 shows a different routing for the co Conduit to Monument Sign.pdf		E100, can you confi	rm C102 has the	correct routing tha	t requires add	litional conduit a	round the detention	on pond? see attac	hed			
A:	Levi Bauer (CORE Construction - Peoria) Electrical bid package to provide condui												
A:		t, power and connection as directe s, P.C) Responded Fri Apr 19, 2024	at 09:17 am CDT	C120 are correct.	This has been upd	ated on Sheet	E100 Electrical	Site Plan ADD 5					-
<b>A</b> :	Electrical bid package to provide condui  Amanda Springer (Klingner & Associates	t, power and connection as directe s, P.C) Responded Fri Apr 19, 2024	at 09:17 am CDT	C120 are correct Springer, Amanda	This has been upd 04/15/2024		E100 Electrical	Site Plan ADD 5					_
A:	Electrical bid package to provide conduited Amanda Springer (Klingner & Associated CLARIFY: The routing of the conduit to the	t, power and connection as directe s, P.C) Responded Fri Apr 19, 2024 he monument sign that is shown or Closed	ed at 09:17 am CDT n Civil sheets C102/0 None	Springer, Amanda	04/15/2024	Levi Bauer	04/20/2024	04/19/24	rify which location	is correct fo	r the gas servi		
<b>A:</b> 133 Gas Se	Electrical bid package to provide conduit  Amanda Springer (Klingner & Associates CLARIFY: The routing of the conduit to the service Location  Levi Bauer Sent Mon Apr 15, 2024 at 10:	t, power and connection as directe s, P.C) Responded Fri Apr 19, 2024 he monument sign that is shown or  Closed  :56 am CDT the east of the storm sewer comin s, P.C) Responded Fri Apr 19, 2024	at 09:17 am CDT n Civil sheets C102/0 None ng into the building of at 09:18 am CDT	Springer, Amanda on C102 but P100	04/15/2024 0 shows the gas ser	Levi Bauer	04/20/2024 est of the storm	04/19/24 sewer. Can you cla	rify which location	is correct fo	r the gas servi	ce?	
A:  133 Gas Se  Q:  A:	Electrical bid package to provide conduit  Amanda Springer (Klingner & Associates CLARIFY: The routing of the conduit to the service Location  Levi Bauer Sent Mon Apr 15, 2024 at 10: The gas service and meter are shown to Amanda Springer (Klingner & Associates	t, power and connection as directe s, P.C) Responded Fri Apr 19, 2024 he monument sign that is shown or  Closed  :56 am CDT the east of the storm sewer comin s, P.C) Responded Fri Apr 19, 2024	at 09:17 am CDT n Civil sheets C102/0 None ng into the building of at 09:18 am CDT	Springer, Amanda on C102 but P100	04/15/2024 0 shows the gas ser	Levi Bauer vice to the we een updated t	04/20/2024 est of the storm	04/19/24 sewer. Can you cla	rify which location	is correct fo	r the gas servi	ce?	- - - -
A: 133 Gas Se Q: A:	Electrical bid package to provide conduit  Amanda Springer (Klingner & Associates CLARIFY: The routing of the conduit to the Gervice Location  Levi Bauer Sent Mon Apr 15, 2024 at 10: The gas service and meter are shown to  Amanda Springer (Klingner & Associates REVISE: The gas service should be on the	t, power and connection as directe s, P.C) Responded Fri Apr 19, 2024 ne monument sign that is shown or  Closed  56 am CDT the east of the storm sewer comin s, P.C) Responded Fri Apr 19, 2024 e east side of the sanitary service  Closed  18 pm CDT les appears on the table of content	at 09:17 am CDT n Civil sheets C102/0 None  In g into the building of at 09:18 am CDT per P100 Plumbing I	Springer, Amanda on C102 but P100 Foundation Plan. Springer, Amanda	04/15/2024 0 shows the gas ser Civil sheets have b 04/10/2024	Levi Bauer vice to the we een updated t Levi Bauer	04/20/2024 est of the storm store reflect this re 04/15/2024	04/19/24 sewer. Can you cla vision. ADD 5 04/19/24		is correct fo	r the gas servi	ce?	
A:  133 Gas Se  Q:  A:  132 07951	Electrical bid package to provide conduit Amanda Springer (Klingner & Associates CLARIFY: The routing of the conduit to the service Location  Levi Bauer Sent Mon Apr 15, 2024 at 10: The gas service and meter are shown to Amanda Springer (Klingner & Associates REVISE: The gas service should be on the 13 Expansion Joint Cover Assemblies  Levi Bauer Sent Wed Apr 10, 2024 at 03: 079513 Expansion Joint Cover Assemblia A531/D8 shows a joint but no other local Levi Bauer (CORE Construction - Peoria)	t, power and connection as directe s, P.C) Responded Fri Apr 19, 2024 he monument sign that is shown or  Closed  :56 am CDT the east of the storm sewer comin s, P.C) Responded Fri Apr 19, 2024 e east side of the sanitary service  Closed  :18 pm CDT ies appears on the table of content tions appear to be noted.  Responded Fri Apr 19, 2024 at 09:	at 09:17 am CDT n Civil sheets C102/0 None  Ing into the building of at 09:18 am CDT per P100 Plumbing I  None  Its of the project mar	Springer, Amanda on C102 but P100 Foundation Plan. Springer, Amanda	04/15/2024 0 shows the gas ser Civil sheets have b 04/10/2024	Levi Bauer vice to the we een updated t Levi Bauer	04/20/2024 est of the storm store reflect this re 04/15/2024	04/19/24 sewer. Can you cla vision. ADD 5 04/19/24		is correct fo	r the gas servi	ce?	-



	ject	t	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impac
					Amanda									
Q:	0	Levi Bauer Sent Wed Apr 10, 2024 at 03:10 pm 061600 Sheathing is listed in the table of cont there's no section 061600 Sheathing required	ents for the project manual bu	ut no specification	is included in th	e project manual or	was issued ir	n addendum 1-4	l. I see sheathing li	sted in part 1.1 A c	of section 06	5 1000. Can yo	u confirm	_
A:		Levi Bauer (CORE Construction - Peoria) Respo sheathing specified in section 06 1000. See ac		5 am CDT										
.30 Subs	stitut	ition Request - Cornerstone	Closed	None	Springer, Amanda	04/10/2024	Levi Bauer	04/15/2024	04/19/24					_
Q:	Р	Levi Bauer Sent Wed Apr 10, 2024 at 02:50 pm Please see attached substitution request rega Cornerstone Substitution Request.pdf		ystems submitted	on behalf of Cor	nerstone Detention	Products.							
A:		Amanda Springer (Klingner & Associates, P.C) ADD: Cornerstone Detention Products is an ap		: 09:18 am CDT										
.29 Pneu	umat	atic Control for Showers	Closed	None	Springer, Amanda	04/10/2024	Levi Bauer	04/15/2024	04/19/24					_
		Levi Bauer Sent Wed Apr 10, 2024 at 07:59 am		ed metering valve	s and to also be	controlled by the bu	uilding water	management s	ystem. Talking with	the manufacturer	r, if the shov	vers need to be		
Q:	b	The specified SV-2 and SV-3 showers are noted by the water management system, the valve water model number to do so.		-		-	ave the show	ers controlled b	y the water manag	jement system, ar	nd if so, plea	se advise an a	cceptable	_
Q: ————————————————————————————————————	b m A	by the water management system, the valve w	would need to be electronic rat Responded Fri Apr 19, 2024 at ly controlled and managed by	ther than pneuma : 09:19 am CDT	tic. Please advis	e if the intent is to h				•				-
A:	b m A : R n	by the water management system, the valve water model number to do so.  Amanda Springer (Klingner & Associates, P.C) REVISE: Valves are intended to be electronical	would need to be electronic rat Responded Fri Apr 19, 2024 at ly controlled and managed by	ther than pneuma : 09:19 am CDT	tic. Please advis	e if the intent is to h	e description			•				-
A:	b m A: R n	by the water management system, the valve water model number to do so.  Amanda Springer (Klingner & Associates, P.C) REVISE: Valves are intended to be electronical number. Refer to updated P500 issued in Adde	Responded Fri Apr 19, 2024 at ly controlled and managed by endum 5. ADD 5 Closed	ther than pneuma 09:19 am CDT the building wate  None ation but it's not c	r management s Springer, Amanda	e if the intent is to h	ve description Levi Bauer	on the schedul 04/14/2024	e has been update 04/19/24	d from Pneumatic	to Electroni	c to match the	model	_
<b>A:</b> .28 Open	b m A: R n ening	by the water management system, the valve water model number to do so.  Amanda Springer (Klingner & Associates, P.C) REVISE: Valves are intended to be electronical number. Refer to updated P500 issued in Adde g Connections in Secure Perimeter  Levi Bauer Sent Tue Apr 9, 2024 at 01:00 pm C Detail E4 on A531 indicates to "weld full length	Responded Fri Apr 19, 2024 at ly controlled and managed by endum 5. ADD 5  Closed  CDT  in both the section and elevented by the controlled and managed by endum 5. ADD 5 at least 19, 2024 at 19:30 and elevented fri Apr 19, 2024 at 09:30 and eleve	ther than pneuma  09:19 am CDT the building wate  None  ation but it's not c	r management s Springer, Amanda	e if the intent is to h	ve description Levi Bauer	on the schedul 04/14/2024	e has been update 04/19/24	d from Pneumatic	to Electroni	c to match the	model	-
<b>A</b> :  .28 Open  Q:	B A A A A A A A A A A A A A A A A A A A	by the water management system, the valve water model number to do so.  Amanda Springer (Klingner & Associates, P.C) REVISE: Valves are intended to be electronical number. Refer to updated P500 issued in Adde of Connections in Secure Perimeter  Levi Bauer Sent Tue Apr 9, 2024 at 01:00 pm CO Detail E4 on A531 indicates to "weld full length supposed to be welded to the steel plates? I do Levi Bauer (CORE Construction - Peoria) Response	Responded Fri Apr 19, 2024 at ly controlled and managed by indum 5. ADD 5  Closed  DT  in both the section and elevent't know if you can weld ductioned Fri Apr 19, 2024 at 09:37 ted.  Responded Fri Apr 19, 2024 at 92:4 at 09:37 ted.	ther than pneuma  09:19 am CDT the building wate  None  ation but it's not cowork to a like that 7 am CDT	r management s  Springer, Amanda  lear what is sup	e if the intent is to he system. The narrative 04/09/2024	ve description  Levi Bauer  Is this indica	on the schedul 04/14/2024 ting the embed	e has been update 04/19/24 plates should be w	d from Pneumatic	to Electronion	c to match the	model	-
A:	b m A A A A A A A A A A A A A A A A A A	by the water management system, the valve water model number to do so.  Amanda Springer (Klingner & Associates, P.C) REVISE: Valves are intended to be electronical number. Refer to updated P500 issued in Adde of Connections in Secure Perimeter  Levi Bauer Sent Tue Apr 9, 2024 at 01:00 pm Contail E4 on A531 indicates to "weld full length supposed to be welded to the steel plates? I do Levi Bauer (CORE Construction - Peoria) Respondancy bid package to provide welding as no Amanda Springer (Klingner & Associates, P.C)	Responded Fri Apr 19, 2024 at ly controlled and managed by indum 5. ADD 5  Closed  DT  in both the section and elevent't know if you can weld ductioned Fri Apr 19, 2024 at 09:37 ted.  Responded Fri Apr 19, 2024 at 92:4 at 09:37 ted.	ther than pneuma  09:19 am CDT the building wate  None  ation but it's not cowork to a like that 7 am CDT	r management s  Springer, Amanda  lear what is sup	e if the intent is to he system. The narrative 04/09/2024	ve description  Levi Bauer  Is this indica	on the schedul 04/14/2024 ting the embed	e has been update 04/19/24 plates should be w	d from Pneumatic	to Electronion	c to match the	model	-
A:	b m A A A R A R A R A R A R A R A R A R A	by the water management system, the valve water model number to do so.  Amanda Springer (Klingner & Associates, P.C) REVISE: Valves are intended to be electronical number. Refer to updated P500 issued in Adde of Connections in Secure Perimeter  Levi Bauer Sent Tue Apr 9, 2024 at 01:00 pm Contail E4 on A531 indicates to "weld full length supposed to be welded to the steel plates? I do Levi Bauer (CORE Construction - Peoria) Respondancy bid package to provide welding as no Amanda Springer (Klingner & Associates, P.C) CLARIFY: Detail E4/A531 was updated in Adder	Responded Fri Apr 19, 2024 at ly controlled and managed by endum 5. ADD 5  Closed  DT  " in both the section and elevon't know if you can weld duction and delevon't know if you can weld duction and elevon't know if you can weld duction and the control in	ther than pneuma  109:19 am CDT the building wate  None  ation but it's not cowork to a like that  7 am CDT  109:19 am CDT the CMU walls are wo	r management s  Springer, Amanda  lear what is supposed welded to the flator springer,	e if the intent is to he system. The narrative 04/09/2024 cosed to be welded.	ve description  Levi Bauer  Is this indica	on the schedul 04/14/2024 ting the embed	e has been update  04/19/24  plates should be w	d from Pneumatic	to Electronion	c to match the	model	-
A:     Q:     A:     A:     A:     A:     A:     A:	b m A A A A A A A A A A A A A A A A A A	by the water management system, the valve will model number to do so.  Amanda Springer (Klingner & Associates, P.C) REVISE: Valves are intended to be electronical number. Refer to updated P500 issued in Adde of Connections in Secure Perimeter  Levi Bauer Sent Tue Apr 9, 2024 at 01:00 pm C Detail E4 on A531 indicates to "weld full length supposed to be welded to the steel plates? I do Levi Bauer (CORE Construction - Peoria) Responsationary bid package to provide welding as no Amanda Springer (Klingner & Associates, P.C) CLARIFY: Detail E4/A531 was updated in Addervice Equipment Specification  Levi Bauer Sent Tue Apr 9, 2024 at 11:08 am C Can you clarify if there is a food service specific	Responded Fri Apr 19, 2024 at ly controlled and managed by indum 5. ADD 5  Closed  CDT  " in both the section and elevent know if you can weld ductronded Fri Apr 19, 2024 at 09:37 ted.  Responded Fri Apr 19, 2024 at ndum 04. The angles around the Closed  CDT  Closed  CDT  Closed  CDT  Closed  CDT  Closed  CDT  Cation?  Ebid documents, just the K100	ther than pneuma  109:19 am CDT the building wate  None  ation but it's not cowork to a like that  7 am CDT  109:19 am CDT he CMU walls are was not compared to the compared t	r management s  Springer, Amanda  lear what is supposed welded to the flator springer,	e if the intent is to he system. The narrative 04/09/2024 cosed to be welded.	ve description  Levi Bauer  Is this indica	on the schedul 04/14/2024 ting the embed	e has been update  04/19/24  plates should be w	d from Pneumatic	to Electronion	c to match the	model	- - - - -



- Jubj	ojec	:t	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impac
					Amanda									
Q:		Levi Bauer Sent Mon Apr 8, 2024 at 05:01 pm 085113 Security Windows is listed in the table		nanual (page 6) but	doesn't appear t	o be included with t	he project ma	anual or addend	um 1-3. Can you pr	ovide a specificat	ion or clarify	if it's not requ	iired?	
A:		Amanda Springer (Klingner & Associates, P.C) ADD: 085113 Security windows spec section h												
A:		Levi Bauer (CORE Construction - Peoria) Respo see addendum 5	onded Fri Apr 19, 2024 at 09:	17 am CDT										
125 Kitch	hen	n Equipment Phasing	Closed	None	Springer, Amanda	04/07/2024	Levi Bauer	04/12/2024	04/17/24					
Q:		Levi Brooke Sent Fri Apr 5, 2024 at 12:39 pm 0 Can you confirm if both phase 1 and phase 2 of kitchen equipment 2.png kitchen equipment 1.png		led in my proposal?	From the FSE dr	awing the following	information is	s listed.						
A:		Amanda Springer (Klingner & Associates, P.C) Answered in Addendum 4	Responded Mon Apr 8, 2024	at 08:47 am CDT										
	ring	g Capacity for aggregate Piers	Closed	None	Springer, Amanda	04/07/2024	Levi Bauer	04/12/2024	04/19/24					_
l24 Beari		Levi Brooke Sent Fri Apr 5, 2024 at 09:56 am 0 It appears that all of the strip and spread footi		ement to 4000psf be	earing capacity l	by aggregate piers.								
Q:			ings are specified for improve s in the west portion of the bu the reduced loads would not b	ilding had lower loa be required but the	d conditions (1.	5kips/lf) and did not the foundation detai	ils still shows	aggregate piers		cted in the current	wall footing	g schedule, so		_
		It appears that all of the strip and spread footi In previous budgets, the interior "F2" footings improvement for those interior footings with t	ings are specified for improve s in the west portion of the bu the reduced loads would not be (2) require ground improveme	ilding had lower loa be required but the ent to a 4000psf cor	d conditions (1.	5kips/lf) and did not the foundation detai	ils still shows	aggregate piers		cted in the current	: wall footing	g schedule, so		_
Q:	\:	It appears that all of the strip and spread footing in previous budgets, the interior "F2" footings improvement for those interior footings with the Do all strip footings in the structure (F1 and F1 Levi Bauer (CORE Construction - Peoria) Responses	ings are specified for improve s in the west portion of the buther educed loads would not be (2) require ground improvement onded Fri Apr 19, 2024 at 09: Responded Fri Apr 19, 2024 at or	ilding had lower loa be required but the ent to a 4000psf cor 38 am CDT at 09:20 am CDT ent. This includes fo	d conditions (1 cross section in a stract pressure continues of the con	Skips/lf) and did not the foundation detail or is the detail just no ngs F2 only require t	ils still shows eed to be upd he ground im	aggregate piers ated? provement nee	s. ded for 1.5 kips per				ments. Also	-
Q: A:	\:	It appears that all of the strip and spread footing improvement for those interior "F2" footings improvement for those interior footings with the Do all strip footings in the structure (F1 and F1 Levi Bauer (CORE Construction - Peoria) Response General trades to bid as directed  Amanda Springer (Klingner & Associates, P.C) CLARIFY: Building footings require ground improved the structure of the	ings are specified for improve s in the west portion of the buther educed loads would not be (2) require ground improvement onded Fri Apr 19, 2024 at 09: Responded Fri Apr 19, 2024 at or	ilding had lower loa be required but the ent to a 4000psf cor 38 am CDT at 09:20 am CDT ent. This includes fo	d conditions (1 cross section in a stract pressure continues of the con	Skips/lf) and did not the foundation detail or is the detail just no ngs F2 only require t	eed to be upd  he ground im ressure (gros	aggregate piers ated? provement nee	s. ded for 1.5 kips per				ments. Also	-
Q: A:	u: glar	It appears that all of the strip and spread footing improvement for those interior "F2" footings improvement for those interior footings with the Do all strip footings in the structure (F1 and F Levi Bauer (CORE Construction - Peoria) Response and trades to bid as directed  Amanda Springer (Klingner & Associates, P.C) CLARIFY: Building footings require ground impose the response in addendum 4 for additional	ings are specified for improve s in the west portion of the buther educed loads would not buther educed loads would not buther educed loads would not buther educed from the founded from the founded from the foundation closed	ilding had lower load be required but the ent to a 4000psf cor 38 am CDT at 09:20 am CDT ent. This includes for in loading is net bear	d conditions (1 cross section in intract pressure of the continuous formula for the continuous for the	Skips/lf) and did not the foundation detail or is the detail just no or is the detail just no	eed to be upd  he ground im ressure (gros	aggregate piers ated? provement nee ss bearing press	ded for 1.5 kips per ure). ADD 5				ments. Also	-
Q:	u: glar	It appears that all of the strip and spread footing in previous budgets, the interior "F2" footings improvement for those interior footings with the Do all strip footings in the structure (F1 and F1 Levi Bauer (CORE Construction - Peoria) Responseral trades to bid as directed  Amanda Springer (Klingner & Associates, P.C) CLARIFY: Building footings require ground impose the response in addendum 4 for additional Bars Responsibility  Levi Brooke Sent Fri Apr 5, 2024 at 09:53 am 0 Who is responsible for supplying the burglar by	ings are specified for improve in the west portion of the but the reduced loads would not be the reduced loads at th	ilding had lower loa be required but the ent to a 4000psf cor 38 am CDT at 09:20 am CDT ent. This includes fo n loading is net bear None	d conditions (1.) cross section in intract pressure of the continuous formation of the	Skips/lf) and did not the foundation detail or is the detail just no ngs F2 only require t t based on contact p 04/07/2024	eed to be upd  he ground im ressure (gros	aggregate piers ated? provement nee ss bearing press	ded for 1.5 kips per ure). ADD 5				ments. Also	-
Q: A: A: 123 Burgl	glar	It appears that all of the strip and spread footing in previous budgets, the interior "F2" footings improvement for those interior footings with the Do all strip footings in the structure (F1 and F1 Levi Bauer (CORE Construction - Peoria) Response and Springer (Klingner & Associates, P.C) CLARIFY: Building footings require ground impose the response in addendum 4 for additional Bars Responsibility  Levi Brooke Sent Fri Apr 5, 2024 at 09:53 am (Who is responsible for supplying the burglar brooking augustions.png  Levi Bauer (CORE Construction - Peoria) Responsible bars will be supplied by the detention of the supplied by the supp	ings are specified for improve in the west portion of the but the reduced loads would not be the reduced loads at th	ilding had lower loa be required but the ent to a 4000psf cor 38 am CDT at 09:20 am CDT ent. This includes fo n loading is net bear None	d conditions (1.) cross section in intract pressure of the continuous formation of the	Skips/lf) and did not the foundation detail or is the detail just no ngs F2 only require t t based on contact p 04/07/2024	eed to be upd  he ground im ressure (gros	aggregate piers ated? provement nee ss bearing press	ded for 1.5 kips per ure). ADD 5				ments. Also	-



	ect	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court		Schedule Impact	Cost Code	Cost Impa
Q:	Levi Brooke Sent Fri Apr 5, 2024 at 09:51 a Does the glazer need to pick up the white Glazing questions.png		in green?										
A:	Levi Bauer (CORE Construction - Peoria) R Confirmed, glazing bid package shall prov			ached detail.									
21 Vesda	a system responsibility	Closed	None	Springer, Amanda	04/03/2024	Levi Bauer	04/08/2024	04/07/24					
Q:	Levi Bauer Sent Wed Apr 3, 2024 at 04:36 Is the FP contractor to supply the Vesda Sy		g as noted in FP	notes?									
A:	Levi Bauer (CORE Construction - Peoria) R VESDA system complete including any ne	cessary sample piping shall be provi	ded by fire alarn		trical bid package.								
	Mechanical bid package to provide all bac	kends/adapters as necessary to tie-	n dampers to sy	stem if required.									_
.0 Additi	cional HVAC controls questions	Closed	None	Springer, Amanda	04/03/2024	Levi Bauer	04/08/2024	04/17/24					
	Please provide quantity and locations o												_
A:	Amanda Springer (Klingner & Associates, Answered in Addendum 4	P.C) Responded Mon Apr 8, 2024 at 0											
		Closed	None	Springer, Amanda	04/03/2024	Levi Bauer	04/08/2024	04/17/24					_
	Answered in Addendum 4  //oltage Questions  Levi Bauer Sent Wed Apr 3, 2024 at 04:26  1. TN000 Responsibility Matrix 2. How many switches and UPS 3. TN000 indicates that 2D,IP h 4. TN101 Plan Note T10 indicat 5. Will the patch panels at each 6. Is there any fiber or copper b 7. TN300 Plan T16 says to prov 8. How many strands of fiber? 9. If there is fiber needed, can	Closed  pm CDT  Indicates that the owner will provide is are there if contractor is installing as (2) cables for an inmate wall phoses to provide a 24-port patch panel in Dispatch Workstation be wall mour between the 2 closets? ide optical fiber panel, see division 2 What type of connector ends for fiber finiFiber be used since other fibers hin this area feed back to server room	None  e and install the i  ?  ne, TN400 (3) ind at each dispatch ited?  ? for additional r(SC,LC) ave big MOQ's? n 134 and land o	Amanda network switch a dicates a single p work station wit information. The	nd UPS. TN300 Plar osition wall phone   h (8) Cat 6 Cables n re isn't anything ab	n Notes T13 and plate. Will the pouted to Dispout fiber, Wh	nd T17 indicates 2nd terminated atch Server141	contractor to insta I cable be placed ir Are these addition single mode, multin	nside the junction hal cables to the commode)?	box? Please a ables indicate	dvise. d on the drav		



#	Subje	ct	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location Schedule Impact	Cost Code	Cost Impact
		Levi Bauer Sent Wed Apr 3, 2024 at 04:23 pm C [Question from glazer]	DT										
	Q:	In the bid package for i) "Aluminum, Glass & Gla	zing" line item 16) states "Pro	vide all bullet pr	oof/resistant glaz	ring and bullet films	i.						
		Am I to pick up detention glazing where the inm Usually, we just pick up the standard storefront, We aren't set up to install or provide detention r	curtainwall framing and glazin	g.									
	A:	Levi Bauer (CORE Construction - Peoria) Respon All security glazing and bullet films per 088853 Bid packages have been updated to this effect			etention bid pack	age.							-
117	Hollow	Core	Closed	None	Bauer, Levi (CORE	04/03/2024	Levi Bauer	04/08/2024	04/03/24				
	Q:	Levi Bauer Sent Wed Apr 3, 2024 at 04:11 pm C The scope, drawings and bid request all referen		n't see any on th	ne drawings. Is th	ere something I am	missing som	iewhere					
	A:	Levi Bauer (CORE Construction - Peoria) Respon Hollow core was going to be used for the mezza			as been removed	from the design.							
116	Grinde	r Specifications	Closed	None	Springer, Amanda	04/03/2024	Levi Bauer	04/08/2024	04/07/24				_
	Q:	Levi Bauer Sent Wed Apr 3, 2024 at 04:07 pm C There are no specifications for the grinder pump		n on P401/10. F	Please provide a	specification.							
	A:	Levi Bauer (CORE Construction - Peoria) Respon Refer to item SG on P500 addendum 2.	ded Wed Apr 3, 2024 at 04:07	pm CDT									
115	Sign Ty	pe C and D - Quantity Confirmation	Closed	None	Bauer, Levi (CORE Springer, Amanda	04/03/2024	Levi Bauer	04/08/2024	04/17/24				_
	Q:	Logan Smith Sent Tue Apr 2, 2024 at 01:15 pm ( Wording in drawings differ from the count tally of For Sign Type C, are (15) or (17) signs needed? For Sign Type D, are (58) or (26) signs needed?		and D.									
	A:	Amanda Springer (Klingner & Associates, P.C) Re Answered in Addendum 4	esponded Mon Apr 8, 2024 at 0	7:38 am CDT									
114	Road P	Patrol Room - Level 3 Ballistic Window Frame	Closed	None	Springer, Amanda	04/03/2024	Levi Bauer	04/08/2024	04/17/24				_
		Logan Smith Sent Tue Apr 2, 2024 at 01:40 pm 0 There is one window in the Road Patrol room tha		tic type window	r frame. However	, there is no ballisti	c window spe	c for this job.					
	Q:	Shall I make assumption on how to bid this wind	low using my BR window vendo	or?									
		(RFI from glazing contractor)											



	Subjec	ct	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court		Schedule Impact	Cost Code	Cost Impac
	A:	Amanda Springer (Klingner & Associates, P.C Answered in Addendum 4	Responded Mon Apr 8, 2024 at	07:37 am CDT										_
113	Kitcher	n Equipment	Closed	None	Springer, Amanda	04/03/2024	Levi Bauer	04/08/2024	04/07/24					
	Q:	Logan Smith Sent Tue Apr 2, 2024 at 01:30 p Based on the General Food Service Notes on		se 1 and Phase 2	equipment need	to be included in th	he equipmen	t proposal.						
	A:	Levi Bauer (CORE Construction - Peoria) Res Refer to RFI 125	oonded Sun Apr 7, 2024 at 02:26	pm CDT										
112	Tornad	o Signage	Closed	None	Springer, Amanda	04/03/2024	Levi Bauer	04/08/2024	04/03/24					_
		Logan Smith Sent Tue Apr 2, 2024 at 01:11 p - What are tornado signs to be made of? Are		n drawings?										
	Q:	- Are any tornado signs S4 needed?												
		- Is tornado sign S5 to be single or double sid	led? What kind of ceiling mount h	ardware is neede	ed?									
	A:	Levi Bauer (CORE Construction - Peoria) Res Refer to RFI 36	oonded Wed Apr 3, 2024 at 03:13	pm CDT										_
111	Precast	t - Cast-In Electrical Connections	Closed	None	Bauer, Levi (CORE	04/03/2024	Levi Bauer	04/08/2024	04/07/24					_
	Q:	Logan Smith Sent Tue Apr 2, 2024 at 01:04 p We see the electrical connections are cast-in		ectrician, so I am	not totally sure v	which designations	need to be ca	ast-in. Do yo hav	e a confirmed qua	ntity we can use fo	or bid?			
		(from precast supplier)												
	A:	Levi Bauer (CORE Construction - Peoria) Resp Quantity survey shall be performed by bidde		pm CDT										
														_
110	Precast	t - Cast-In Wood Blocking	Closed	None	Bauer, Levi (CORE	04/03/2024	Levi Bauer	04/08/2024	04/03/24					_
110	Precast  Q:	t - Cast-In Wood Blocking  Logan Smith Sent Tue Apr 2, 2024 at 01:01 p E12/A800: Is cast-in wood blocking required	m CDT	None		04/03/2024	Levi Bauer	04/08/2024	04/03/24					_
110		Logan Smith Sent Tue Apr 2, 2024 at 01:01 p	m CDT	None		04/03/2024	Levi Bauer	04/08/2024	04/03/24					_
110		Logan Smith Sent Tue Apr 2, 2024 at 01:01 p E12/A800: Is cast-in wood blocking required	m CDT ?			04/03/2024	Levi Bauer	04/08/2024	04/03/24					_
	Q:	Logan Smith Sent Tue Apr 2, 2024 at 01:01 p E12/A800: Is cast-in wood blocking required: (from precast supplier) Levi Bauer (CORE Construction - Peoria) Resp	m CDT ?			04/03/2024		04/08/2024	04/03/24					-



	ect	Status	Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impac
	In bid package 4 (Civil) the \$20,000 allowance r	mentioned o	overs maintenance	, regrading, and	d dress up of tem	porary and perman	ent access ro	oads / laydown ar	eas.					
	Does this also cover the cost of additional stone	that will be	required due to all	the constructio	n traffic?									
A:	Levi Bauer (CORE Construction - Peoria) Respon Confirmed, this allowance is also intended to co Refer to RFI 31 for additional information.				r to installation o	of permeant pavem	ent.							
.08 UL-86	4 Listed Unit Controllers and Code Compliance	Closed		None	Springer, Amanda	04/03/2024	Levi Bauer	04/08/2024	04/19/24					
	Levi Bauer Sent Wed Apr 3, 2024 at 02:38 pm C [Question from siemens]	DT												
Q:	The latest addendum clarified that the unit cont supply and return damper and fans so that we creasons.					•		,						
	Can you ask the engineer if anyone listed can a requirements	ctually do it	and let me know? It	the answer is y	es then I will bid	the controls. If the	answer is no	then I'm not sure	e if anyone will bid	the project if they	actually und	derstand the		
A:	Levi Bauer (CORE Construction - Peoria) Responsee addendum 5	nded Fri Apr	19, 2024 at 09:04 a	m CDT										_
.07 Masor	nry Clarifications	Closed		None	Bauer, Levi (CORE Springer, Amanda	04/02/2024	Levi Bauer	04/07/2024	04/15/24					_
					Amanda									
Q:	Kareem Castaneda Sent Tue Apr 2, 2024 at 11:1 [Questions from masonry contractor] 1) Is code #3 detail H on A531 intended to be code with the	ode #5?	d item supplied by o	thers?	Allidiud									_
Q:	[Questions from masonry contractor] 1) Is code #3 detail H on A531 intended to be code will be used to be code will be code w	ode #5?  n embedded  ed Wed Apr	10, 2024 at 03:18 p	m CDT		level, checking to d	confirm frame	es are square, an	d to assure all MEP	rough-ins are ma	iintained dur	ing the installi	ation of the	-
	[Questions from masonry contractor] 1) Is code #3 detail H on A531 intended to be co 2) Will we install frames, or will others install? 3) What sealant is required for this? 4) Is this steel faced masonry unit considered at See spec 04 2900 2.3 Detention Equipment.jpg Frames.jpg Sealant.jpg Steel Faced Masonry Unit.jpg  Dan Joos (CORE Construction - Peoria) Responde In addition to Levi Bauer response dated 4/8 be Masonry contractor will still be responsible for in	ed Wed Aprelow: nstalling em	10, 2024 at 03:18 p abeds, anchors, grou or 8, 2024 at 10:51 a metal frames. The c	m CDT uting, temp sho am CDT letention packa	ring, checking of ge will install all	detention frames. F		·			intained dur	ing the installi	ation of the	-



#	Subje	ct	Status	Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impac
	A:	Levi Bauer (CORE Construction - Peoria) Respond Klinger to clarify items 1 and 3. CORE will address			n CDT										_
106	Interio	r Wall Footings	Closed		None	Springer, Amanda	04/02/2024	Levi Bauer	04/07/2024	04/17/24					
	Q:	Kareem Castaneda Sent Tue Apr 2, 2024 at 10:54 For the interior wall footings that have a TOF of 1 short stem wall for the block reference details 8, details on S503. Please advise.	.00', (F2, F												
	A:	Amanda Springer (Klingner & Associates, P.C) Re Answered in Addendum 4	sponded I	Mon Apr 8, 2024 at 07:	33 am CDT										
105	Mini-sp	olit drain sizes	Closed		None	Springer, Amanda	03/30/2024	Levi Bauer	04/04/2024	04/17/24					_
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 10:26 am CI RFI-Mini Split Drains Drawings do not indicate where to drain the indo		olits and drain size?											
	A:	Amanda Springer (Klingner & Associates, P.C) Re Answered in Addendum 4	sponded I	Mon Apr 8, 2024 at 07:	37 am CDT										_
104	Substit	cution Request - Siemens	Closed		None	Springer, Amanda	03/30/2024	Levi Bauer	04/04/2024	04/19/24					_
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 10:24 am CD Substitution Request - DDC Controls Siemans To whom this concerns,	DΤ												
		Siemens has been asked to provide a controls nu a specific form required, please send it to me and			seeking appro	oval. Siemens wo	uld like to be an ac	cceptable ma	nufacture for Dir	ect-Digital Control	s in Specification s	section 2309	923, part 2.1 A	. If there is	
	A:	Levi Bauer (CORE Construction - Peoria) Respond was approved in addendum 5	ded Fri Apr	19, 2024 at 09:19 am	CDT										_
	A:	Levi Bauer (CORE Construction - Peoria) Respond Substitution Request is attached Siemens Substitution Request.pdf A6V11852707.pdf A6V10304985_en (1).pdf	ded Thu Ap	pr 11, 2024 at 09:32 ai	m CDT										_
	A:	Levi Bauer (CORE Construction - Peoria) Respond A substitution request form is required before thi													
103	Panel o	question	Closed		None	Springer, Amanda	03/30/2024	Levi Bauer	04/04/2024	04/19/24					_
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 10:16 am CI The panels below are shown on the one line diag LRL1 LRL2		a note saying fusible. T	he panel sche	dule however jus	t shows these as e	ither MLO or	MB panels. Wha	t is meant by fusib	le and what type o	f panel will l	pe required?		



A: Amanda Springer (Klingner & Associates, P.C) Responded Mon Apr 8, 2024 at 07:35 am CDT

# !	Subje	ect	Status Responsib Contracto		Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impac
		LRUPS LRH3 LSH1 LSH2												
-	A:	Amanda Springer (Klingner & Associates, P.C) Re- Line item 29 on Addendum 4	sponded Fri Apr 19, 20	24 at 09:31 am CDT										_
	A:	Amanda Springer (Klingner & Associates, P.C) Re CLARIFY: Panels indicated are fusible type for sele			cal system. Upda	ated Panelboard sch	edules includ	ed in Addendum	#4.					_
	A:	Levi Bauer (CORE Construction - Peoria) Respond This answer doesn't appear to have been provide		t 04:31 pm CDT										_
	A:	Amanda Springer (Klingner & Associates, P.C) Re Answered in Addendum 4	sponded Mon Apr 8, 20	24 at 07:31 am CDT										_
102 9	5S-1 s <sub> </sub>	spec	Closed	None	Springer, Amanda	03/30/2024	Levi Bauer	04/04/2024	04/17/24					_
-	Q: A:	Levi Bauer Sent Sat Mar 30, 2024 at 10:08 am CE This job calls for SS-1 for the solid surface in varie The finish schedule doesn't have this listed out.  Can you provide a specification for SS-1  Amanda Springer (Klingner & Associates, P.C) Re The solid surface countertop is specified in section 123661 - Simulated Stone Countertops.doc	ous areas. sponded Wed Apr 17, 2		was not added ii	n the addendum but	was clarified	as to where to f	ind the information	n for SS-1. See lir	e item 18 Ad	ddendum 4.		_
-	A:	Levi Bauer (CORE Construction - Peoria) Respond A specification doesn't appear to have been adde			e in addendum 4									_
	A:	Amanda Springer (Klingner & Associates, P.C) Re Answered in Addendum 4	sponded Mon Apr 8, 20	24 at 07:36 am CDT										-
101 /	Aggreç	gate pier loads	Closed	None	Springer, Amanda	03/30/2024	Levi Bauer	04/04/2024	04/17/24					_
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 10:04 am CE [Question from aggregate Pier provider] Are you able to provide the actual load and dead,		footings? Designing b	ased off the actu	ual loads instead of j	ust the bearii	ng capacity will o	give you a more ec	onomical price.				
-	A:	Amanda Springer (Klingner & Associates, P.C) Re Answered in Addendum 4	sponded Mon Apr 8, 20	24 at 07:35 am CDT										_
100 /	Agg pi	ier testing	Closed	None	Springer, Amanda	03/30/2024	Levi Bauer	04/04/2024	04/17/24					_
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 10:03 am CE [Question from aggregate pier provider] The specs mention a list of testing including mod as there is no uplift requirement on this project. F	ulus test, bottom stabi	•		•		-					load test	



#	Subje	ct	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
		Answered in Addendum 4												*
99	predril	ling for aggregate piers	Closed	None	Springer, Amanda	03/30/2024	Levi Bauer	04/04/2024	04/17/24					
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 10:01 am [question from aggregate pier provider] The specs look to be written for an old school p use vertical or horizontal vibrating probes that probe down while vibrating to consolidate the confirm this is an acceptable installation method	oredrill and tamping stone colu penetrate without predrilling, stone and create the stiffness	and install stone trequired. Furthern	hrough the cent nore, we would r	er of the tooling as not expect predrilled	the probes ard holes to stay	re removed. As y	ou remove the pro	bes and install the	stone you	frequently rein	sert the	
	A:	Amanda Springer (Klingner & Associates, P.C) F Answered in Addendum 4	Responded Mon Apr 8, 2024 at	: 07:36 am CDT										
98	Aggre	gate pier replacement ratio	Closed	None	Springer, Amanda	03/30/2024	Levi Bauer	04/04/2024	04/17/24					
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 09:59 am [question from aggregate pier provider] The specs mention a minimum area replaceme heave. Since the stone columns are design bui	ent ratio of 30%. This is much I				alistic to insta	all. At ARR above	20% you start to	get interference b	etween the	columns and g	round	
	A:	Amanda Springer (Klingner & Associates, P.C) for Addendum 4, Line item 20:  ADD: Add the following to specification section bearing surface."		·	num stone colum	nn area coverage th	e ground sha	ll be improved to	o provide uniform s	soil stiffness and s	oil bearing p	ressure at the	footing	
	A:	Amanda Springer (Klingner & Associates, P.C) F Answered in Addendum 4	Responded Mon Apr 8, 2024 at	: 07:34 am CDT										
97	Pier ins	stallation elevation	Closed	None	Bauer, Levi (CORE	03/30/2024	Levi Bauer	04/04/2024	04/07/24					_
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 09:57 am [question from aggregate pier provider] Existir		', should we assun	ne we will be ins	talling from around	718' -719'?							
	A:	Levi Bauer (CORE Construction - Peoria) Respo Aggregate pier installer will be installing piers			n. Subgrade elev	ation varies. Refer	to RFI 3.							
96	Overh	ead door material	Closed	None	Springer, Amanda	03/30/2024	Levi Bauer	04/04/2024	04/17/24					_
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 09:45 am 83323-2 2.1 A spec calls for insulated aluminum - 18ga drawing A430-A2 describes steel coiling door -		el?										
	A:	Amanda Springer (Klingner & Associates, P.C) F Answered in Addendum 4	Responded Mon Apr 8, 2024 at	:07:34 am CDT										
		ead doors screens			Springer,									_



#	Subje	ect	Status	Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impac
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 09:43 am [question from OH door contractor]  83323-3 2.2 F and G what is meant by security screen and insect sc Drawing A801-C12 shows a separate security in the security of the security of the security in the security	creen for the and insect s	creen (not part of se		provided by the n	nanufacturer of the	door. Securi	ty screen, bug sc	reen and all sill pla	ate material BY OT	HER.			
	A:	Levi Bauer (CORE Construction - Peoria) Respo Per addendum 5, At the coiling door, provide a diameter wire) installed in a black aluminum.				16, .011"									_
		Insect screen to be provided by general trades	package ar	nd recommend to be	provided by gla	zier									_
	A:	Levi Bauer (CORE Construction - Peoria) Respo Follow up question to this, the insect screen do in this regard. Can you provide additional infor	pesn't have	a material callout or		finish or anythin	g of that nature not	ed in either t	the drawings or t	he specification. a	ddendum 4 doesn	't provide ar	y additional in	formation	
	A:	Amanda Springer (Klingner & Associates, P.C) Answered in Addendum 4	Responded	Mon Apr 8, 2024 at 0	7:35 am CDT										_
94	Truss	Height	Closed		None	Springer, Amanda	03/30/2024	Levi Bauer	04/04/2024	04/17/24					
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 09:40 am Drawing A400 section thru - please verify botto		height AFF at lowest	point to the sou	th.									
	A:	Amanda Springer (Klingner & Associates, P.C) Answered in Addendum 4	Responded	Mon Apr 8, 2024 at 0	7:34 am CDT										_
93	Overh	head door finish	Closed		None	Springer, Amanda	03/30/2024	Levi Bauer	04/04/2024	04/17/24					_
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 09:39 am 83613-2 2.2-A-1-c hot dip galvanized called for - This is		le. Standard finish pe	r 2.2-A-2 will be	e provided									
	A:	Amanda Springer (Klingner & Associates, P.C) Answered in Addendum 4	Responded	Mon Apr 8, 2024 at 0	7:35 am CDT										-
	A:	Levi Bauer (CORE Construction - Peoria) Respo Klinger to clarify if alternate finish is acceptabl		ar 30, 2024 at 09:39	am CDT										_
92	Overh	head door electrical	Closed		None	Bauer, Levi (CORE	03/30/2024	Levi Bauer	04/04/2024	04/19/24					_
	Q:	Levi Bauer Sent Sat Mar 30, 2024 at 09:38 am 83613-3 2.3L2 - calls for provide remotes and all wiring ELECTRICIAN. Please confirm or present an alt	. Need verifi				provide mechanica	Il installation	of doors ONLY, N	lo Electrical. All ele	ectrical include lov	v voltage an	d this work by		
	A:	Levi Bauer (CORE Construction - Peoria) Respo Electrical bid package shall provide power and													_



Job #: 8-22-01-011 Edgar County Jail TBD SPRINGFIELD RD PARIS, Illinois 61944

# :	Subje	ct	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location Schedule Impact	Cost Code	Cos
		Electrical bid package shall provide all conduit	, cabling and final connections	for the security e	electronic control	s including items re	quired to prov	vide the door re	mote controls in c	entral control.			_
		Detention package via security electronics to s Electrical bid package to install all field devices			egrate door cont	rols.							
)1	Substit	tution Request - Security Automation	Closed	None	Springer, Amanda	03/26/2024	Levi Bauer	03/31/2024	04/07/24				
	Q:	Levi Bauer Sent Tue Mar 26, 2024 at 08:27 am Please see attached substitution request subm S2 Substitution.pdf Hoffman Substitution.pdf Cyber Security Insurance _ SAS.pdf Qualifications.docx		tomation Systems	3								
	A:	Amanda Springer (Klingner & Associates, P.C) F Approved in Addendum 3	Responded Fri Mar 29, 2024 at	10:35 am CDT									
90 '	Vesda :	System and Duct Decectors	Closed	None	Springer, Amanda	03/25/2024	Levi Bauer	03/30/2024	04/07/24				_
	Q:	Levi Brooke Sent Fri Mar 22, 2024 at 11:12 am Is the FP contractor to supply the Vesda System		ng as noted in FP	notes?								
	A:	Levi Bauer (CORE Construction - Peoria) Respo VESDA system complete including any necessary	ary sample piping shall be pro	vided by fire alarn		, -							
	<b>A</b> :	Mechanical bid package to provide all backend  Amanda Springer (Klingner & Associates, P.C) f  CLARIFY: Duct Detectors and VESDA system ar  assignment is the responsibility of the Constru	Responded Fri Mar 29, 2024 at e part of the fire alarm system	: 10:35 am CDT n. They are require	ed to be installed	. The engineer belie			/installed by the fi	re protection/fire a	alarm subcontractor. Scope	:	-
19	Precas	t Panel Finish	Closed	None	Springer, Amanda	03/25/2024	Levi Bauer	03/30/2024	04/07/24				_
	Q:	Levi Brooke Sent Fri Mar 22, 2024 at 09:20 am There are multiple walls called out with a sandl This is an untypical detail as both sides will still	blast finish on both sides of th		m faces).								
		Is it the architect's intent for both sides to look	exactly the same?										
		Will we be the exposed final finish on the interi											_
	A:	Amanda Springer (Klingner & Associates, P.C) F See Architect response for RFI 68	Responded Fri Mar 29, 2024 at	: 10:37 am CDT									
					Springer,								

The FFD is the only fixture that is specified with an electronic valve that would be compatible with the Water Management system (CVC's).



A: Amanda Springer (Klingner & Associates, P.C) Responded Fri Mar 29, 2024 at 10:38 am CDT

#	Subje	ect	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impac
		Is a water management system required for	Cu-1,2,3, SV-2 and SV-3 and FFC?											
	A:	Amanda Springer (Klingner & Associates, P.C Answered in Addendum 4	) Responded Mon Apr 8, 2024 at (	07:32 am CDT										-
37	C8 Fla	ange	Closed	None	Springer, Amanda	03/25/2024	Levi Bauer	03/30/2024	04/07/24					_
	Q:	Levi Brooke Sent Fri Mar 22, 2024 at 09:15 at Also in detail 7/S401 at the bottom of the det (see sketch I drew below detail 7) as long as unless C8 can be put attached into a form with WSS Scan_20240321_172004.pdf	ail it shows that the underside of the deck is to extend 'into' the C8											
	A:	Levi Bauer (CORE Construction - Peoria) Resp Pick proof caulking to be provided by Genera		pm CDT										
	A:	Amanda Springer (Klingner & Associates, P.C CLARIFY: The metal deck may bear on the bo 7 1/2" thick. (ADD 3)			ed flush to the en	d of the C8 flange v	vith pick proo	f caulking. At th	ne slab edge at the	C8 the total thickr	ess of the sl	ab on metal d	eck may be	
86	HSS Fr	raming	Closed	None	Bauer, Levi (CORE	03/25/2024	Levi Bauer	03/30/2024	04/07/24					_
	Q:	Levi Brooke Sent Fri Mar 22, 2024 at 09:14 at Steel HSS 2 X 2 framing is shown on detail 7, the detention equipment scope ? WSS Scan_20240321_172004.pdf		itional 3/4" X 3/4	4" vert bars betw	een the HSS 2 X 2 I	assume that	we would need	to include the 3/4"	bars but just want	to confirm t	hat they are n	ot part of	
	A:	Levi Bauer (CORE Construction - Peoria) Resp Confirmed, steel provide via general trades l	-		components sho	wn on S401/7 and <i>F</i>	A530/A10.							_
85	Rail Be	ends	Closed	None	Springer, Amanda	03/25/2024	Levi Bauer	03/30/2024	04/07/24					_
	Q:	Levi Brooke Sent Fri Mar 22, 2024 at 09:12 at On A5/A530 the detail for the front of the bert tread except it will not be vertical?  The return bend seems to me to leave sort ows Scan_20240321_184427.pdf	nt checker PL tread shows a return			-				ated so that front	of nosing wil	l be similar to	back of	
	A:	Amanda Springer (Klingner & Associates, P.C CLARIFY: Stair tread to be built as detailed in			(ADD 3)									-
84	Rails		Closed	None	Springer, Amanda	03/25/2024	Levi Bauer	03/30/2024	04/07/24					_
	Q:	Levi Brooke Sent Fri Mar 22, 2024 at 09:11 a Rails shown on A400 & A431 show the typica confirm that we should figure a 2 line rail w/ WSS Scan 20240321 184427.pdf	ll 2 line rail with pickets between I				ctly to the str	inger (I highligh	nted in yellow where	e the missing botto	om HSS 2 X 2	2 would go) Ple	ease	
														_



#	Subje	ct	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
		CLARIFY: Build stair railing as detailed in A5 and	A7/A530 and structural details 1	, 3 and 4/S401	. No secondary 2x	<2 tube steel. The	larger details	supersede the o	verall building sec	tions. (ADD 3)				
83	Aspha	lt Mix Design	Closed	None	Springer, Amanda	03/25/2024	Levi Bauer	03/30/2024	04/07/24					_
	Q:	Levi Brooke Sent Fri Mar 22, 2024 at 09:08 am Cl I've attached the details. Will this mix be accepta N70 Mix Design.pdf												
	A:	Amanda Springer (Klingner & Associates, P.C) Re Clarify: N70 mix design is NOT an acceptable sub												
82	Interio	or Bollards	Closed	None	Bauer, Levi (CORE	03/25/2024	Levi Bauer	03/30/2024	03/25/24					_
	Q:	Levi Brooke Sent Fri Mar 22, 2024 at 09:04 am Cl I found a detail for interior bollards per A8/A531 WSS Scan_20240321_182514.pdf		nterior bollards	yet									
	A:	Levi Bauer (CORE Construction - Peoria) Respond Refer to A131 keynote 9 and A131 A7 keynote 9. These appear to be located at the inmate showe												
81	Bollard	d Responsibility	Closed	None	Bauer, Levi (CORE	03/25/2024	Levi Bauer	03/30/2024	04/07/24					_
	Q:	Levi Brooke Sent Fri Mar 22, 2024 at 09:02 am Cl Per scope we are to include bollards But per Civil plans C112 & C110 they are a buy o Please confirm that the 'bollards' would then just WSS Scan_20240321_182514.pdf	ut item from Chem Tube (see att	ached) I think	made of plastic ?									
	A:	Levi Bauer (CORE Construction - Peoria) Respond Bollards to be furnished and installed by site con Bid packages will be revised.		CDT										
80	Contro	ols for RTUs	Closed	None	Springer, Amanda	03/21/2024	Levi Bauer	03/26/2024	04/07/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 03:08 pm C I have the following RFI question pertaining to th												
		RTU's 1,2,3,& ERV1 are specified to have packag	ed controls. Since these are part	of the smoke	control sequence	will these control	lers be UL-86	4 listed for code o	ompliance?					
	A:	Amanda Springer (Klingner & Associates, P.C) Re CLARIFY: RTU's 1,2,3,& ERV1 are specified to have			art of the smoke	control sequence,	these contro	llers shall be UL-8	864 listed for code	compliance. (ADI	O 3)			
79	Precas	st Questions	Closed	None	Springer, Amanda	03/21/2024	Levi Bauer	03/26/2024	04/07/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 01:32 pm C Specification 03-4500 Precast units General	DT											



#	Subje	ect	Status	Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
		Section 2.2 - B This section references the PCI Color and Texture There is not a plate number listed. Concrete Materials Section 2.8 - C Reference is made to a sample in office of Archite Is this sample available for viewing? Is there a mix design available? Who made this sample? Form Liners Reference is made to form liner Drawings show exterior finish imparted by form II Is there a specific manufacturer and a model num	ect. ner.	match sample indicate	ed.										
	A:	Levi Bauer (CORE Construction - Peoria) Respond Refer to RFI responses 69, 64, and 14	ed Sun Aր	or 7, 2024 at 01:24 pm	CDT										
	A:	Amanda Springer (Klingner & Associates, P.C) Res ADD: Sheet A444 Precast Concrete Panel Patterns				ards nailed down i	n the form bed. (A	ADD 3)							-
78	Precas	st Hauling Permit	Closed		None	Bauer, Levi (CORE	03/21/2024	Levi Bauer	03/26/2024	04/08/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 01:28 pm CI Precast SCOPE OF WORK Item E We are to include all hauling permits Access to construction site for delivery of precast	panels w												
	<b>A</b> :	Is this a city street or a county road and are there  Levi Bauer (CORE Construction - Peoria) Respond The west portion of 950th rd is a county road whe Per direction from the county, the county does no	ed Mon A ere the de	or 8, 2024 at 08:44 an liveries would be comi	n CDT ing in	state permits. All I	oid packages shall	l include all n	ecessary permitti	ng and associated	l fees.				-
77	drywa	ll grid in lieu of stud framing for drywall ceilings.	Closed		None	Springer, Amanda	03/21/2024	Levi Bauer	03/26/2024	04/07/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 01:08 pm CI Is it acceptable to request the use of drywall grid		f stud framing for all (	GB ceiling syste	ems where applica	ably noted on the	RCP (A200)?	Bulkheads would	remain stud frami	ng as detailed				
	A:	Amanda Springer (Klingner & Associates, P.C) Res REVISE: Gypsum board ceiling systems can use a bulkheads and soffits shall be stud framed as sho	rid in place of stud fra	oplicably noted ar	nd detailed. The re	flected ceilin	g plan details on :	sheet A200 will re	main unchanged f	to show inte	nt/basis of des	ign. All	_		
76	Payme	ent for stored materials	Closed		None	Bauer, Levi (CORE	03/21/2024	Levi Bauer	03/26/2024	04/07/24					
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:47 pm CI 1.6 - Please confirm payment for Stored Materials													
	A:	Levi Bauer (CORE Construction - Peoria) Respond Confirmed provided they are billed in accordance All trade packages shall coordinate with the CM fo	with 01 2	1900 - payment proced	dures.	oidance of unnec	essary stored mat	erial charges	i.						-



#	Subject	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impa
75	Liquidated Damages	Closed	None	Bauer, Levi (CORE	03/21/2024	Levi Bauer	03/26/2024	04/07/24					
	Levi Bauer Sent Thu Mar 21, 2024 at 12:47 pm  Q: Standard Subcontract Agreement references in there any and what they may be or if there is a	Liquidated Damages, but make	s not mention if										
	A: Levi Bauer (CORE Construction - Peoria) Respo			ole,									
74	Precast panel finish	Closed	None	Springer, Amanda	03/21/2024	Levi Bauer	03/26/2024	04/07/24					
	<ul> <li>Levi Bauer Sent Thu Mar 21, 2024 at 12:46 pn A440 refers to several different types of panel architectural sandblast finish (F-1) on BOTH si manufacturer's means and methods, this requindustry, especially if the interior is painted pewythe) is typically different than the back mix actual finishes between the exterior and intertypical for the interior finish. Please advise the</li> </ul>	Is, the majority of which are ind ides of the panel. Without gettir uest is extremely costly and not er Note 4 on A440-A442. The fact (interior wythe), which will restirior wythes. A smooth-trowel fin	ng into each common to the ce mix (exterior ult in 2 different ish (F-2 or F-3) is										
	Amanda Springer (Klingner & Associates, P.C) REVISE: The Precast Finish Legend shall be revisandblast. The interior side will have a smooth other side. The surface finishes of the two sides	vised as follows. All precast pan h steel trowel finish. All precast	els on the exterio panels located wi	ithin the building .DD 3)									
3	Precast Bid Package Questions	Closed	None	Bauer, Levi (CORE	03/21/2024	Levi Bauer	03/26/2024	04/17/24					
	Levi Bauer Sent Thu Mar 21, 2024 at 12:45 pm • 5i.) This item refers to including all of these all of these items with these trades? We feel the sp.) How many electrical conduit, boxes, fixinclude? • 5r.) How many embedded items are there to 5x.) How many additional months of brace mincluded with the bid? • 5nn.) With the Site Logistics showing crane what additional crane pads will be needed? Wallowed inside the footprint to erect the "commoffice?	items, but are we to include the hose words are missing from the tures and devices is the precast on the installed by the precast suppendid the suppendid the suppendid the suppendid the precast particles and truck pathway around the fill there be access provided by	e request. t supplier to  pplier? onth is to be  entire building, others and	,									
	A: Levi Bauer (CORE Construction - Peoria) Responsible 5p.) Refer to RFI 70. all subcontractors shall p												
	Levi Bauer (CORE Construction - Peoria) Respo	onded Mon Apr 8, 2024 at 08:21	L am CDT										
	<b>A:</b> 5nn.) Access into the footprint of the building additional crane pads.		rior precast pane	ls. Access points	are shown on the si	te logistics p	ian. The precast	bidder will be resp	ponsible for provid	ling, installir	ig, and remov	ing any	



#	Subje	ct		Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
		5x.) Refer to schedule (00 31 13a) included with steel. 5nn.) CORE is reviewing this	addendum	1 for sequencing and	d activity dura	tions. Temporary	bracing is required	until permar	nent connections	/support are comp	leted including co	ompletion of	erection struc	tural	-
72	Securit	ty Electronics Responsibility	Closed		None	Bauer, Levi (CORE	03/21/2024	Levi Bauer	03/26/2024	04/17/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:37 pm C Section 011200, Letter L, #5, letter "a" states th feeders, site lighting, lighting controls, wire mold of all security electronics system equipment?	at (the elect												
	A:	Levi Bauer (CORE Construction - Peoria) Respond Security electronics will be provided under the de				dated in addendı	um to clarify what r	ough-in is rec	uired by the elec	trical bid package					_
71	Fire ala	arm responsibility	Closed		None	Bauer, Levi (CORE	03/21/2024	Levi Bauer	03/26/2024	04/07/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:36 pm C Section 011200, Letter L, #2, letter "v" lists that "provide a complete fire alarm system" Whic	the Division		o include secti	ion 284600 (Fire I	Detection and Alarr	n), but 01120	00, Letter P, #5, I	etter "f" states tha	t the Electrical co	intractor (Bi	d Package 15)	is to	
	A:	Levi Bauer (CORE Construction - Peoria) Respond All fire alarm work shall be provided by the electr Bid packages shall be corrected.		•	n CDT										
70	Condu	it/Blocking in Precast	Closed		None	Springer, Amanda Bauer, Levi (CORE	03/21/2024	Levi Bauer	03/26/2024	04/08/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:30 pm C [question from precast bidder] Are the electrical NOTE: Electrician will need to be at our plant durbe properly marked and delivered to the our plant E12/A800 and similar. Cast-in wood blocking.	connections ring product st, prior to s	ion to assist in elect tart of production.	ric connection	location, but El	ectricians will not b	e allowed on	our production b	eds, for Liability re	easons. All cast-in				
	A:	Levi Bauer (CORE Construction - Peoria) Respond The electrical bid package shall include furnishi components via other precast providers. If the precast provider takes exception to the ele The electrical bid package shall note all electrica The electrical bid package shall have all cast-in e assemble them at the plant at their option. The electrical bid package shall ensure all electri The electrical bid package shall include 5% extra The electrical bid package shall be at the precast All electrical materials shall be delivered to the p	led Mon Apr ng all cast-i ctrician beir I boxes on t lectrical fix cal boxes al material or plant durin	8, 2024 at 11:06 an n electrical compon- ng on their production the precast shop dra- tures prepared in ad re completely duct to n hand in during pro- ng production of the	on CDT ents and instal on beds, a cred wings. Ivance before p aped and mark duction in the panels to inspe	llation at the predict will be request panel production ked on the tape eevent that during ect them and ma	cast providers planded from the electrical bid each piece# that the greating some charke sure that the electrical bid the greating some charke sure that the electrical bid the electrical bid some charke sure that the electrical bid	al bid package can be go into a go i	t been an issue for ge and an add pr put the fixtures t be made to avoid	or any precast pro ovided to the prec ogether in their sh	ect CORE has pro ast provider prior op and bring then	to the comn	nencement of	work.	
		Precast bid package shall furnish and install all ca													



	Subje	ect	Status Res Con	ponsible Receiv tractor From	ed Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
	A:	Amanda Springer (Klingner & Associates, P.C) F CLARIFY: The electrical rough-in's shall be cast Panel manufacturer shall coordinate with the e	in the precast par	nels, particularly for items		ne building and in th	e jail area. Ite	ms in the mech	anical/electrical uti	lity spaces may b	e surface mo	ounted. The P	recast	_
69	Form L	Liner Spec	Closed	None	Springer, Amanda	03/21/2024	Levi Bauer	03/26/2024	04/07/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:29 pm Is there a spec for the type of form liner on the		I did not see one.										
	A:	Levi Bauer (CORE Construction - Peoria) Respo precast bid package shall provide all framing, b Bid packages to be revised to this affect		•	panel patterns.									_
	A:	Amanda Springer (Klingner & Associates, P.C) F ADD: Sheet A444 Precast Concrete Panel Patte				n in the form bed (A	DD 3)							_
68	Precas	st finish for exterior precast panels	Closed	None	Springer, Amanda	03/21/2024	Levi Bauer	03/26/2024	04/07/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:28 pm F6/A440. Steel trowel finish on both sides. Par		ive steel form finish and p	anel Interior will hav	e Steel trowel finish	. We cannot s	teel trowel the	down side (Exterio	r), as we have to r	oour it on son	nething.		
				•						,, ac				
	A:	Amanda Springer (Klingner & Associates, P.C) F REVISE: All precast panels on the exterior of th REVISE: The panels located entirely within the finish (F-2 as Defined in the Precast Flnish Lege create a smooth surface free of pitting.	Responded Fri Mar e building shall th building interior w	r 29, 2024 at 10:58 am CD le following surface finishe vill have a light sandblast	T s. The exterior side inish (F-1 as defined	of the precast pane d in the Precast Finis	will have a st h Legend/A44	eel form finish v	with a light sandbla The other side of ir	st (F-1 as defined	in the Preca	ve a smooth s	teel trowel	_
	A:	REVISE: All precast panels on the exterior of the REVISE: The panels located entirely within the finish (F-2 as Defined in the Precast Flnish Lege	Responded Fri Mar e building shall th building interior w	r 29, 2024 at 10:58 am CD le following surface finishe vill have a light sandblast	T s. The exterior side inish (F-1 as defined	of the precast pane d in the Precast Finis	will have a st h Legend/A44	eel form finish v	with a light sandbla The other side of ir	st (F-1 as defined	in the Preca	ve a smooth s	teel trowel	_
	A:	REVISE: All precast panels on the exterior of the REVISE: The panels located entirely within the finish (F-2 as Defined in the Precast Finish Lege create a smooth surface free of pitting.	Responded Fri Mar e building shall th building interior w end/A440) on the Responded Fri Mar et A101. For Partit	r 29, 2024 at 10:58 am CD re following surface finishe vill have a light sandblast other side. ADD: All preca: r 29, 2024 at 10:43 am CD tion Types, refer to sheet 0	T s. The exterior side inish (F-1 as defined it panel surfaces wit T i130. The exterior p	of the precast pane d in the Precast Finis thin the detention ar recast panels are 12	will have a st h Legend/A44 eas and areas	eel form finish v 0) on one side. where inmates	with a light sandbla The other side of ir s have access shall ation. The precast p	st (F-1 as defined iterior precast pai have all holes and banels located ent	l in the Preca nels shall hav d voids large	ve a smooth s r than 1/8" fill the building h	teel trowel led solid to	_
67	<b>A</b> :	REVISE: All precast panels on the exterior of the REVISE: The panels located entirely within the finish (F-2 as Defined in the Precast Flnish Lege create a smooth surface free of pitting.  Original Response is for RFI 66.  Amanda Springer (Klingner & Associates, P.C) FCLARIFY: The partition designations are on sheep	Responded Fri Mar e building shall th building interior w end/A440) on the Responded Fri Mar et A101. For Partit	r 29, 2024 at 10:58 am CD re following surface finishe vill have a light sandblast other side. ADD: All preca: r 29, 2024 at 10:43 am CD tion Types, refer to sheet 0	T s. The exterior side inish (F-1 as defined it panel surfaces wit T i130. The exterior p	of the precast pane d in the Precast Finis thin the detention ar recast panels are 12	will have a st h Legend/A44 eas and areas " thick with co rcise Room. D	eel form finish v 0) on one side. where inmates	with a light sandbla The other side of ir s have access shall ation. The precast p	st (F-1 as defined iterior precast pai have all holes and banels located ent	l in the Preca nels shall hav d voids large	ve a smooth s r than 1/8" fill the building h	teel trowel led solid to	_
67	<b>A</b> :	REVISE: All precast panels on the exterior of the REVISE: The panels located entirely within the finish (F-2 as Defined in the Precast Flnish Lege create a smooth surface free of pitting.  Original Response is for RFI 66.  Amanda Springer (Klingner & Associates, P.C) F CLARIFY: The partition designations are on she solid 8" thickness (Partition Type P8) and 10" the	Responded Fri Mar e building shall th building interior wend/A440) on the control Responded Fri Mar et A101. For Partit nickness with cont	r 29, 2024 at 10:58 am CD ie following surface finishe will have a light sandblast other side. ADD: All precase r 29, 2024 at 10:43 am CD tion Types, refer to sheet 0 tinuus insulation (Partition	T s. The exterior side inish (F-1 as defined it panel surfaces with T sil30. The exterior p Type P10). P10 is for Springer, Amanda Bauer, Levi (CORE	of the precast paned in the Precast Finish thin the detention and recast panels are 12 und around the Exe	will have a st h Legend/A44 eas and areas " thick with co rcise Room. D	eel form finish v 0) on one side. where inmates ontinuous insula etails D4 and F4 03/26/2024	with a light sandbla The other side of ir s have access shall ation. The precast p 1/A850 have been u	ost (F-1 as defined iterior precast par have all holes and panels located ent updated with revis Bauer, Levi (CORE	l in the Preca: nels shall hav d voids large tirely within t sed notes. (A	ve a smooth s r than 1/8" fill the building h DD 3)	ave either a	_
67	A: Pick Pr	REVISE: All precast panels on the exterior of the REVISE: The panels located entirely within the finish (F-2 as Defined in the Precast Flnish Lege create a smooth surface free of pitting.  Original Response is for RFI 66.  Amanda Springer (Klingner & Associates, P.C) F CLARIFY: The partition designations are on she solid 8" thickness (Partition Type P8) and 10" the coof Caulk  Levi Bauer Sent Thu Mar 21, 2024 at 12:26 pm Precast Panel Type P8 and P10 on G130 calls for	Responded Fri Mar e building shall th building interior w end/A440) on the of Responded Fri Mar et A101. For Partit nickness with cont  Open  CDT or "Pick Proof Caul nded Fri Apr 19, 2	r 29, 2024 at 10:58 am CD ie following surface finishe will have a light sandblast other side. ADD: All precase r 29, 2024 at 10:43 am CD tion Types, refer to sheet of tinuus insulation (Partition  None	T s. The exterior side inish (F-1 as defined it panel surfaces with T sil30. The exterior p Type P10). P10 is for Springer, Amanda Bauer, Levi (CORE	of the precast paned in the Precast Finish thin the detention and recast panels are 12 und around the Exe	will have a st h Legend/A44 eas and areas " thick with co rcise Room. D	eel form finish v 0) on one side. where inmates ontinuous insula etails D4 and F4 03/26/2024	with a light sandbla The other side of ir s have access shall ation. The precast p 1/A850 have been u	ost (F-1 as defined iterior precast par have all holes and panels located ent updated with revis Bauer, Levi (CORE	l in the Preca: nels shall hav d voids large tirely within t sed notes. (A	ve a smooth s r than 1/8" fill the building h DD 3)	ave either a	_
67	A: Pick Pr	REVISE: All precast panels on the exterior of the REVISE: The panels located entirely within the finish (F-2 as Defined in the Precast Flnish Lege create a smooth surface free of pitting.  Original Response is for RFI 66.  Amanda Springer (Klingner & Associates, P.C) F CLARIFY: The partition designations are on she solid 8" thickness (Partition Type P8) and 10" the proof Caulk  Levi Bauer Sent Thu Mar 21, 2024 at 12:26 pm Precast Panel Type P8 and P10 on G130 calls for NS.  Levi Bauer (CORE Construction - Peoria) Response	Responded Fri Mar e building shall th building interior w end/A440) on the e Responded Fri Mar et A101. For Partit nickness with cont  Open  CDT or "Pick Proof Caul nded Fri Apr 19, 2 acceptable nded Thu Mar 21,	r 29, 2024 at 10:58 am CD ie following surface finishe will have a light sandblast other side. ADD: All precase r 29, 2024 at 10:43 am CD tion Types, refer to sheet 0 tinuus insulation (Partition  None  Ik" on Inmate side at top of 024 at 09:44 am CDT	T s. The exterior side inish (F-1 as defined it panel surfaces with the panel surfaces with side of the surfaces with side	of the precast panel in the Precast Finish thin the detention are recast panels are 12 und around the Exe 03/21/2024	will have a st h Legend/A44 eas and areas " thick with co rcise Room. D Levi Bauer	eel form finish v 0) on one side. where inmates ontinuous insula etails D4 and F4 03/26/2024	with a light sandbla The other side of ir s have access shall ation. The precast p 1/A850 have been to	ost (F-1 as defined iterior precast par have all holes and panels located ent updated with revis Bauer, Levi (CORE	l in the Preca: nels shall hav d voids large tirely within t sed notes. (A	ve a smooth s r than 1/8" fill the building h DD 3)	ave either a	_



detectors or duct smoke detectors associated with the dampers on FP-101. Question: Are duct smoke detectors to be located within 5'-0" of all

#	Subje	ect	Status	Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:25 p Drawings show 8" solid Interior walls, 10" in		r walls, and 12" ins	ulated exterior w	valls. Is that corr	ect? D4/A850 looks	like a 10" so	lid panel.						
	A:	Levi Bauer (CORE Construction - Peoria) Res Refer to Addendum 3	sponded Thu Ap	or 4, 2024 at 04:47	om CDT										
	A:	Amanda Springer (Klingner & Associates, P.C CLARIFY: The partition designations are on s solid 8" thickness (Partition Type P8) and 10	sheet A101. For	Partition Types, ref	er to sheet G130								the building ha	ive either a	
65	Precas	st Continious Insulation	Closed		None	Springer, Amanda	03/21/2024	Levi Bauer	03/26/2024	04/04/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:24 p [regarding precast] Continuous insulation.		ould provide 6" solic	l at top and bott	om of panel and	around all openings	. Is that acce	eptable or do we	need to price in th	e continuous insu	lation?			
	A:	Amanda Springer (Klingner & Associates, P. CLARIFY: The precast concrete panel manuf				cast walls as det	ailed in wall section:	s and to follo	w the 2018 ener	rgy code. (ADD 3)					
54	Precas	st Mockup/sample	Closed		None	Springer, Amanda	03/21/2024	Levi Bauer	03/26/2024	04/17/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:22 precast Spec asks for (2) 4'-0" x 4'-0" sampl		" x 5'-0" mock-ups,	and disposal of	all four when the	e job is complete. D	o you require	both samples a	ind mockups?					
	A:	Amanda Springer (Klingner & Associates, P.o. Answered in Addendum 4	C) Responded I	Mon Apr 8, 2024 at (	)7:38 am CDT										
63	Precas	st embed material	Closed		None	Springer, Amanda	03/21/2024	Levi Bauer	03/26/2024	04/04/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:22 places in the precast spec and on the di		fer to both stainless	s steel embeds a	ınd galvanized e	mbeds. Which one i	s required?							
	A:	Amanda Springer (Klingner & Associates, P. REVISE: All precast embeds shown in details													
62	precas	st interior panel finish	Closed		None	Springer, Amanda	03/21/2024	Levi Bauer	03/26/2024	04/04/24					_
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:21 places that show some of the Interior pi		vill be sandblast fini	sh on both sides	. We can do this	, but they will not lo	ok the same,	as one side is fo	orm finish and one s	side is trowel finish	n. Is this req	uired?		
	A:	Amanda Springer (Klingner & Associates, P.o See response to RFI 68	C) Responded F	Fri Mar 29, 2024 at 1	.0:42 am CDT										
61	Fire/Sr	moke Dampers	Closed		None	Springer, Amanda	03/21/2024	Levi Bauer	03/26/2024	04/04/24					-
	Q:	Levi Bauer Sent Thu Mar 21, 2024 at 12:15 p Situation: Sheets M101.A & M101.B show ap dampers and (12) smoke despers in Area A	oproximately (2	e any area smoke											_



#	Subje	ct	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
		fire-smoke and smoke dampers?												
	A:	Levi Bauer (CORE Construction - Peoria) Resp VESDA system complete including any neces	•		n vendor via elec	trical bid package.								
		Mechanical bid package to provide all backer	nds/adapters as necessary to tie-i	n dampers to sy	stem if required.									
		Amanda Springer (Klingner & Associates, P.C. CLARIFY: In Area A & B, the fire-smoke dampe			DA activated sm	oke control system	and do not re	equire smoke de	tectors or duct smo	ke detectors asso	ciated with	these dampers	i.	_
	A:	CLARIFY: Areas of the building where the VES serve.	DA activated smoke control syste	em is not samplir	ng, the contracto	r shall provide area	smoke dete	ctors and duct s	moke detectors to b	e utilized and loc	ated within	5' of the dampe	ers they	
		ADD 3												
60	Downs	spout Boot Detail	Closed	None	Springer, Amanda	03/20/2024	Levi Bauer	03/25/2024	04/04/24					_
	Q:	Levi Bauer Sent Wed Mar 20, 2024 at 05:29 p Can you provide a downspout boot detail? Th		A430/A4 but the	ere's no enlarged	detail for the boot	connection.							_
	A:	Levi Bauer (CORE Construction - Peoria) Resp The civil bid package shall provide the cast in	•		o to it.									
		The roofing bid package shall provide downsp	oouts and connect to the downsp	out boot.										
	A:	Amanda Springer (Klingner & Associates, P.C. ADD: See clouded Revision #3 in Addendum			ails. (ADD 3)									
59	Sallypo	ort pedestal mounting	Closed	None	Springer, Amanda	03/20/2024	Levi Bauer	03/25/2024	04/04/24					
	Q:	Levi Bauer Sent Wed Mar 20, 2024 at 04:31 p Can you clarify what the mounting detail for t		e sallyports is? <i>F</i>	Are these just bo	ted to the sidewalk	or do they re	equire a concrete	e foundation?					
	A:	Levi Bauer (CORE Construction - Peoria) Resp Site concrete bid package to provide pedesta Detention Equipment package shall provide a	l foundation.	om CDT										
	A:	Amanda Springer (Klingner & Associates, P.C. ADD: Detail #9, pedestal detail for the access			3)									_
58	Power	to Access Control Pedestals	Closed	None	Springer, Amanda	03/20/2024	Levi Bauer	03/25/2024	04/04/24					_
	Q:	Levi Bauer Sent Wed Mar 20, 2024 at 04:27 p Can you confirm power is required to the acc No power appears to be noted on the electric	ess control pedestals at the sally	ports?										
	A:	Amanda Springer (Klingner & Associates, P.C. CLARIFY: The access control pedestals at the			r feed. The powe	r for the camera co	mes through	the Cat 5/6 cabl	e. The intercom do	es not need powe	r. (ADD 3)			
57	Concre	ete foundation for do not enter site signage	Closed	None	Springer, Amanda	03/20/2024	Levi Bauer	03/25/2024	04/04/24					_



#	Subje	ect	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impac
	Q:	Levi Bauer Sent Wed Mar 20, 2024 at 04:24 pm Is a concrete foundation or bollard required for t		ote 19 on C110 or i	s the post directl	y buried?								
	A:	Amanda Springer (Klingner & Associates, P.C) Re CLARIFY: Signs denoted by keynote 19 on C110 not be required. (ADD 3)			f the IDOT Stand	ard Specifications f	or Road & Bri	dge Constructio	n and driven to a d	epth of 4.0'. A cor	ncrete found	ation and/or b	ollard will	
56	Tempo	orary Partitions	Closed	None	Springer, Amanda	03/20/2024	Levi Bauer	03/25/2024	04/04/24					
	Q:	Levi Bauer Sent Wed Mar 20, 2024 at 10:41 am Can you confirm G130 partition Type T rated and		or this project?										
	A:	Amanda Springer (Klingner & Associates, P.C) Re REVISE: On sheet G130, Temporary partitions, T			project (ADD 3)									
55	Substi	itution Request - Elite Storage Products - Lockers	Closed	None	Springer, Amanda	03/19/2024	Levi Bauer	03/24/2024	04/04/24					
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 03:33 pm Please see attached substitution request form s Substitution Request - Elite Storage Products - L	ubmitted on behalf of Elite S	Storage Products										
	A:	Amanda Springer (Klingner & Associates, P.C) Re ADD 2 approved	esponded Fri Mar 29, 2024 a	at 10:53 am CDT										
	A:	Amanda Springer (Klingner & Associates, P.C) Re ADD: Elite Storage Products is an Architect appr												
54		ndum 1, page 7, paragraph 2.21 Design sional Compensation	Closed	None	Bauer, Levi (CORE	03/19/2024	Levi Bauer	03/24/2024	04/04/24					_
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 02:26 pm In addendum 1, page 7, paragraph 2.21 Design the sub-contractor or contractor?		n. Can you commen	t more on this la	nguage and when y	ou think RFI'	s, submitalls, an	d inspections are c	considered to be "	multiple" or	costs charged	l back to	
		Levi Bauer (CORE Construction - Peoria) Respon It appears this question is in regard to the samp	-	•	e 17 of the adde	ndum 10								_
	A:	CORE assumes a basic level of competency and documents for pertinent information prior to sul								assumed that (su	b)contractor	s will review t	he contract	:
		CORE's intent is to provide support and training Willful negligence or the unwilful inability to cor				ned at the sole disc	retion of the	Construction Ma	nager.					
53	Water	/Sewer Permits	Closed	None	Bauer, Levi (CORE	03/19/2024	Levi Bauer	03/24/2024	04/17/24					_
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 02:25 pm What permits or tap fees are required for Edgar		er, Water and Storr	n Drainage ?									
	A:	Levi Bauer (CORE Construction - Peoria) Respon Tap fee allowance to be moved to civil bid packa		):19 am CDT										



#	Subje	ect	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
	A:	Levi Bauer (CORE Construction - Peoria) Respon Per direction from the city of Paris, sanitary, wat			city crews and th	ney charge charge T	-&M							-
	Α.	An allowance will be added to the general trade Civil bid package bidders shall provide all other			authorities havir	ng jurisdiction.								
52	Groun	d Water	Closed	None	Bauer, Levi (CORE	03/19/2024	Levi Bauer	03/24/2024	04/04/24					
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 02:23 pm In the Geotech report there are discussions rego On 6.0, Ground water observations, there is son Do you think the geotech directs us to provide r	arding ground water. ne language that dewaterin				ally we includ	le simple sump p	oumps to pump out	rain water from e	excavations.			
	A:	Levi Bauer (CORE Construction - Peoria) Respon Well points and underground pumping will not be												
51	As Bui	ilt Requirements	Closed	None	Bauer, Levi (CORE	03/19/2024	Levi Bauer	03/24/2024	04/04/24					_
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 02:21 pm Regarding the weekly and monthly requirement		his just be a had wr	ritten notes on si	te drawings or do yo	ou want more	e ?						
	A:	Levi Bauer (CORE Construction - Peoria) Respon Refer to section 01 78 39 Project Record Docum		9 pm CDT										
50	Bid Ex	ttension	Closed	None	Bauer, Levi (CORE	03/19/2024	Levi Bauer	03/24/2024	04/04/24					_
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 02:19 pm CEI has requested a bid extension from 4/2 to 4,		nd before and most	of our estimator	rs will be gone for th	ie holiday. Pl	ease advise if th	is extension is app	roved.				
	A:	Levi Bauer (CORE Construction - Peoria) Respon Bid date was moved to 4/9 via addendum 3.	ded Thu Apr 4, 2024 at 03:0	04 pm CDT										
49	Plantir	ng Soil location	Closed	None	Springer, Amanda	03/19/2024	Levi Bauer	03/24/2024	04/04/24					_
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 02:15 pm I'm guessing the planting soil is only that around		correct ?										
	A:	Levi Bauer (CORE Construction - Peoria) Responsee RFI 48 response	ded Thu Apr 4, 2024 at 03:0	)2 pm CDT										-
	A:	Amanda Springer (Klingner & Associates, P.C) R ADD 2	esponded Fri Mar 29, 2024 a	at 10:53 am CDT										-
	A:	Amanda Springer (Klingner & Associates, P.C) R CHANGE Details 1 &2/L501 planting soil mix not			nting Soil Mix on	plan sheet L001. AI	DD note "The	planting soil mi	x is only required a	round trees and s	hrubs." (ADI	DENDUM 2)		-
48	Plantir	ng soil requirements	Closed	None	Springer, Amanda	03/19/2024	Levi Bauer	03/24/2024	04/04/24					_
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 02:11 pm	CDT											



# Sı	ubje	ect	Status Responsib Contractor		Assignee	Date Initiated	l RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
		I noticed on the written specs for landscaping one would you like to use ?	there is a requirement for	planting soil. This is a	lso mentioned o	n the landscape de	tail pages Th	ne detail page a	nd the written spec	: page do not agre	e on the pea	t/topsoil ratio	o. Which	
	A:	Levi Bauer (CORE Construction - Peoria) Respo Landscaper via general trades bidder shall ov			xcess spoils									_
	A:	Amanda Springer (Klingner & Associates, P.C) ADD 2	Responded Fri Mar 29, 202	24 at 10:53 am CDT										
	A:	Amanda Springer (Klingner & Associates, P.C) CLARIFY: The planting soil mix shall be in acco			Soil Mix on plan s	sheet L001. (ADDEN	IDUM 2)							
47 Cc	oring	g excavation to install aggregate base at walkwa	ays. Closed	None	Bauer, Levi (CORE	03/19/2024	Levi Bauer	03/24/2024	04/04/24					
		Levi Brooke Sent Tue Mar 19, 2024 at 02:09 pr On scope item 22: Coring excavation to instal		vays.										
Q	):	I'm not sure what you mean here. I think we would just install the aggregate bas	se first, then the site concre	ete package would do t	the concrete wo	rk.								
		Not sure where the coring comes in ?												
	A:	loader and "core" those areas out. The civil pa The civil bid package is responsible for establi Provide all excavation necessary if lawn areas	ishing all subgrade elevati	ons and providing aggi	regate base for v	valks.	eas.							_
46 Di	visio	on 28 Spec	Closed	None	Amanda	03/19/2024	Levi Bauer	03/24/2024	04/04/24					
Q	):	Levi Brooke Sent Tue Mar 19, 2024 at 02:08 pr In downloading and reviewing the project. The		cifications for the Touch	nscreen Door Co	ntrol System, Came	eras, Video Ma	anagement Syst	em, etconly Fire	alarm.				
	A:	Amanda Springer (Klingner & Associates, P.C) ADD 2	Responded Fri Mar 29, 202	24 at 10:55 am CDT										
	A:	Amanda Springer (Klingner & Associates, P.C) See Addendum 2 for added sheets	Responded Thu Mar 21, 20	024 at 10:52 am CDT										
45 De	ewate	tering Treatment	Closed	None	Bauer, Levi (CORE	03/19/2024	Levi Bauer	03/24/2024	04/04/24					
Q	):	Levi Brooke Sent Tue Mar 19, 2024 at 02:04 pr When pumping water off site through an NOI p		ve to be clean or treate	d in any way ?									
	A:	Levi Bauer (CORE Construction - Peoria) Respo Dewatering activities must include appropriat Refer to page 6 of the attached for additional Permit ILR10.pdf	e controls as indicated in I											
44 Pr	otect	ting Graded Areas	Closed	None	Bauer, Levi	03/19/2024	Levi Bauer	03/24/2024	04/04/24					_



#	Subje	ect	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impa
					(CORE									
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 02:04 pm [regarding 312000 earthwork] 3.18 A & B - Protecting graded areas and recor AGAIN, how much of this should be Can all of this be included through a	structing language. expect ?	ded only ?										
	A:	Levi Bauer (CORE Construction - Peoria) Respon Refer to RFI response 44, Damage to graded areas outside the temporary	·		of the trade packa	age that incurred th	e damage.							
43	Dama	ged subgrade due to weather	Closed	None	Bauer, Levi (CORE	03/19/2024	Levi Bauer	03/24/2024	04/04/24					_
		Levi Brooke Sent Tue Mar 19, 2024 at 02:03 pm [regarding 312000 earthwork]	CDT											
	Q:	3.7 E. Reconstruct damaged subgrades caused How much and to what extent damage an		additional comp	ensation.									
	A:	Levi Bauer (CORE Construction - Peoria) Respon Repair to damage subgrades will be addressed v Temporary roads will be provided in most subgra	via the winter conditions and te	emporary road a		te logistics plan.								
42	Subgr	ade protection from damage	Closed	None	Bauer, Levi (CORE Springer, Amanda	03/19/2024	Levi Bauer	03/24/2024	04/04/24					_
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 02:02 pm [regarding 312000 earthwork] 3.2 C Protect sub		mining, washout	t and damage by	rain or water. How	do you do thi	is?						
	A:	Amanda Springer (Klingner & Associates, P.C) Re ADD 2	esponded Fri Mar 29, 2024 at 1	0:56 am CDT										
	A:	Amanda Springer (Klingner & Associates, P.C) Re CLARIFY: Subgrades shall be protected using BM (ADDENDUM 2)			ashout damage i	in the event of a rai	n event. Exca	avation shall be n	naintained so that	positive drainage	e is provided	at all times.		
41	Dewat	tering	Closed	None	Bauer, Levi (CORE Bauer, Levi (CORE	03/19/2024	Levi Bauer	03/24/2024	04/04/24					_
		Levi Brooke Sent Tue Mar 19, 2024 at 02:01 pm	CDT						ntractors. Can the	ana itama ha saya				
	Q:	[regarding 312000 earthwork] 3.2 Dewatering:	We have no idea how much ur	nderground dew	atering may be n	needed. This is a lar	rge expense	with specialty co	illiactors. Carrtine	ese items be cove	red by an all	owance as nee	eaea ?	
	Q:	[regarding 312000 earthwork] 3.2 Dewatering:  Levi Bauer (CORE Construction - Peoria) Respon Major dewatering such as well points will not be The civil bid package and all other bid packages	ded Thu Apr 4, 2024 at 02:42 p required upon review of the ge	om CDT eotechnical repo	ort.		rge expense	with specialty co	initaciois. Can the	ese items be cove	red by an all	owance as nee	eded ?	-



#	Subje	ct	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
					Amanda									
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 02:00 pm On 312000-3 3.1 C. Protect subgrades from fro		cres on this site.	Not feasible to d	o this really								
	A:	Levi Bauer (CORE Construction - Peoria) Respondents associated protecting the subgrade from			tions allowance ir	n the general trade	S.							
	A:	Amanda Springer (Klingner & Associates, P.C) F ADD 2	Responded Fri Mar 29, 2024 at 1	10:56 am CDT										
	A:	Amanda Springer (Klingner & Associates, P.C) F CLARIFY: For this item, subgrade preparation sh			cifications for Ro	ad & Bridge Constr	uction. (ADDI	ENDUM 2)						
39	Aspha	lt Pavement markings	Closed	None	Springer, Amanda	03/19/2024	Levi Bauer	03/24/2024	04/04/24					
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 01:58 pm Will the asphalt contractor need to provide the												
	A:	Levi Bauer (CORE Construction - Peoria) Responsive Pavement markings will be provided by the site			e bid package sc	ope of work item r.								
	A:	Amanda Springer (Klingner & Associates, P.C) F ADD 2	Responded Fri Mar 29, 2024 at 1	L0:55 am CDT										
	A:	Amanda Springer (Klingner & Associates, P.C) F CLARIFY: Either the parking lot pavement contr			ngs, or a paveme	nt marking subcont	tractor will ne	eed to be consult	ted. Coordinate bid	s with Constructio	n Manager.	(ADDENDUM 2	2)	
38	Type E	Medallion	Closed	None	Springer, Amanda	03/19/2024	Levi Bauer	03/24/2024	04/04/24					
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 01:49 pm Type E Medallion sign: our understanding is th with an etched OR painted detail for the letters	at the back panel is 48" diamet			•		•	o Lighting)					
	A:	Amanda Springer (Klingner & Associates, P.C) F CLARIFY: THe Type E Medallion sign has the foll detail for the letters and badge/rope); and a thi	owing pieces as shown in the d	etail. Back panel				nal panel of 3/8"	(or deeper as requ	iired for Halo Ligh	ing) with an	etched OR pa	inted	_
37	Type D	Lettering on A540	Closed	None	Springer, Amanda	03/19/2024	Levi Bauer	03/24/2024	04/04/24					_
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 01:47 pm Type D Lettering on A540: listed "quantity" is 2		f 2 locations as s	shown on A300 w	rill require 29 letter	s for a total o	f 58 letters this t	ype; please confirm	n 58 letters and N	OT 24.			
	A:	Amanda Springer (Klingner & Associates, P.C) F REVISE: Type D lettering is a total of 58 letters,	-		sign/A540 is revis	sed. (ADD 3)								_
36	G101	Tornado Safe Room Sign	Closed	None	Springer, Amanda	03/19/2024	Levi Bauer	03/24/2024	04/17/24					_
	Q:	Levi Brooke Sent Tue Mar 19, 2024 at 01:47 pm G101 Tornado Safe Room Signage: confirm typ		or ceiling mount	ing of S5; we pla	n to price these to I	match the oth	ner interior signs	s. – ¼" acrylic pane	ls, is that accepta	ble?			



,								Manager					Impact	Code	Impact
	A:	Amanda Springer (Klingner & Associates, P.C) Re Answered in Addendum 4	esponded M	lon Apr 8, 2024 at 07	:33 am CDT										
	A:	Levi Bauer (CORE Construction - Peoria) Respondible up question, Since the non-tornado signa				e signs are photo	polymer?								
	A:	Amanda Springer (Klingner & Associates, P.C) Re The Tornado Safe Room Signage shall be 1/4" ac				ther interior sign	ns shown on A540. T	he Tornado S	afe Room Signa	ge shall be mounte	d with foam vinyl	tape. (ADD	3)		
35 A0	010 M	onument Sign	Closed		None	Springer, Amanda Bauer, Levi (CORE	03/19/2024	Levi Bauer	03/24/2024	04/04/24					
Q	):	Levi Brooke Sent Tue Mar 19, 2024 at 01:45 pm of A010 Monument Sign, detail G4 has NO callouts		quire the medallion o	or letters as pa	rt of the 101400	? Or is this outside o	our scope?							
	A:	Levi Bauer (CORE Construction - Peoria) Respon- Signage as described below shall be provided by			n CDT										
,	A:	Amanda Springer (Klingner & Associates, P.C) Re ADD: All letters on the monument sign will be 1/ Type 'C' on sheet A540. The second row of letter grayscale toness, similiar to D5/A540. The meda (ADD 3)	2" thick alu s will be 4 i	minum cut letters wit nch high aluminum, s	th painted blac similar to Sign	Type 'B' on sheet	t A540. The seal sha	all be 1'-8" dia	ameter, 3/8" alur	ninum with etched	(or painted) Seal	of Edgar Co	unty in black a	and	
34 Do	oor 13	35B-1	Closed		None	Springer, Amanda	03/16/2024	Levi Bauer	03/21/2024	04/04/24					
Q	):	Levi Bauer Sent Sat Mar 16, 2024 at 11:13 am C in the hardware spec there is a set 40 that reads There is not a 135B-1 on the door schedule please confirm no opening 135B-1		r 135B-1											
-	A:	Amanda Springer (Klingner & Associates, P.C) Re ADD 2	esponded F	ri Mar 29, 2024 at 10:	:55 am CDT										_
	A:	Amanda Springer (Klingner & Associates, P.C) Re Reivsed: hardware spec section 08 7100 and sho				dum 02. (ADDEN	IDUM 2)								_
33 Do	oor 10	03 and 105A	Closed		None	Springer, Amanda	03/16/2024	Levi Bauer	03/19/2024	04/04/24					
Q	):	Levi Bauer Sent Sat Mar 16, 2024 at 11:11 am C Door schedule opening 103 reads FEMA but it's i		the storm shelter and	l opening 105A	A is not noted as	FEMA but it is part o	of the storm s	helter						
_		please confirm105A is FEMA and 103 is not													_
	A:	Amanda Springer (Klingner & Associates, P.C) Re ADD 2	esponded F	ri Mar 29, 2024 at 10:	:55 am CDT										_
	A:	Amanda Springer (Klingner & Associates, P.C) Re REVISE: Door 103 is not a FEMA rated door. REVI				UM 2)									
															_



#	Subje	ct	Status Respons Contract		Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
					Amanda					(CORE				
	Q:	Levi Bauer Sent Sat Mar 16, 2024 at 11:10 am CI Exterior openings with comment SS frame, shou have a SS door as well or just the frame?												
	A:	Levi Bauer (CORE Construction - Peoria) Respond for bidding purposes, assume stainless is a stray	•	at 09:43 am CDT										_
	A:	Levi Bauer (CORE Construction - Peoria) Respond Follow up question, the original question appears			169 on A800, ad	ddendum 2 remove	d the note in	dicating a stainle	ess steel frame was	required for thes	e openings.			_
		However detail E8 on this sheet calls for stainles	s steel frames and is	listed for quite a few oper	nings in the sche	edule such as 105A,	114B, 115 e	tc. can you confi	rm stainless is just	stray note?				_
	A:	Levi Bauer (CORE Construction - Peoria) Respond Stainless steel doors and frames to be provided		at 02:05 pm CDT										
	A:	Amanda Springer (Klingner & Associates, P.C) Re ADD 2	esponded Fri Mar 29, 2	2024 at 10:54 am CDT										_
	A:	Amanda Springer (Klingner & Associates, P.C) Re REVISE: Exterior openings will be both stainless			sed on sheet A8	00.(ADDENDUM 2)								_
31	recycle	e material / Temp roads	Closed	None	Bauer, Levi (CORE	03/16/2024	Levi Bauer	03/19/2024	04/04/24					
	Q:	Levi Bauer Sent Sat Mar 16, 2024 at 11:01 am Cl With regards to bid package 4 ( civil ), Note 8	DT											
		I'm not sure what the material referred to as "red	cycle"											
		Levi Bauer (CORE Construction - Peoria) Respond This is recycled concrete.	ded Thu Apr 4, 2024 a	at 01:59 pm CDT										
	A:	The scope of the temporary roads is going to be	revised. The intent is	at least 10" of aggregate	(either recycled	l or CA-6) and a fabi	ric separator	will be provided	at noted areas for	temporary roads,	staging, and	d parking.		
		Refer to revised bid packages and revised altern	ate specification.											
30	topsoil	depth	Closed	None	Springer, Amanda	03/16/2024	Levi Bauer	03/19/2024	04/04/24					_
	Q:	Levi Bauer Sent Sat Mar 16, 2024 at 10:57 am Cl I cannot see what depth you want the site topso												
	A:	Amanda Springer (Klingner & Associates, P.C) Re ADD 2	esponded Fri Mar 29, 2	2024 at 10:54 am CDT										_
	A:	Amanda Springer (Klingner & Associates, P.C) Re CLARIFY: Topsoil shall be installed at a minimum												
29	Plante	r Topsoil	Closed	None	Bauer, Levi (CORE	03/16/2024	Levi Bauer	03/19/2024	04/04/24					_



# S	ubje	et	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
		The civil package includes supplying the plants	er topsoil. But I do not see who	install the plante	er topsoil Can yo	ou clarify ?								
	A:	Levi Bauer (CORE Construction - Peoria) Response	nded Thu Apr 4, 2024 at 01:39	pm CDT										
28 to	opsoil	responsibility	Closed	None	Bauer, Levi (CORE	03/16/2024	Levi Bauer	03/19/2024	04/04/24					
c	Q:	Levi Bauer Sent Sat Mar 16, 2024 at 10:56 am Regarding topsoil:	CDT											
		It looks like the civil package will place and gra	de topsoil but the general trade	es package has la	andscaping inclu	ding any soil amend	dments requi	red. Is this corre	ect ?					
	A:	Levi Bauer (CORE Construction - Peoria) Respor Topsoil depth to be 4" per RFI response 30 from		pm CDT										_
		Levi Bauer (CORE Construction - Peoria) Respo Civil bid package shall respread/place new clea			ubgrade at all la	wn areas, landscap	e beds, and i	slands.						_
	A:	General trades shall provide all soil preparation	n including amending soil, prov	iding positive dra	inage, as well as	s removal and dispo	osal of all wee	eds, vegetation a	and rocks as requir	ed.				
		Bid packages will be updated to this effect.												
27 Te	emp S	seeding Responsibility	Closed	None	Bauer, Levi (CORE	03/16/2024	Levi Bauer	03/19/2024	04/15/24					
c	Q:	Levi Bauer Sent Sat Mar 16, 2024 at 10:54 am I see temporary seeding is listed in general trac		il package. Whic	h package will b	e responsible for te	mp. seeding	?						
	A:	Levi Bauer (CORE Construction - Peoria) Response REVISED RESPONSE: Civil package is responsible for temp seeding o	·		ons. General trad	des will be responsi	ble for temp	seeding anywhe	re disturbed by the	eir activities				_
	A:	Levi Bauer (CORE Construction - Peoria) Respo The civil bid package will be responsible for ter Bid packages will be updated		pm CDT										
26 cl	loude	d area on civil plans	Closed	None	Bauer, Levi (CORE	03/16/2024	Levi Bauer	03/19/2024	03/16/24					_
c	Q:	Levi Bauer Sent Sat Mar 16, 2024 at 10:53 am On the east side of the site, I see a clouded are I'm thinking these trees will not be removed an	a that may be trees.											
	A:	Levi Bauer (CORE Construction - Peoria) Respo Confirmed	nded Sat Mar 16, 2024 at 10:53	3 am CDT										_
25 C	ompa	iction Testing	Closed	None	Bauer, Levi (CORE	03/16/2024	Levi Bauer	03/19/2024	04/04/24					_
C	Q:	Levi Bauer Sent Sat Mar 16, 2024 at 10:50 am Please clarify who is responsible for the cost of												
_	A:	Levi Bauer (CORE Construction - Peoria) Respo												_



	Subje	ect	Status Resp Cont		Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
		Per section 31 2100 part 3.17 compaction testing	g will be provided	by the Owner.											_
24	Halot-l	lit signs	Closed	l	None	Springer, Amanda	03/15/2024	Levi Bauer	03/18/2024	04/04/24					
	Q:	Levi Bauer Sent Fri Mar 15, 2024 at 09:25 am CD have attached a few images of layered, halo-lit s make the center badge as a circular fabricated of that this alternate fabrication method, if done in idea of how we did them.  103447.1.Proof.pdf  Williamsville HS.PNG  Monticello HS.PNG  103694 - LargeLogo - Proof.pdf	signs we have dor abinet with a poly	ycarbonate face o	decorated w	ith a translucent	vinyl overlay rendir	ng the State o	of Illinois logo in o	color (similar to the	e bullet element ir	n the William	nsville HS sign	. I suspect	
	A:	Amanda Springer (Klingner & Associates, P.C) Re CLARIFY: There are no exterior signs made of ste				ee Sheet A540 fo	r exterior sign infor	mation.							
23 (	etched	d steel for signage	Closed	I	None	Springer, Amanda	03/15/2024	Levi Bauer	03/18/2024	04/04/24					_
	Q:	Levi Bauer Sent Fri Mar 15, 2024 at 08:53 am CD Is there a reason they have specified etched stee 24"-dia.		abricate this sort	of signage in	n aluminum. Wou	ld aluminum be acc	ceptable? The	e foundry we use	for etched plaque	s has size restrict	ions; pieces	must be no la	rger than	
	A:	Amanda Springer (Klingner & Associates, P.C) Re ADD 2	esponded Fri Mar	29, 2024 at 10:54	am CDT										
		Amanda Springer (Klingner & Associates, P.C) Re	•			size of the meda	llion sign is 4' diam	eter. Aluminı	ım shall be elect	rically isolated from	n other metals to	prevent gal	vanic corrosio	۱.	-
	A:	CLARIFY: Aluminum is an acceptable alternate to (ADDENDUM 2)	steel. Detail F5/ <i>i</i>	ASTO CallS for ala											
22 1		•	Closed		None	Springer, Amanda	03/15/2024	Levi Bauer	03/18/2024	04/04/24					_
		(ADDENDUM 2)	Closed	l		Amanda					r metal backgroun	ıds will resul	t in "hot spots	" at the the	_
	metal	panel finish  Levi Bauer Sent Fri Mar 15, 2024 at 08:45 am CD What is the finish of the pre-finished metal pane	Closed oT ling upon which t	he seal is to be m	ounted? Ha	Amanda					r metal backgroun	ds will resul	t in "hot spots	" at the the	_
	metal <b>Q:</b>	panel finish  Levi Bauer Sent Fri Mar 15, 2024 at 08:45 am CD What is the finish of the pre-finished metal panel perimeter of the sign.  Levi Bauer (CORE Construction - Peoria) Response	Closed  OT  ling upon which ti  ded Thu Apr 4, 20  esponded Fri Mar i metal panels is th	he seal is to be m 124 at 01:18 pm C 29, 2024 at 10:49	ounted? Ha	Amanda lo-lighting is mos	t effective on light-	colored, text	ured background	s. Smooth or shiny					-
	q:	panel finish  Levi Bauer Sent Fri Mar 15, 2024 at 08:45 am CD What is the finish of the pre-finished metal panel perimeter of the sign.  Levi Bauer (CORE Construction - Peoria) Respondence of the Standard Springer (Klingner & Associates, P.C) RecLARIFY: The basis of design for the prefinished	Closed  To Closed  To Closed  Thu Apr 4, 20  Esponded Fri Mar 15, 20  The Closed Fri Mar 15, 20  The Closed Fri Mar 15, 20	he seal is to be m 124 at 01:18 pm C 29, 2024 at 10:49 ne Petersen Alumi 124 at 08:49 am C	ounted? Ha  Ounted? Ha  Ounted? Ha	Amanda lo-lighting is mos	t effective on light-	colored, text	ured background	s. Smooth or shiny					-



#	Subje	ct		Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impac
		manufacturer's standard line.													_
		Klinger to clarify concerns about hot spots													
21	medall	lion illumination	Closed		None	Springer, Amanda	03/15/2024	Levi Bauer	03/18/2024	04/04/24					
	Q:	Levi Bauer Sent Fri Mar 15, 2024 at 08:44 am CD The medallion on the outside of the building (see does not show location of LED units). Do they un	e at H10/A30									it structure (	diagram at F5	6/A540	
	A:	Levi Bauer (CORE Construction - Peoria) Respond General trades bid package to provide all integra Electrical bid package to provide all rough-in, po	al and taped	lighting for signage		ge to provide all	unattached lighting	g for signage	such as the gro	und mounted signa	ge for the monun	nent sign cor	nplete.		_
	A:	Amanda Springer (Klingner & Associates, P.C) Re CLARIFY: As described in Detail F5/A540, the sign				hoto sensor, aro	und the perimeter o	of the back pl	ate ring. (ADD	3)					
20	Monum	nent Sign Construction	Closed		None	Springer, Amanda	03/15/2024	Levi Bauer	03/18/2024	04/04/24					
	Q:	Levi Bauer Sent Fri Mar 15, 2024 at 08:44 am CD The signage specifications do not address how t subsurface acrylic/polycarbonate for lettering &	he monume		ed. Please hav	e the architect s	pecify (monument o	abinet with a	a vinyl-applied բ	polycarbonate face	or a solid aluminu	m face route	d with push-tl	hru or	
	A:	Precast bid package shall provide t     General trades shall provide alum i     General trades shall supply and de     Building Concrete shall provide mo	the precast r letters and s liver embed	nonument sign. Inst eal mounted on con s to concrete and pr	all embeds su cealed stando ecast bid pack	ffs as described ages for them to	in RFI 3 install/cast-in			provided by genera	l trades. include a	ndditional mo	obilization to p	oour curbs/	
	<b>A</b> :	Amanda Springer (Klingner & Associates, P.C) Re ADD: The monument sign shall be precast concr lights. The front face and sides of the precast pa A440. See structural drawing S002 for detail on	rete with cha inel will be st	mfered corners on beel form bed finish	ooth sides. The with a light sar										_
19	Monum	nent sign single/double sided?	Closed		None	Springer, Amanda	03/15/2024	Levi Bauer	03/18/2024	04/04/24					_
	Q:	Levi Bauer Sent Fri Mar 15, 2024 at 08:43 am CD If the monument is illuminated, is it to be single		ded (graphics on bo	th sides)?										
	A:	Amanda Springer (Klingner & Associates, P.C) Re CLARIFY: The monument sign will have signage of				ated with ground	l mounted lights on	the road side	of the sign. (Al	DD 3)					
18	Monum	nent Sign Illumination	Closed		None	Springer, Amanda	03/15/2024	Levi Bauer	03/18/2024	04/04/24					_
	0:	Levi Bauer Sent Fri Mar 15, 2024 at 08:42 am CD	DT												



# 5	Subje	ct	Status Responsible Contractor	Received From	Assignee	Date Initiated	l RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impac
-	A:	Amanda Springer (Klingner & Associates, ADD 2	P.C) Responded Fri Mar 29, 2024 a	at 10:54 am CDT										_
-	A:	Amanda Springer (Klingner & Associates, CLARIFY: The monument sign will be illun												_
14	Precas	t Panel Form Liners	Closed	None	Springer, Amanda	03/14/2024	Levi Bauer	03/17/2024	04/04/24					_
	Q:	Levi Bauer Sent Thu Mar 14, 2024 at 08:4 Has there been any decision on the type		exterior finish of s	ome of the prec	ast panels? See F-4 (	on the precas	t finish legend						
-	A:	Amanda Springer (Klingner & Associates, REVISE: Precast Finish Legend F3 Form Li ADD: Sheet A444 Precast Concrete Panel	ner Finish, REVISE note: "See note	4." in lieu of note			Form Linter Fi	nish, ADD note:	"See Sheet A444 P	recast Concrete P	anel Pattern	ns for more info	rmation."	_
	A:	Levi Bauer (CORE Construction - Peoria) Form liners where intended to be an alter			on drawings curr	rently in this regard.	Klinger to cla	arify						_
13 5	Sandb	last finish on precast panels	Closed	None	Springer, Amanda	03/14/2024	Levi Bauer	03/17/2024	04/04/24					
	Q:	Levi Bauer Sent Thu Mar 14, 2024 at 08:5 Some of the precast panel types on shee would recommend a steel trowel finish or precast sandblast panels.png	A440 state that the interior face				-				bursting of	the cement pa	iste. We	
	A:	Amanda Springer (Klingner & Associates, ADD 2	P.C) Responded Fri Mar 29, 2024 a	at 10:53 am CDT										
	A:	Amanda Springer (Klingner & Associates, REVISE: Sheet A440 to provide steel trow			dblast finish (AD	DDENDUM 2)								
2 I	Precas	t Mix Design	Closed	None	Springer, Amanda	03/14/2024	Levi Bauer	03/17/2024	04/04/24					_
	Q:	Levi Bauer Sent Thu Mar 14, 2024 at 08:3 Section 03 4500 part 2.8 indicates "Ceme		oderate Portland t	ype"									
		Can this be changed to type III cement? T	ype III cement provide better strip	ping strengths for	the wall panels.	[we] do not recomm	nend type II ce	ement.						
	A:	Amanda Springer (Klingner & Associates, Revise: Specification section 034500 par			r ASTM C595 Typ	oe IL." (ADD 3)								
.1	Precas	t Certification Required?	Closed	None	Springer, Amanda	03/12/2024	Levi Bauer	03/15/2024	04/04/24					_
	Q:	Levi Bauer Sent Tue Mar 12, 2024 at 01:0 BP #8 Scope of Work - Precast - Item 5rr. categories were changed in October 202 PCI-Certification-Statement-for-Industry.	refers to the PCI supplier holding F L to a range of AA through AE. Plea							no longer specified	d A1 catego	ry for certificat	ion. The	
	A:	Amanda Springer (Klingner & Associates, Revise: Regarding the Precast/Prestresse			e following. Spec	cification section 034	4500 paragra	ph 1.7.B.5 from	"catagory A1 - Arch	nitectural Precast	Concrete" to	o "category AD		



#	Subj	ect	Status Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
		Architectural Precast Concrete Products" (ADD 3)												
10	Sche	dule	Closed	None	Bauer, Levi (CORE	03/12/2024	Levi Bauer	03/15/2024	03/14/24					
	Q:	Levi Bauer Sent Tue Mar 12, 2024 at 01:04 pm CD Schedule - no schedule was included within the B		nis will be forth	coming in Addend	lum?								_
	A:	Levi Bauer (CORE Construction - Peoria) Respond Schedule has been issued with addendum 1	ed Thu Mar 14, 2024 at 08:45 a	m CDT										
9	Preca	st Leave out Panels	Closed	None	Bauer, Levi (CORE	03/12/2024	Levi Bauer	03/15/2024	04/04/24					
	Q:	Levi Bauer Sent Tue Mar 12, 2024 at 01:03 pm CD BP #8 Scope of Work - Precast - Item 5jj. refers to		leave-out par	els and potentially	y crane roadways	, but nothing	seems to be inclu	ided within the Bio	d Documents				
	A:	Levi Bauer (CORE Construction - Peoria) Respond Refer to site logistics plan issued with addendum Precast bid package is required to include additio	1 for where precast panels sho	uld be left out.										-
8	Owne	er Agreement	Closed	None	Bauer, Levi (CORE	03/12/2024	Levi Bauer	03/15/2024	04/04/24					
	Q:	Levi Bauer Sent Tue Mar 12, 2024 at 12:59 pm CE [assuming] the CM's Subcontract Agreement will		with the Owne	r, so we would nee	ed a redacted cop	y of that as w	vell to review.						
	A:	Levi Bauer (CORE Construction - Peoria) Respond Refer to addendum 2	ed Thu Apr 4, 2024 at 12:51 pm	CDT										
7	Samp	ole Subcontract Agreement	Closed	None	Bauer, Levi (CORE	03/12/2024	Levi Bauer	03/15/2024	03/14/24					
	Q:	Levi Bauer Sent Tue Mar 12, 2024 at 12:57 pm CD Section 00 21 13 - 1.17A states that a copy of the		vould be availa	able for viewing wi	thin the Bid Docu	ments, but th	ere is nothing inc	luded. Please incl	ude for review				
	A:	Levi Bauer (CORE Construction - Peoria) Respond Sample subcontract agreement has been provide		m CDT										
6	Textu	ra Cost	Closed	None	Bauer, Levi (CORE	03/12/2024	Levi Bauer	03/15/2024	04/04/24					
	Q:	Levi Bauer Sent Tue Mar 12, 2024 at 12:55 pm CD How much does Oracle-Textura cost?	т											
	A:	Levi Bauer (CORE Construction - Peoria) Respond Refer to sample subcontract issued with addendu Textura cost are 0.22% of the contract value with	ım 1 (page 46 of addendum)		subcontractor.									-
		All bid package prime bidders and vendors working	ng directly for CORE shall includ	le Textura in th	eir base bid price	and modify it as n	ecessary for	any alternates.						
5	Utility	structure manufacture	Closed	None	Springer, Amanda	03/12/2024	Levi Bauer	03/19/2024	04/04/24					_
5	Utility	y structure manufacture	Closed	None		03/12/2024	Levi Bauer	03/19/2024	04/04/24					



#	Subje	et .	Status	Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
	Q:	Levi Bauer Sent Tue Mar 12, 2024 at 09:44 am CE Regarding the storm and sanitary manholes and Can we use a manufacturer who is INDOT approv	pre-cast												
		NPCA certificate ? ( National Precast Concrete A													
	A:	Levi Bauer (CORE Construction - Peoria) Respond Refer to addendum 2	led Thu A	pr 4, 2024 at 12:46 ¡	pm CDT										
	A:	Amanda Springer (Klingner & Associates, P.C) Rec CLARIFY: For storm and sanitary manholes (pre-c specifications.				approved and ha	ave their NPCA certi	ficate are ac	ceptable. Manho	e structures shall ı	meet the size and	materials s	pecified in the	plans and	
	A:	Amanda Springer (Klingner & Associates, P.C) Res CLARIFY: For storm and sanitary manholes (pre-c specifications. (ADDENDUM 2)				approved and ha	ave their NPCA certi	ficate are ac	ceptable. Manho	e structures shall ı	meet the size and	materials s	pecified in the	plans and	
4	Soil Sto	ockpile	Closed		None	Bauer, Levi (CORE	03/12/2024	Levi Baue	03/19/2024	04/04/24					_
	Q:	Levi Bauer Sent Tue Mar 12, 2024 at 09:27 am CI The erosion control plans do not show where we of [Please indicate a location]		pile topsoil.											
	A:	Levi Bauer (CORE Construction - Peoria) Respond location will be established during the kickoff me				nsite.									_
3	Soil Co	rrections Scope	Closed		None	Bauer, Levi (CORE	03/12/2024	Levi Bauer	03/19/2024	04/04/24					_
		Levi Bauer Sent Tue Mar 12, 2024 at 09:25 am CI I understand the Geotech reports and recommen		re to be included in	our pricing for ea	arthwork.									
	Q:	After reading the report, I understand the bldg co for this purpose? I see the liquid limit for most or									d granular. How o	do we know	f on site clay is	s suitable	
		With regards to the site paving, roads and parkin lime/cement stabilization. The pricing on each of How do we price this? Could there be a unit pric	f these m	ethods is different a					er rework and rew	ork this material u	ntil is passes test	s, or use a g	eogrid support	, or use a	
		Levi Bauer (CORE Construction - Peoria) Respond The civil bid package shall undercut 24" of unsuit 4" slabs, etc as required to achieve the subgrade	table soils	to 5' outside the bu	•	packfill it with imp	oorted granular mat	terial to the	subgrade elevatio	on. This will be a ba	ackfill depth will b	e 18" deep a	t the 6" slab, 2	20" deep at	
		The granular material is needed to act as a work	pad that	the aggregate piers	can be installed	on.									
	A:	The building concrete bid package will provide th													
		temporary road maintenance allowance in the civ			over the backfille	ed aggregate tha	t is installed by the	civil contrac	tor prior to slab i	nstallation. Regrad	ling and repair of	the slab will	be addressed	via the	
		temporary road maintenance allowance in the circ Corrections to unsuitable soils in the site paving a	vil packaç	ge.			·		tor prior to slab i	nstallation. Regrad	ling and repair of	the slab will	be addressed	via the	



Refer to addendum 1

#	Subject		•	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
2	Asphalt lift depths	Closed		None	Springer, Amanda	03/12/2024	Levi Bauer	03/19/2024	04/04/24					
	Levi Bauer Sent Tue Mar 12, 2024 at 09:17 am C  The plans call for the IL-19.0 , N50 (BINDER) to p figure on using the IL-19.0 mix and placing the I	laced in 1 1/2		lift thickness	s for an IL-19.0 mi	x is 2 1/4". Should	we plan on u	sing an IL-9.5 FG	level binder inste	ad and placing the	e binder in t	wo lifts? Or sho	ould we	
	A: Levi Bauer (CORE Construction - Peoria) Respon	ded Thu Apr 4	, 2024 at 12:21 pm C	DT										_
	A: Amanda Springer (Klingner & Associates, P.C) R REVISE: IL9.5 & IL9.5FG are acceptable to use for													_
	A: Amanda Springer (Klingner & Associates, P.C) R REVISE: IL9.5 & IL9.5FG are acceptable to use for													
1	Site Logistics Plan	Closed		None	Bauer, Levi (CORE	03/12/2024	Levi Bauer	03/15/2024	04/04/24					_
	Q: Levi Bauer Sent Tue Mar 12, 2024 at 09:09 am C Provide temp. aggregate roads/laydown/parking		ed on site logistics pla	an. Can you	tell me where to	find the site logisti	c plan							
	Levi Bauer (CORE Construction - Peoria) Respon	ded Thu Apr 4.	. 2024 at 12:19 pm C	DT										_



April 19, 2024

# **BIDDING ADDENDUM 5**

For work titled: Edgar County Jail

## TO ALL BIDDERS

### **GENERAL NOTES**

This addendum is issued for the purpose of clarifying the intent of the contract documents or for making necessary corrections, deletions, and/or additions to the documents on all items of discrepancy raised up to the time of the issuance of this addendum.

Each bidder is hereby instructed and authorized to incorporate into his proposal the instructions contained in this addendum. This addendum forms a part of the bidding and contract documents and modifies the original bidding documents, dated March 4, 2024. Acknowledge receipt of this addendum in space provided on Bid Form. FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.

This addendum consists of eighty-eight (88) pages including this cover sheet.

## **GENERAL**

<b>CLARIFY:</b> The smoke control dampers and smoke control fans will require UL listed controllers.
The Rooftop Units do not need UL listed controllers. The rooftop units are monitored by the smoke
control panel so the fire fighters can see if they are operating or not and can turn them off if they
want to, but they are not used for controlling smoke.

## **PROJECT MANUAL**

	<b>REMOVE:</b> Section 061600 is removed from the Table of Contents and not included in the project specifications. The sheathing is specified in section 061000 Rough Carpentry
	<b>REVISE</b> : Section 079513 Expansion Joint Cover Assemblies is removed from the Table of Contents and not included in the project specifications. The expansion joint is specified on the drawings.

3	033000 Cast in Place Concrete, 2.10 Liquid Floor Treatment	ADD: 2.10 LIQUID FLOOR TREATMENTS with Water and Chloride Ion Repelling Penetrating Sealer
4	083323 Overhead Coiling Doors, 2.2, G	<b>ADD</b> : At the coiling door, provide a black aluminum wire mesh insect screen (18 x 16, .011" diameter wire) installed in a black aluminum frame.
5	Glazed Curtain	<b>REVISE:</b> The Curtain Wall Basis of Design shall be EFCO 5500X shall be removed as the Architect's basis of design for the UL Level 3 ballistic rated windows and replaced with the Insulgard TTH600 Thermally broken Bullet Resistant Window System which is the Architect's Basis of Design for the 1-7/8" thick UL Level 3 ballistic glazing.
6	085113 Security Windows	ADD: 085113 Security windows spec section has been added to the project manual.
7	088000 Glazing, 2.8, Spandrel Glass	<b>REVISE:</b> Spandrel glass has been updated in spec to include the sprandrel coating on the #4 surface to be Guardian Glass Deco HT Warm Gray.
8	088853 Security Glazing, 2.4	<b>REVISE:</b> In spec section 088853, Security Glazing, paragraph 2.4, Bullet Resistant Transaction Window has been removed. The information is included in section 088113 Security Windows.
9	114000 Food Service Equipment	ADD: Add section 114000 Food Service Equipment  CLARIFY: Specifications for Base Bid Phase I Food Service Equipment may be found on Sheet K100.
10	230923 Direct- Digital Control for HVAC,2.1 A	ADD Siemens Desigo will be allowed as an acceptable manufacturer
	Work Results for Electronic Safety and Security,1.6	ADD: Cornerstone Detention Products is an approved supplier.
12	284600 Fire Detection and Alarm	<b>CLARIFY:</b> The smoke control dampers and smoke control fans will require UL listed controllers. The Rooftop Units do not need UL listed controllers. The rooftop units are monitored by the smoke control panel so the fire fighters can see if they are operating or not and can turn them off if they want to, but they are not used for controlling smoke.

# **DRAWINGS**

1	G130 Partition	<b>CLARIFY:</b> Type 'M' partitions are full height to bottom of deck. M12S is the storm shelter wall. Refer
-	Types	to sheet G130, Partition Types.
2	A101 Annotation Plan	<b>CLARIFY:</b> Within Evidence Processing room #123, the equipment shown on the south wall is labeled on the enlarged plan detail shown on sheet A130 Enlarged Plans, Detail #E6. The equipment is identified in the Detention Equipment Schedule found on sheet A130.
3	A130 Enlarged Plans, Detail C11 AND A131 Enlarged Plans, Detail A7 and E7	<b>CLARIFY:</b> The video visitation monitors shown in these details are identified in the Detention Equipment Schedule as Owner Furnish and Contractor Installed. The Owner is working with a selected vendor for the visitation monitors. Telecom sheets show data outlets required and the architectural plans and interior elevations show locations.
4	A130 Enlarged Plans, Detail C11	<b>REVISE:</b> The deal tray (E021) has been removed from equipment schedule. It is part of the AVT security window and specified in new spec section 085653. <b>REVISE:</b> The package pass (E020) has been moved to the Detention Equipment Schedule.

5	A430 Wall Sections and	CLARIFY: The rigid insulation encapsulating the back side and top of the precast concrete walls panels shall be adhered to the precast wall panels. This is typical for all conditions and details.  REVISE: The fire treated wood blocking shown on the exterior of the concrete precast wall panels shall be exterior rated. This is typical for all conditions and details. See Section 061000 Rough
6	Details, Detail HS  A900 Finish Schedule & Materials Legend, Detail E8	CLARIFY: The floor slab should be flat at the Onyx shower pans and at the ramp (shown by hatch pattern on sheet A130). Beyond these extents, slope floor per structural to the floor drains near toilets.
7	A500 Exterior Plan Details	<b>CLARIFY:</b> In the plan details, transition flashing is required and noted to seal air barrier to precast panels. No expansion joints or sealant are required where the two materials meet. If it is not feasible to order custom size end panels, a J-channel is acceptable to terminate metal panels at precast. Leave ½ gap between J-channel and face of precast panel.
8	A531 Detention Equipment & Interior Details, Detail E4	<b>CLARIFY:</b> Detail E4/A531 was updated in Addendum 04. The angles around the CMU walls are welded to the flat steel plates. The ductwork is installed into the opening, but not welded to the steel plates.
9	C120 Utility Plan	CLARIFY The conduits to the lift station are required in order to power or provide backup power to the lift station during a potential outage. This has been updated on Sheet E100 Electrical Site Plan CLARIFY: The conduits shown on C120 are required. This has been updated on Sheet E100 Electrical Site Plan CLARIFY: The routing of the conduit to the monument sign that is shown on Civil sheets C102/C120 are correct. This has been updated on Sheet E100 Electrical Site Plan REVISE: The gas service should be on the east side of the sanitary service per P100 Plumbing Foundation Plan. Civil sheets have been updated to reflect this revision.
10	P101 Plumbing Waste & Vent First FLoor Plan - Overall	<b>CLARIFY:</b> As shown on the plans issued for bidding, Holding cells H2 and H3 do not require floor drains.
11	P500 Plumbing Schedules	<b>REVISE</b> : Valves are intended to be electronically controlled and managed by the building water management system. The narrative description on the schedule has been updated from Pneumatic to Electronic to match the model number. Refer to updated P500 issued in Addendum 5.
12	TN000 Telecom General Notes and Legend	<b>CLARIFY:</b> Contractor to coordinate exact installation location of telecom equipment with furniture manufacturer and Architect prior to installation.
13	K100 Food Service	CLARIFY: Addendum 4 explained only the Phase 1 equipment should be included in the base bid. See Addendum #4.  CLARIFY: Note #4, All MEP connections for phase 2 FUTURE equipment shall be installed in the base bid.
	S001 - Stone Column Ground Improvement notes - Add note 8	<b>CLARIFY:</b> Building footings require ground improvement to control settlement. This includes footings F2. Footings F2 only require the ground improvement needed for 1.5 kips per lineal foot net foundation load per the comments. Also see the response in addendum 4 for additional clarification. The foundation loading is net bearing pressure not based on contact pressure (gross bearing pressure).
15	S203 Roof Framing Plan	<b>REVISE:</b> The roof hydrant shown on P400 has a steel angle framing support, see 3/S513. See items shown clouded on sheet S203.

16	E100 Electrical Site Plan	REVISE: At the main entrance on the northwest corner of the building, Add four (4) SF2 site light fixtures on the west wall to illuminate the wall mounted signage. Install light fixtures similar to the north wall.  REVISE: The conduits to the monument sign have been updated to coordinate with the C120 Civil Utility Plan.  REVISE: Conduits are added to the lift station to coordinate with the C120 Civil Utility Plan.
17	E101 Lighting First Floor Plan - Overall	CLARIFY: Provide two fixtures as indicated on E101.
18	E201 Power First Floor - Overall	REVISE: Added power for door hardware. Refer to updated sheet E301.
19	E302 Equipment Connection Mezzanine Plan - Jail	REVISE: Added power to door operator. Refer to updated sheet E302.

# **ATTACHMENTS**

HMN Addendum 5 (17 pages) Henderson Addendum 5 (21 pages) Chastain Addendum 5 (7pages) Klingner Addendum 5 (43 pages)

All other terms and conditions of the Project Manual and Drawings shall remain unchanged.

**END OF ADDENDUM 5** 



# **ADDENDUM NO 5**

April 17, 2024

**ISSUED BY** 

Henderson Engineers, Inc. 8345 Lenexa Dr Lenexa, KS 66214

NOTICE TO ALL BIDDERS FOR THE

Edgar County Public Safety Center Paris. IL

**ISSUED FOR** 

Edgar County Public Safety Center 12636 950<sup>th</sup> Road Paris, IL 61944

You are instructed to read and to note the following described changes, corrections, clarifications, omissions, deletions, additions, approvals, and statements pertinent to the Contract Bid and Construction Documents.

This addendum is part of the Contract Bid and Construction Documents and shall govern in the performance of the Work.

### **DRAWINGS**

# Plumbing:

- 1. SHEET P500 PLUMBING SCHEDULES
  - A. Revised SV2 & SV3 with electronic valve option.

#### Electrical:

- 1. SHEET E100 ELECTRICAL SITE PLAN
  - a. Added keynote and conduits for future metal building and solar panels.
  - b. Added floor up lights on west side of the building.
- 2. SHEET E301 EQUIPMENT CONNETION FIRST FLOOR PLAN OVERALL
  - a. Added power for door opener for public lobby room 101.
  - b. Added power for door access control.
- 3. SHEET E302 EQUIPMENT CONNECTION MEZZANINE PLAN JAIL
  - a. Added power for rollup door in exercise room.
- 4. SHEET E500 ELECTRICAL ONELINE
  - a. Added note for equipment that was part of generator purchase set.
- 5. SHEET E502 PANELBOARD SCHEDULE
  - a. Update panelboard schedule.
- 6. SHEET E503 PANELBOARD SCHEDULE
  - a. Update panelboard schedule.
- 7. SHEET E504 PANELBOARD SCHEDULE
  - a. Update panelboard schedule.

# **SPECIFICATIONS**

- Section 220700 Plumbing Insulation
   A. Revised to add Direct Bury Insulation.

## **SECTION 262416**

## **PANELBOARDS**

# PART 1 - GENERAL

### 1.1 SUMMARY:

- A. This section includes panelboards rated 600 V and less, including the following:
  - 1. Distribution panelboards.
  - 2. Lighting and appliance branch-circuit panelboards.
  - 3. Disconnecting and Overcurrent Protective Devices.
  - 4. Fused Lighting and Appliance Branch-Circuit Panelboards.
  - 5. Surge Protection Devices.
  - 6. Accessory Components and Features.

### 1.2 DEFINITIONS

- A. NETA ATS: InterNational Electrical Testing Association Acceptance Testing Specification.
- B. SVR: Suppressed voltage rating.
- C. SPD: Surge Protection Device

## 1.3 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.
- B. Coordinate sizes and locations of concrete bases with actual equipment provided. Concrete, reinforcement, and formwork requirements are specified in Division 03.

## 1.4 SUBMITTALS

- A. General: Submit the following in accordance with Division 01 and Division 26 Section "General Electrical Requirements".
- B. Product Data: For each type of panelboard, switching and overcurrent protective device, furnished accessories and components. Include dimensions and Manufacturer's technical data on features, performance, electrical characteristics, ratings, weights, furnished options, specialties, accessories, and finishes.
- C. Shop Drawings: For each panelboard and related equipment.
  - Include dimensioned plans, elevations, sections, and details, including required clearances, service space around equipment, and attachments to other work. Show tabulations of installed devices, equipment features, and ratings.
    - a. Tabulate features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
  - 2. Detail enclosure types and details for other than NEMA 250, Type 1.
  - 3. Include general arrangement drawing showing dimensions and weights of each assembled section.
  - 4. Detail bus configuration, current, and voltage ratings, including size and number of bus bars and current rating for each bus. Indicate mains and branches of phase, neutral, and ground buses.
  - 5. Detail short-circuit current rating of panelboard assembly and overcurrent protective devices.
  - 6. Include descriptive documentation of barriers specified for electrical insulation and isolation.
  - 7. Detail utility company's metering provisions with indication of approval by utility company.
  - 8. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.

- Include time-current coordination curves for each type and rating of overcurrent protective device included in panelboards; include selectable ranges for each type of overcurrent protective device. Submit electronic files, in an SKM-compatible format.
- 10. Include schematic and wiring diagrams for power, signal, and control wiring.
- 11. Include nameplate legends.
- 12. Include list of materials.
- D. Coordination Drawings: Floor plans showing dimensioned layout, required working clearances, and required area above and around panelboards where pipe and ducts are prohibited. Show panelboard layout and relationships between components and adjacent structural and mechanical elements. Show support locations, type of support, and weight on each support. Indicate field measurements.
  - 1. For each equipment room, provide dimensioned layout of the electrical equipment within the space, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved.
  - 2. Dimensioned concrete base, outline of panelboard sections, conduit entries, and ground rod locations; including equipment working clearances and manufacturer required access space.
  - Indicate structural members, light fixtures, sprinkler piping and heads, HVAC equipment, ducts and diffusers, plumbing piping and access fittings. Include maintenance access clearances.
  - 4. Location of structural supports for structure-supported raceways.
  - Location and clearance of electrical equipment and raceways impacting equipment installation.
- E. Qualification Data: For qualified testing agency.
- F. Field Quality-Control Reports:
  - 1. Test procedures used.
  - 2. Test results that comply with requirements.
  - 3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.
- G. Manufacturer's field service report.
- H. Sample Warranty: For warranty.
- I. Project Record Documents: Record actual installed equipment and circuiting arrangements. Record actual routing for underground circuits. Record actual installed location of ground rods.
- J. Panelboard Schedules: Submit final panelboard directories.
- K. Operation and Maintenance Data: For panelboards and components to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01 Section "Operation and Maintenance Data," include the following:
  - 1. Routine maintenance requirements for panelboards and all installed components.
  - 2. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
  - 3. Time-current curves, including selectable ranges for each type of overcurrent protective device that allows adjustments.
  - 4. Features and operating sequences, both automatic and manual.
  - 5. Video recording of operation training and demonstration.
- L. Follow-up service reports.

### 1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the InterNational Electrical Testing Association or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.
  - Testing Agency's Field Supervisor: Person currently certified by the InterNational Electrical Testing Association or the National Institute for Certification in Engineering Technologies to supervise on-site testing specified in Part 3.

- B. Test Equipment Suitability and Calibration: Comply with NETA ATS, "Suitability of Test Equipment" and "Test Instrument Calibration."
- C. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories from single source from single manufacturer.
- D. Product Selection for Restricted Space: Drawings indicate maximum dimensions for panelboards including clearances between panelboards and adjacent surfaces and other items. Comply with indicated maximum dimensions.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- F. Comply with NEMA PB 1.
- G. Comply with NFPA 70.

### 1.6 PROJECT CONDITIONS

- A. Maintain field conditions within manufacturer's required service conditions during and after installation.
- B. Environmental Limitations:
  - 1. Do not deliver or install panelboards until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work above equipment is complete, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
  - 2. Rate equipment for continuous operation under the following conditions unless otherwise indicated:
    - a. Ambient Temperature: Not exceeding 23 deg F (minus 5 deg C) to plus 104 deg F (plus 40 deg C).
    - b. Altitude: Not exceeding 6600 feet (2000 m).
- C. Service Conditions: NEMA PB 1, usual service conditions, as follows:
  - 1. Ambient temperatures within limits specified.
  - 2. Altitude not exceeding 6600 feet (2000 m).

# 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Coordinate delivery of equipment to allow movement into designated space.
- B. Store in a clean, dry space, protected from weather and so condensation will not form on or in units. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic. Handle carefully in accordance with manufacturer's instructions to avoid damage to equipment components, enclosure, and finish. Provide temporary heating according to manufacturer's written instructions.
- C. Handle and prepare panelboards for installation according to NEMA PB 1 and manufacturer's written instructions. Use factory-installed lifting provisions.

### 1.8 WARRANTY

- A. Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components and/or products of the panelboards that fail in materials or workmanship within the specified warranty period.
- B. Warranty Period: Three years from date of Substantial Completion.

# 1.9 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Fuses: Refer to Division 26 section "Fuses" for spare fuse requirements. At a minimum, include spares for the following:
    - a. Primary disconnect fuses.
    - b. Potential transformer fuses.
    - c. Control power fuses.
    - d. Fuses for fusible devices.

- 2. Indicating Lights: Four of each type installed.
- 3. Primary Switch Contact Lubricant: One container.
- 4. Touchup Paint: Two containers of paint matching enclosure finish, each 0.5 pint (250 mL).
- 5. Enclosure Keys: Two for each enclosure type. All distribution equipment keyed alike.

# **PART 2 - PRODUCTS**

## 2.1 GENERAL

- A. Manufacturers:
  - 1. ABB Inc.
  - 2. Eaton.
  - 3. Schneider Electric.
  - 4. Siemens Energy & Automation, Inc.
- B. Enclosures: Flush- or surface-mounted cabinets as noted.
  - 1. Rated for environmental conditions at installed location.
    - a. Indoor Dry and Clean Locations: NEMA 250, Type 1.
  - 2. Hinged Front Cover: Entire front trim hinged to box.
  - 3. Door: Standard door with concealed hinges, within hinged trim cover. Secured with vault-type latch with tumbler lock; keyed alike.
  - 4. Finishes:
    - Panels and Trim: Steel and galvanized steel, factory finished immediately after cleaning and pretreating with manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
    - b. Back Boxes: Galvanized steel.
    - c. Fungus Proofing: Permanent fungicidal treatment for overcurrent protective devices and other components.
    - . Directory Card: Inside panelboard door, mounted in transparent card holder.
- C. Incoming Mains Location: Top and/or bottom as required.
- D. Buses: Three phase, four wire unless otherwise indicated.
  - 1. Phase, and Neutral Buses:
    - a. Material:
      - 1) Hard-drawn copper, 98 percent conductivity.
    - b. Size: Ampacity as indicated on drawings, with uniform capacity for entire length of panelboard's sections.
      - Neutral bus: 100 percent of the ampacity of phase buses unless otherwise indicated, equipped with connectors for outgoing circuit neutral cables. Brace bus extensions for busway feeder neutral bus
  - 2. Ground Bus: Equipped with connectors for feeder and branch-circuit ground conductors. For busway feeders, extend insulated equipment grounding cable to busway ground connection and support cable at intervals in vertical run.
    - a. Material: Hard-drawn copper, 98 percent conductivity
    - b. Size: Minimum-size required by UL 67
  - General: Provide any available breaker mounting space with bussing.
- E. Line-Side Conductor Connectors (Lugs):
  - General: Suitable for use with conductor material and sizes. Connections shall comply with requirements of Division 26 Section "Low-Voltage Electrical Power Conductors and Cables".
  - 2. Material: Same as bus material.
  - 3. Capacity rating: Same as associated bus.

- 4. Type: Provide mechanical type unless otherwise indicated on Drawings, refer to schedules and one-line diagram.
- 5. Provide properly sized lugs for all equipment, circuit breakers and other electrical devices to accommodate installed conductors. A larger frame, oversized lugs or non-standard product may be required in some instances.
  - a. Pin adapters may be utilized only as allowed by manufacturer and the authority having jurisdiction.

## F. Feed-Through Lugs:

- 1. General: Suitable for use with conductor material and sizes. Connections shall comply with requirements of Division 26 Section "Low-Voltage Electrical Power Conductors and Cables".
- 2. Location: Locate at opposite end of bus from line side lugs or main device.
- 3. Material: Same as line side conductor connectors.
- 4. Capacity rating: Same as associated bus.
- 5. Type: Same as line side conductor connectors.

# G. Subfeed lugs (Double Lugs):

- General: Suitable for use with conductor material and sizes. Connections shall comply with requirements of Division 26 Section "Low-Voltage Electrical Power Conductors and Cables".
- 2. Location: Locate at same end of bus as incoming lugs or main device.
- 3. Material: Same as line side conductor connectors.
- 4. Capacity rating: Same as associated bus.
- 5. Type: Same as line side conductor connectors.
- H. Service Equipment Label: NRTL labeled for use as service equipment for panelboards or load centers with one or more main service disconnecting and overcurrent protective devices.
- I. Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.
- J. Short-Circuit Current Rating (SCCR):
  - Refer to fault-current and coordination study submittal requirements listed in other parts of this section, in addition to specification section "Overcurrent Protective Device Coordination Study".
  - Rating value: Rated to withstand symmetrical short-circuit current available at terminals.
     Panelboards shall be fully-rated, unless series-rated is indicated on the drawings. SCCR shall not be less than the highest AIC rating of any circuit breaker in panelboard.

# 2.2 DISTRIBUTION PANELBOARDS

- A. Panelboards: NEMA PB 1, power and feeder distribution type.
- B. Doors: For doors more than 36 inches (914 mm) high, provide two latches, keyed alike.
- C. Mains: As indicated on drawings.
- D. Branch Overcurrent Protective Devices:
  - 1. Connection to bus:
    - a. For Circuit-Breaker Frame Sizes 125 A and Smaller: Bolt-on circuit breakers.
    - b. For Circuit-Breaker Frame Sizes Larger Than 125 A: Bolt-on circuit breakers; plug-in circuit breakers where individual positive-locking device requires mechanical release for removal.
  - 2. Type: Provide types as indicated on drawings and as defined below.

## E. Device Ratings:

- 1. Continuous ampere rating: as indicated on drawings.
- 2. Voltage and frequency rating: same as panelboard.
- 3. Short-circuit current rating (SCCR): Same as requirements for panelboard.

4. Ampere Interrupting Current (AIC) rating: Rated to interrupt symmetrical short-circuit current available at terminals. Panelboards shall be fully-rated, unless series-rated is indicated on the drawings.

### 2.3 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

- A. Panelboards: Circuit breaker type: NEMA PB 1, lighting and appliance branch-circuit type.
- B. Mains: As indicated on drawings.
- C. Branch Overcurrent Protective Devices:
  - 1. Connection to bus: Plug-in circuit breakers, replaceable without disturbing adjacent units.
  - Type: Provide types as indicated on drawings and as defined below.
- D. Device Ratings:
  - 1. Continuous ampere rating: as indicated on drawings.
  - 2. Voltage and frequency rating: same as panelboard.
  - 3. Short-circuit current rating (SCCR): Same as requirements for panelboard.
  - 4. Ampere Interrupting Current (AIC) rating: Rated to interrupt symmetrical short-circuit current available at terminals. Panelboards shall be fully-rated, unless series-rated is indicated on the drawings.

### 2.4 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

### A. Ratings:

- 1. Continuous ampere rating: as indicated on drawings.
- 2. Voltage and frequency rating: same as panelboard.
- 3. Short-circuit current rating (SCCR): Same as requirements for panelboard.
- Ampere Interrupting Current (AIC) rating: Rated to interrupt symmetrical short-circuit current available at terminals. Panelboards shall be fully-rated, unless series-rated is indicated on the drawings.
- B. Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with interrupting capacity to meet available fault currents.
  - Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
  - 2. Adjustable Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.
  - Electronic trip circuit breakers with rms sensing; field-replaceable rating plug or field-replicable electronic trip; and the following field-adjustable settings:
    - a. Instantaneous trip.
    - b. Long- and short-time pickup levels.
    - Long- and short-time time adjustments.
    - d. Ground-fault pickup level, time delay, and I<sup>2</sup>t response.
  - 4. Current-Limiting Circuit Breakers: Frame sizes 400 A and smaller; let-through ratings less than NEMA FU 1, RK-5.
  - 5. GFCI Circuit Breakers: Single- and two-pole configurations with Class A ground-fault protection (6-mA trip).
  - 6. Ground-Fault Equipment Protection (GFEP) Circuit Breakers: Class B ground-fault protection (30-mA trip).
  - 7. Arc-Fault Circuit Interrupter (AFCI) Circuit Breakers: Comply with UL 1699; 120/240-V, single-pole configuration.
  - 8. Molded-Case Circuit-Breaker (MCCB) Features and Accessories:
    - a. Standard frame sizes, trip ratings, and number of poles.
    - Lugs: Mechanical type unless otherwise indicated on Drawings, suitable for number, size, trip ratings, and conductor materials.

- Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and high-intensity discharge (HID) lighting circuits.
- d. Ground-Fault Protection: Relay and trip unit with adjustable pickup and time-delay settings, push-to-test feature, and ground-fault indicator.
  - 1) Mounting: Integral
- e. Shunt Trip: 120-V trip coil energized from separate circuit, set to trip at 55 percent of rated voltage.
- f. Undervoltage Trip: Set to operate at 35 to 75 percent of rated voltage without intentional time delay.
- g. Alarm Switch: Single-pole, normally open contact that actuates only when circuit breaker trips.
- h. Zone-Selective Interlocking: Integral with electronic trip unit; for interlocking ground-fault protection function with other upstream or downstream devices.
- Multipole units enclosed in a single housing or factory assembled to operate as a single unit.
- j. Handle Clamp: Loose attachment, for holding circuit-breaker handle in on position.
- C. Fused Switch: NEMA KS 1, Type HD; clips to accommodate specified fuses; lockable handle.
- D. Fuses are specified in Division 26 Section "Fuses."

# 2.5 FUSED LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS (30 TO 400A MAINS)

- A. Basis-of-Design Product: Subject to compliance with requirements, provide comparable products by one of the following, the first listed manufacturer was used as the basis of design:
  - Cooper Bussman Quik Spec Coordination Panelboards type QSCP
- B. Bus Bars: Shall be tin-plated copper.
- C. Panelboards: listed to UL 67
  - 1. Provide space behind locking door for a minimum of 6 spaces to store replacement branch circuit fuses.

### D. Mains:

- 1. Permanently installed lockout means shall be provided.
- 2. Quick-make, quick-break type.
- E. Branch Overcurrent Protective Devices:
  - Device shall have visible circuit ON/OFF indication with colored and international symbol markings
  - 2. Device shall provide open fuse indication via permanently installed neon or LED indicating light.
  - 3. Fuse and disconnect assembly shall be a finger-safe component with trim installed.
  - 4. No special tools shall be required for fuse removal.
  - 5. Devices shall have bolt-on style bus connectors.
  - 6. Device housing shall be clearly marked with device amperage.
  - Permanently installed lockout means shall be provided on the device for lockout tagout procedures. Permanently installed means for locking device in the ON position shall also be provided.
  - 8. Device shall provide fuse amp rating rejection at the following ampacities to ensure continued circuit protection at the specified circuit rating: 15A, 20A, 30A, 40A, 50A, 60A, 70A, 90A & 100A.
  - Branch circuit overcurrent protection shall be 600Vac UL Listed minimum 300kA IR and CSA Certified minimum 200kA IR finger-safe fuse with Class J\* performance characteristics. Cooper Bussmann UL class CF CUBEFuse meets this requirement.
- F. Device Ratings:
  - 1. Continuous ampere rating: as indicated on drawings.

- 2. Voltage and frequency rating: same as panelboard.
- 3. Short-circuit current rating (SCCR): Same as requirements for panelboard.
- 4. Ampere Interrupting Current (AIC) rating: Rated to interrupt symmetrical short-circuit current available at terminals. Panelboards shall be fully-rated, unless series-rated is indicated on the drawings.

## 2.6 SURGE PROTECTION DEVICES

- A. Provide surge protective devices as required by Division 26 Section "Surge Protective Devices".
- B. Panelboards requiring SPD and the location of the devices shall be as indicated on the Drawings.

## 2.7 ACCESSORY COMPONENTS AND FEATURES

- A. Accessory Set: Include tools and miscellaneous items required for overcurrent protective device test, inspection, maintenance, and operation.
- B. Portable Test Set: For testing functions of solid-state trip devices without removing from panelboard. Include relay and meter test plugs suitable for testing panelboard meters and switchboard class relays.

## 2.8 IDENTIFICATION

A. Nameplates: Nameplates and label products are specified in Division 26 Section "Identification for Electrical Systems."

# **PART 3 - EXECUTION**

# 3.1 EXAMINATION

- A. Examine panelboards before installation. Reject equipment that is damaged, or rusted, or have been subjected to water saturation.
- B. Examine areas, surfaces, substrates, and elements to receive panelboards with Installer present, for compliance with requirements for installation tolerances, structural support, ventilation, temperature, humidity, and other conditions affecting performance of the Work.
  - 1. Verify that field measurements are as indicated.
  - Verify that manufacturer's written instructions for environmental conditions have been permanently established in spaces where equipment will be installed, before installation begins.
- C. Examine roughing-in of conduits and grounding systems to verify the following:
  - 1. Wiring entries comply with layout requirements.
  - 2. Entries are within conduit-entry tolerances specified by manufacturer.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Install panelboards and accessories according to NEMA PB 1.1 and manufacturer's instructions.
- B. Coordinate layout and installation of equipment with other construction including conduit, piping, equipment, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.
- C. Comply with mounting and anchoring requirements specified in Division 26 Section "Seismic Controls for Electrical Systems."
- D. Wall-Mounted Panelboards: Install panelboards on walls with tops at uniform height unless otherwise indicated, and by bolting units to wall or mounting on lightweight structural-steel channels bolted to wall. For panelboards not at walls, provide freestanding racks complying with Division 26 Section "Hangers and Supports for Electrical Systems."
- E. Floor-Mounted Panelboards: Install panelboards on concrete bases.
  - Concrete Bases: 4 inches (100 mm) high, reinforced, with chamfered edges. Extend base
    no more than 3 inches (75 mm) in all directions beyond the maximum dimensions of
    panelboards unless otherwise indicated or unless required for seismic anchor support.
    Construct concrete bases according to Division 26 Section "Hangers and Supports for
    Electrical Systems."

- 2. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch (450-mm) centers around full perimeter of base.
- Install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete floor.
- Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
- 5. Install anchor bolts to elevations required for proper attachment to panelboards.
- 6. Attach panelboards to the vertical finished or structural surface behind the panelboards.
- F. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from panelboards.
- G. Mount top of trim 72 inches (1788 mm)above finished floor unless otherwise indicated.
- H. Mount panelboard cabinet plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.
- I. Install overcurrent protective devices and controllers not already factory installed.
- J. Install fuses in fusible devices.
- K. Install filler plates in unused spaces.
- L. Stub four 1-inch (27-GRC) empty conduits from panelboard into accessible ceiling space or space designated to be ceiling space in the future. Stub four 1-inch (27-GRC) empty conduits into raised floor space or below slab not on grade.
  - 1. Empty conduits shall be provided with pull strings.
  - 2. Cap and label empty conduits for future use.
- M. Arrange conductors in gutters into groups and bundle and wrap with wire ties.
- N. Comply with NECA 1.

### 3.3 CONNECTIONS

- A. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."
- B. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."
- C. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Install lacing bars and distribution spools for control wiring.

# 3.4 IDENTIFICATION

- A. Equipment Nameplates: Label each contiguous main, or entrance, section with equipment nameplate.
- B. Device Nameplates: Label each branch circuit device in distribution panelboards with a nameplate.
- C. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs as specified in Division 26 Section "Identification for Electrical Systems."
- D. Diagram and Instructions:
  - 1. Engraved, Laminated Acrylic or Melamine Label. Mount on front of panelboard.
    - Operating Instructions: Printed operating instructions for panelboard, including key interlocking, control sequences, elementary single-line diagram, and emergency procedures.
- E. Warning Labels: Label each panelboard with a warning label in accordance with NFPA 70 and NFPA 70E.
  - 1. Exception: Do not install NFPA 70 working clearance requirements on flush panelboards and similar equipment in finished spaces.
- F. Panel Directories

- Create a directory to indicate installed circuit loads; incorporate Owner's final room designations. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.
- 2. Note the date the directory was created/updated.
- 3. Create directory after loads have been balanced to reflect actual as-built conditions.
- 4. Circuit descriptions shall be per code and shall be distinguishable from all others.

#### 3.5 CLEANING

A. After completing equipment installation and before energizing, inspect unit components. Vacuum dirt and debris from interior of equipment; do not use compressed air to assist in cleaning. Remove paint splatters and other spots. Repair exposed surfaces to match original finish.

### 3.6 PROTECTION

A. Temporary Heating: Apply temporary heat to maintain temperature according to manufacturer's written instructions.

### 3.7 ADJUSTING

- A. Adjust moving parts and operable component to function smoothly, and lubricate as recommended by manufacturer.
- B. Set field-adjustable circuit-breaker trip ranges as specified in Division 26 Section "Overcurrent Protective Device Coordination Study."

### 3.8 FIELD QUALITY CONTROL

- A. Testing: Perform the following field quality-control tests and inspections:
  - Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, to assist in testing, and to assist in adjusting device settings.
- B. Acceptance Testing Preparation:
  - 1. After installing equipment but before equipment is energized, test for compliance with requirements.
  - 2. Verify that grounding system at the equipment tested at the specified value or less.
  - 3. Test insulation resistance for each bus, component, connecting supply, feeder, and control circuit.
  - 4. Test continuity of each circuit.

## C. Tests and Inspections:

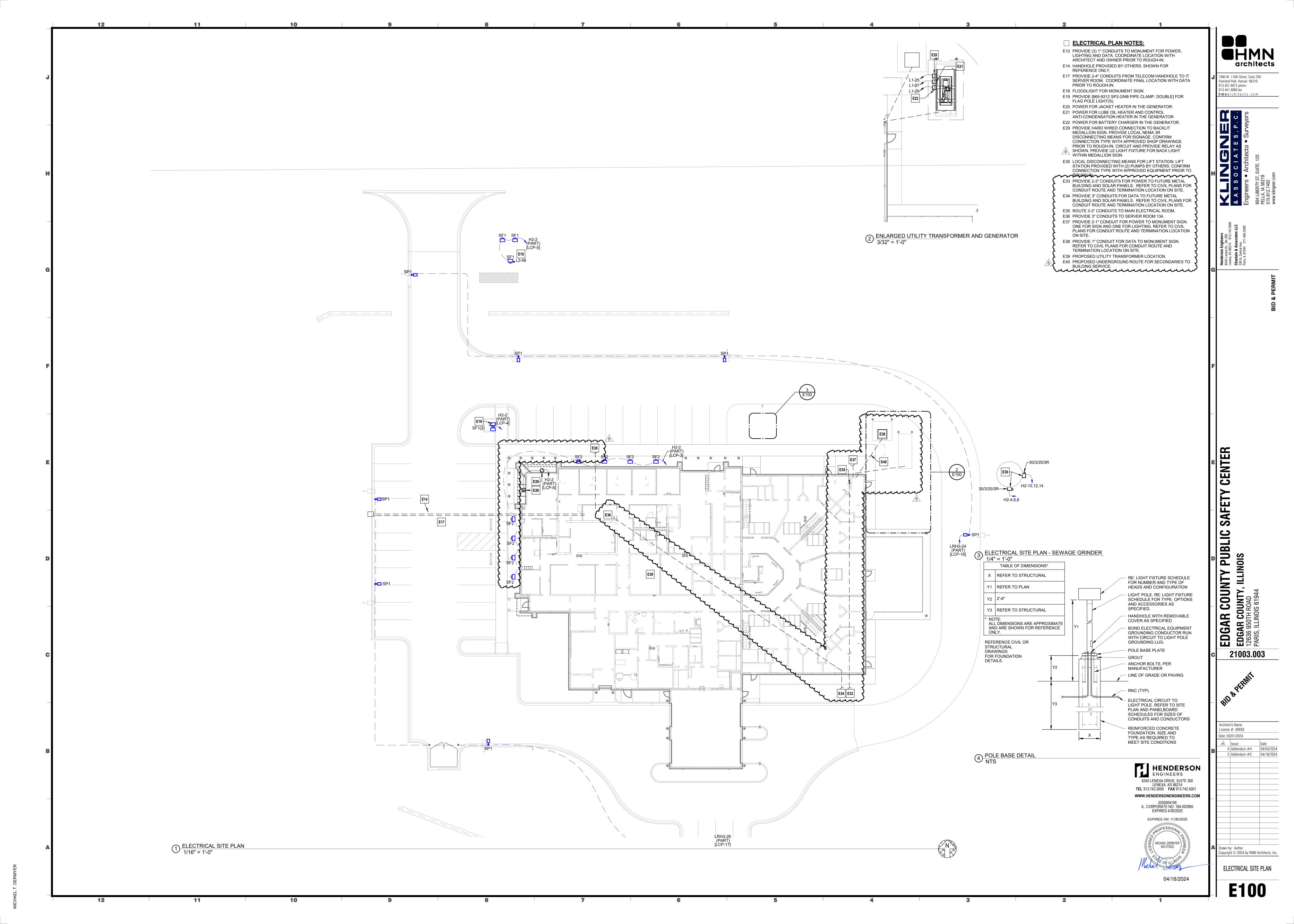
- 1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters. After electrical circuitry has been energized, test for compliance with requirements.
- 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
- 3. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.
- Report results of tests and inspections in writing. Record adjustable settings and measured insulation resistances. Attach a label or tag to each tested component indicating satisfactory completion of tests.
- D. Assist in field commissioning of equipment including pretesting and adjusting of equipment and components.
- E. Infrared Scanning: Perform the following infrared scan tests and inspections and prepare reports:
  - 1. Initial Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each panelboard. Remove front panels so joints and connections are accessible to portable scanner.
  - 2. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each panelboard 11 months after date of Substantial Completion.

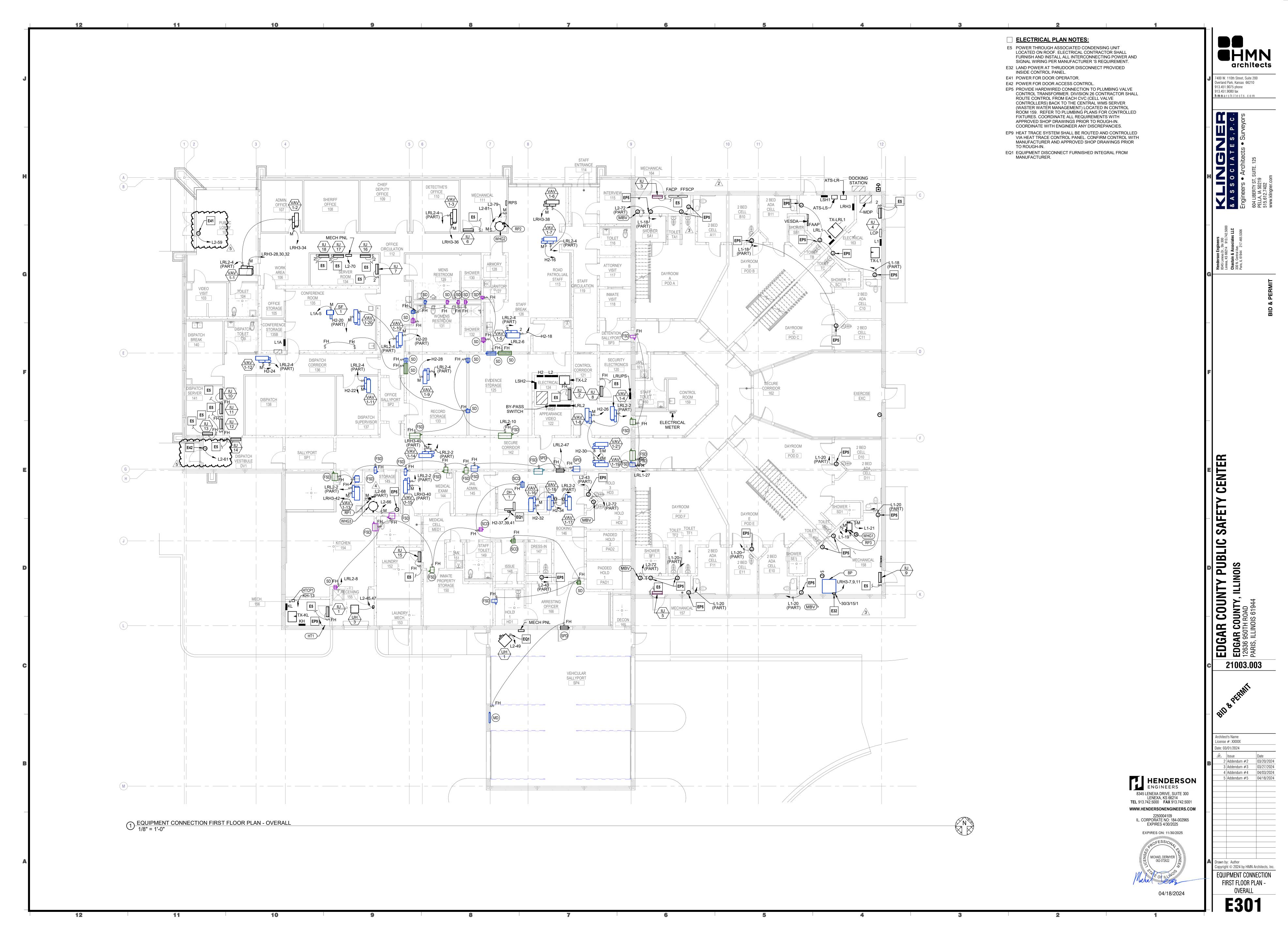
- Instruments and Equipment: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
- F. Voltage Monitoring and Adjusting: After Substantial Completion, if requested by Owner, but not more than six months after Final Acceptance, perform the following voltage monitoring:
  - During a period of normal load cycles as evaluated by Owner, perform seven days of threephase voltage recording at the main incoming section of each service entrance panelboard. Use voltmeters with calibration traceable to the National Institute of Science and Technology standards. Voltage unbalance greater than 1 percent between phases, or deviation of any phase voltage from the nominal value by more than plus or minus 5 percent during the test period, is unacceptable.
  - 2. Corrective Action: If test results are unacceptable, perform the following corrective action, as appropriate:
    - a. Rebalance loads.
    - b. Prepare written request for voltage adjustment by electric utility in accordance with Division 26 section "Provisions for Electric Utility Service".
  - 3. Retests: Repeat monitoring, after corrective action has been performed, until satisfactory results are obtained.
- G. Panelboards will be considered defective if they do not pass tests and inspections.
- H. Prepare test and inspection reports, including a certified report that identifies panelboards included and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

### 3.9 DEMONSTRATION

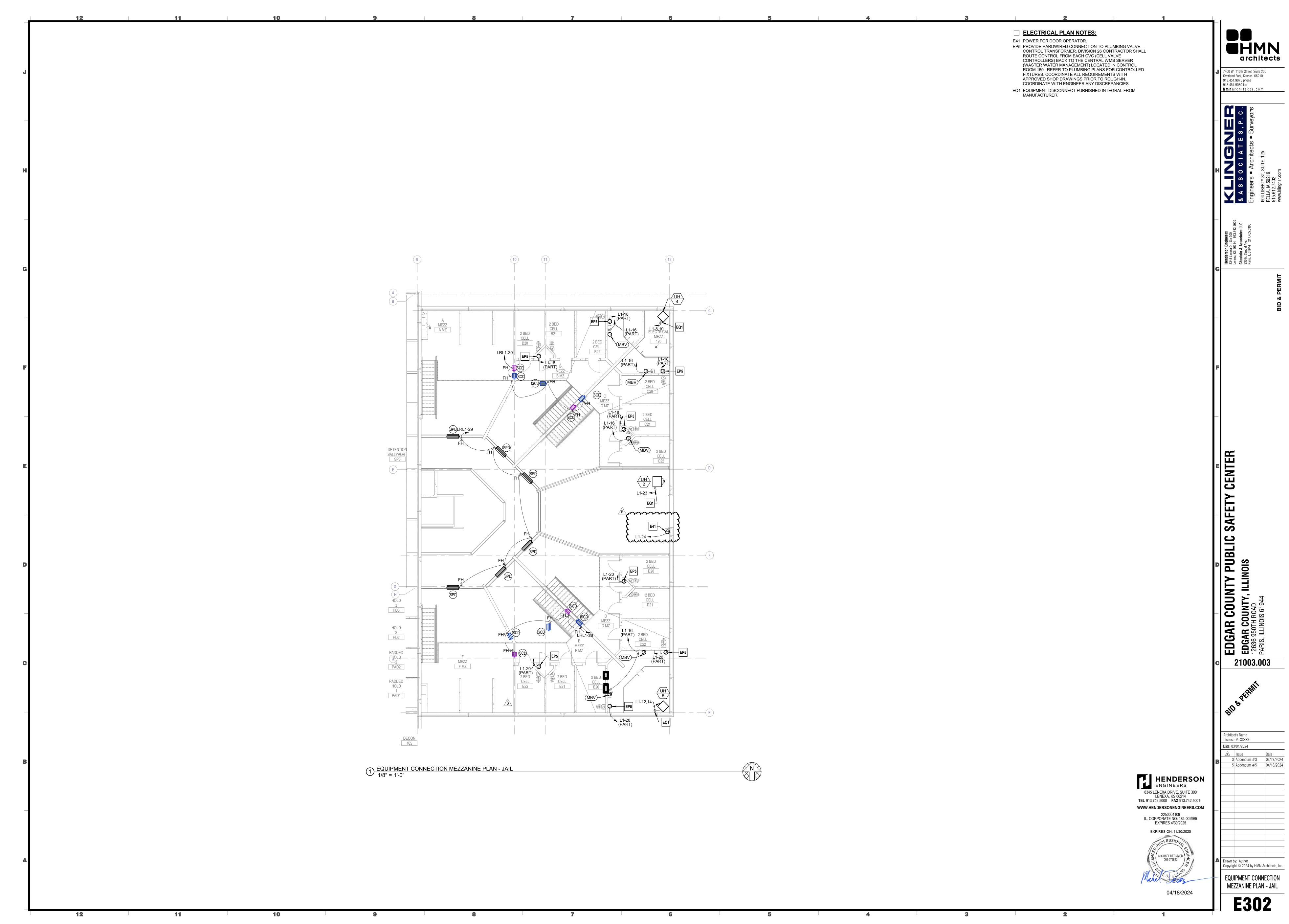
- A. Train Owner's maintenance personnel to adjust, operate, and maintain panelboards, overcurrent protective devices, instrumentation, and accessories.
- B. Video record demonstrations presentation for Owner's records.

#### **END OF SECTION 262416**





CHAEL T. DERMYER

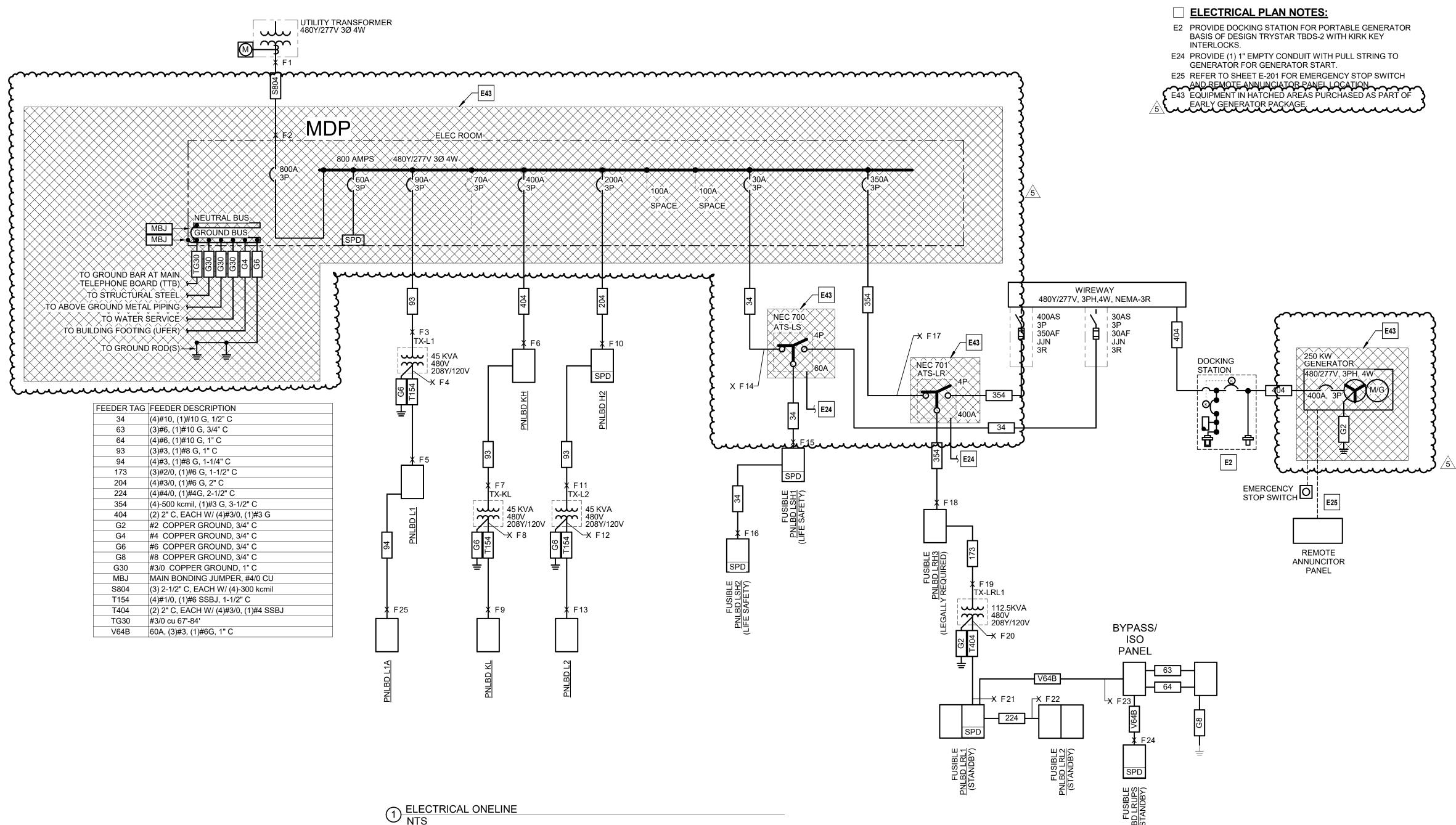


AICHAEL T. DERMYER

# EDGAR COUNTY, ILLINOIS EDGAR COUNTY PUBLIC SAFETY CENTER

12636 950TH ROAD PARIS, ILLINOIS 61944

**Short-Circuit and Voltage Drop Calculations** 



### **ONE-LINE DIAGRAM GENERAL NOTES:**

- THE INFORMATION SHOWN IN THE SHORT-CIRCUIT AND VOLTAGE DROP CALCULATIONS SCHEDULE IS SHOWN FOR CALCULATION PURPOSES ONLY. CONTRACTOR SHALL NOT USE THE CONDUIT TYPES, CONDUCTOR TYPES, SIZES, QUANTITIES OR LENGTHS FOR TAKEOFFS OR BIDDING PURPOSES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN THIS SCHEDULE AND OTHER PORTIONS OF THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL NOTIFY ENGINEER OF AS-BUILT CONDITIONS THAT CONSTITUTE A CHANGE FROM WHAT IS SHOWN BELOW; THIS INCLUDES CONDUCTOR LENGTHS DIFFERING BY MORE THAN 10%.
- REFER TO THE SHORT-CIRCUIT AND VOLTAGE DROP CALCULATIONS TABLE ON THIS SHEET. AVAILABLE FAULT CURRENT INFORMATION IS LISTED UNDER THE "FAULT CURRENT" COLUMN. VOLTAGE DROP VALUES ARE LISTED UNDER THE "CUMULATIVE VOLTAGE DROP" COLUMN. THE AIC/SCCR RATING OF THE EQUIPMENT SHALL NOT BE LESS THAN THE AVAILABLE 3-PHASE SYMMETRICAL FAULT CURRENT. ALL SERIES RATED EQUIPMENT SHALL BE PROPERLY LISTED AND LABELED PER CODE.
- FEEDER NUMBER DESIGNATIONS PRECEDED BY "V" INDICATE THAT THE CONDUCTORS ARE UP-SIZED DUE TO VOLT-DROP CONSIDERATIONS. PROVIDE LUG ADAPTERS AS NEEDED IN ORDER TO PROPERLY LAND CONDUCTORS AT TERMINATION(S).
- 4. FEEDER SIZES ARE BASED ON COPPER (CU) THHN/THWN-2 INSULATION. UNLESS NOTED OTHERWISE. CONDUIT SIZES SHOWN ARE APPROPRIATE FOR SCHEDULE 40 PVC, EMT, GRS, IMC AND RMC; ADJUST SIZE AS NEEDED FOR OTHER RACEWAY TYPES.
- BRANCH CIRCUIT SIZES ARE BASED ON COPPER (CU) THHN/THWN-2 INSULATION, UNLESS NOTED OTHERWISE. CONDUIT SIZES SHOWN ARE APPROPRIATE FOR SCHEDULE 40 PVC, EMT, GRS, IMC AND RMC; ADJUST SIZE AS NEEDED FOR OTHER RACEWAY TYPES. ALL CONDUCTOR SIZES ARE BASED ON 60 DEG C RATED TERMINATIONS, UNLESS NOTED OTHERWISE. FOR ANY OTHER CONDITIONS MODIFY SIZES PER CODE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- INSTALL FEEDERS OVERHEAD AS HIGH AS PRACTICABLE AND ORTHOGONALLY ALONG BUILDING STRUCTURE, UNLESS NOTED OTHERWISE. COORDINATE FINAL ROUTING WITH OTHER TRADES.
- PROVIDE A PERMANENT LABEL ON FRONT OF EQUIPMENT ENCLOSURE; REFER TO SPECIFICATIONS FOR LABEL REQUIREMENTS. LABEL SHALL READ AS FOLLOWS (INCLUDE RESPECTIVE NAMES IN BLANKS): SERVICE EQUIPMENT LABEL:
- **EXAMPLE**: 208Y/120V, 60HZ SCCR = 65,000A MAX AVAILABLE FAULT CURRENT = 58,815A
- CALCULATED: 01/01/2018 PANELBOARD/SWITCHBOARD LABEL:
- LINE 1: PANELBOARD "\_\_\_\_\_" SUPPLIED BY UPSTREAM LINE 2: PANELBOARD/SWITCHBOARD "\_\_\_\_ LINE 3: LOCATED IN " \_\_\_" SUPPLIES DOWNSTREAM LINE 4: PANELBOARD "\_ LINE 5: PANELBOARD(S) "\_\_\_\_
- TRANSFORMERS LABEL LINE 1: TRANSFORMER " " SUPPLIED BY UPSTREAM LINE 2: PANELBOARD/SWITCHBOARD "\_\_\_ LINE 3: LOCATED IN " LINE 4: TRANSFORMER "\_\_\_\_\_" SUPPLIES DOWNSTREAM LINE 5: PANELBOARD(S) "\_\_\_\_\_"

## **ELECTRICAL UTILITY CONTACT NOTE:**

**UTILITY COMPANY: ENERSTAR** UTILITY CONTACT: [???] PHONE: [???] EMAIL: [???]

FAULT CURRENT GENERAL NOTE (ESTIMATED VALUE): THE MAXIMUM AVAILABLE 3-PHASE SYMMETRICAL FAULT CURRENT VALUE AT THE UTILITY TRANSFORMER SECONDARY/POINT OF SERVICE COULD NOT BE DETERMINED AT THE TIME OF THIS SUBMITTAL. THE ESTIMATED WORST CASE VALUE OF 17,183A IS BASED ON AN INFINITE BUS CALCULATION AT THE UTILITY TRANSFORMER, CONTRACTOR SHALL VERIFY ACTUAL AVAILABLE FAULT CURRENT VALUE WITH UTILITY. NOTIFY ENGINEER IF ACTUAL VALUE EXCEEDS ESTIMATED CALCULATED VALUE. ESTIMATED DESIGN VALUE IS BASED ON THE

UTILITY TRANSFORMER SECONDARY VOLTAGE: 480Y/277V, 3Ø, 4W UTILITY TRANSFORMER SIZE: 500 Z=3.5%

# OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY GENERAL NOTE

CONTRACTOR SHALL PROVIDE AN OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY TO DETERMINE THE CORRECT SETTINGS FOR THE ADJUSTABLE TRIP CIRCUIT BREAKERS, TO ENSURE SELECTIVE COORDINATION AND TO DOCUMENT ARC-FLASH HAZARDS. CODE REQUIRED EMERGENCY AND LEGALLY REQUIRED STANDBY SYSTEMS SHALL BE SELECTIVELY DEVICES (APPLIES TO BOTH THE NORMAL AND EMERGENCY POWER SOURCES). PROVIDE ALL NECESSARY AS-BUILT INFORMATION DOING THE STUDY. PROVIDE SUBMITTALS INDICATED WITHIN THE SPECIFICATIONS TO OWNER AND ARCHITECT/ENGINEER TO CONFIRM STUDY HAS BEEN COMPLETED. CONTRACTOR SHALL INCLUDE THE COST FOR THIS WORK IN THEIR BID. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

## ONE-LINE DIAGRAM SUPPLEMENTAL SPECIFICATIONS

- 1. GROUNDING ELECTRODE SYSTEM SHALL BE PER LOCAL REQUIREMENTS AND SHALL NOT BE LESS STRINGENT THAN THAT SPECIFIED IN THE CONSTRUCTION DOCUMENTS.
- BREAKERS, AND OTHER ELECTRICAL DEVICES TO ACCOMMODATE INSTALLED CONDUCTORS. A LARGER FRAME, OVERSIZED LUGS OR NON-STANDARD PRODUCT MAY BE REQUIRED IN SOME INSTANCES. UTILIZE PIN ADAPTERS ONLY IF NECESSARY AND ONLY AS ALLOWED BY MANUFACTURER AND AHJ.
- 3. PROVIDE ANY AVAILABLE SPACE IN SWITCHBOARDS/PANELBOARDS WITH BUSSING. 4. PROVIDE TYPED FINAL CIRCUIT DIRECTORY FOR ALL PANELBOARDS TO REFLECT ACTUAL AS-BUILT CONDITIONS. COORDINATE FINAL ROOM NAMES. NUMBERS AND DESCRIPTIONS WITH OWNER PRIOR TO COMPLETION. CIRCUIT DESCRIPTIONS SHALL BE PER CODE AND SHALL BE DISTINGUISHABLE FROM ALL OTHERS.

Distances	are for calculation purposes only and shall not be	e used for conti	ractor tak	eoffs nor bidd	ing - Contrac	ctor shall noti	fy Engineer of any field	condition that res	sults in a chang	e of 10% or gre	eater circui	t distance																	
	The following calculations are based on the "Point	t-by-Point" met	thod wher	re:														VOLTAGE	DROP (3Ø):										
1	ISC (2) = ISC(1) x M(1)	•	M= 1/(1+			Fe	eder: f (3Ø) = <u>1.73</u>	2 x L x Isc		XFMR:	f (3Ø) =	= IP(sca)x V	/p x 1.73 x %Z		IS(sca)=	Vp x M x IP(so			, ,	arccos(pf)	+ X x sin (arccos(pf))	)) x L/# x l x 1.7	73) / E						
1	ISC (1) = short circuit current at fault point 1			,			C x I				()	100,000 x			,	Vs	•	VOLTAGE		. ,	( ( )	,,	- / -						
	ISC (2) = short circuit current at fault point 2					Fe	eder: f (1Ø)= 2 x L			XFMR:	f (1Ø)=	= <u>IP(sca)x V</u>							, ,		+ X x sin(arccos(pf)))	) x 2 x   /# x  ) /	/ F						
							C x I			74 11114	. (12)	100,000 x						7012	((117	u10000(p1),	, * ,	, , , , , , , , , , , , , , , , , , , ,	_						
	E = Line to line volts																												
	IP = Primary short circuit current																												
	Vp = Primary voltage																												
	IS= Secondary short circuit current																	9	6VD CUM =	Cumulati	ve Voltage Drop from	Fault Point 1 t	to Fault Point #	#					
	Vs= Secondary voltage																		R =	resistanc	e in ohms per LF								
	L = Length of circuit																		X =	reactanc	es in ohms per LF								
	C = "C" Factor from Bussman table where	re "C" = 1 / im	pedance	per linear foot																									
	Feeder Types: NM - Non Magnetic Conduit, M - M	lagnetic Condu	uit, FB - F	· eeder Busway	y, PB - Plug-i	in Busway, T	X - Transformer																						
	System Voltage: 480Y/277V - 3 phase	<b>J</b>	,	•	,, 3	,																							
Fault		Source		Source Isc			Feeder		Conductor	Busway 'C'	L-L	Circuit	Load Power	Circuit Load		Conductor					Transformer					Fault	Voltage	Cumulative	Fault
Point	Bus/Feeder Description	(Fault	Phase	(amps)	Conduit		Quantity of Parallel		'C' Value	Value Value	Voltage	Length	Factor (pf)		Resistance	Reactance	Arccos (pf)	Туре	Degree	kVA	New Xfmr Existing		Tap Setting	f f	M	Current	Drop (%VD)	Voltage Drop	Point
(F#)		Point)		( 1 - 7	Type/ TX	Material	Phase & Neur	tral Size			(E)	(L)	(I. )	( 1337)	(R)	(X)	(Radians)	Турс	Rise	NYA	Z Xfmr Z	Voltage	Tap Octang	3		(amps)	,	(%VD)	(F#)
1	Utility Service Point			17,183	at the secor	ndary of the ι	utility transformer																Source Isc +	+ 6X Motor C	ontribution =	20,063	3		1
	Motor Contribution			480	The connec	cted full load	motor amps (includes c	ompressors) on t	the system																				
2	TO MDP	1	3	20,063	NM	CU	4 Set(s) of 350	kcmil	22737		480	40	0.9	960	0.000038	0.000040	0.451027							0.032	0.97	19,444	-0.18%	-0.18%	2
3	TO TX-L1 PRIMARY	2	3	19,444	М	CU	1 Set(s) of 3	AWG	4774		480	10	0.7	72	0.000250	0.000059	0.795399							0.147	0.87	16,952	-0.06%	-0.24%	3
	TX-L1 SECONDARY	3	3	16,952	TX						480							DOE	150	45	3.51	208		10.993	0.08	3,262		-0.24%	4
	TO PANELBOARD L1	4	3	3,262	М	CU	1 Set(s) of 1/0	AWG	8925		208	10	0.7	120	0.000120	0.000055	0.795399							0.030	0.97	3,166	-0.12%	-0.36%	5
	TO KH	2	3	19,444	NM	CU	2 Set(s) of 3/0	AWG	13923		480	175	0.9	320	0.000077	0.000042	0.451027							0.441	0.69	13,494	-0.89%	-1.06%	6
	TO TX-KL PRIMARY	6	3	13,494	M	CU	1 Set(s) of 3	AWG	4774		480	10	0.7	72	0.000250	0.000059	0.795399							0.102	0.91	12,245	-0.06%	-1.12%	7
	TX-KL SECONDARY	7	3	12,245	TX						480							DOE	150	45	3.51	208		7.940	0.11	3,161		-1.12%	8
9	TO PANELBOARD KL	8	3	3,161	М	CU	1 Set(s) of 1/0	AWG	8925		208	10	0.7	120	0.000120	0.000055	0.795399							0.029	0.97	3,070	-0.12%	-1.24%	9
10	TO H2	2	3	19,444	М	CU	1 Set(s) of 3/0	AWG	12844		480	95	0.9	160	0.000079	0.000052	0.451027							0.519	0.66	12,801	-0.51%	-0.69%	10
11	TO TX-L2 PRIMARY	10	3	12,801	М	CU	1 Set(s) of 3	AWG	4774		480	10	0.7	72	0.000250	0.000059	0.795399							0.097	0.91	11,672	-0.06%	-0.75%	11
12	TX-L2 SECONDARY	11	3	11,672	TX						480							DOE	150	45	3.51	208		7.569	0.12	3,143		-0.75%	12
13	TO PANELBOARD L2	12	3	3,143	М	CU	1 Set(s) of 1/0	AWG	8925		208	10	0.7	120	0.000120	0.000055	0.795399							0.029	0.97	3,054	-0.12%	-0.87%	13
14	TO ATS-LS	2	3	19,444	М	CU	1 Set(s) of 8	AWG	1557		480	46	0.9	30	0.000780	0.000065	0.451027							2.073	0.33	6,328	-0.36%	-0.54%	14
	TO LSH1	14	3	6,328	М	CU	1 Set(s) of 8	AWG	1557		480	5	0.9	30	0.000780	0.000065	0.451027							0.073	0.93	5,895	-0.04%	-0.58%	15
	TO LSH2	15	3	5,895	M	CU	1 Set(s) of 8	AWG	1557		480	105	0.9	30	0.000780	0.000065	0.451027							1.435	0.41	2,421	-0.83%	-1.41%	16
	TO ATS-LR	2	3	19,444	M	CU	2 Set(s) of 3/0	AWG	12844		480	50	0.9	320	0.000079	0.000052	0.451027							0.137	0.88	17,108	-0.27%	-0.45%	17
	TO LRH3	17	3	17,108	M	CU	2 Set(s) of 3/0	AWG	12844		480	5	0.9	320	0.000079	0.000052	0.451027							0.012	0.99	16,904	-0.03%	-0.48%	18
	TO TX-LRL1 PRIMARY	18	3	16,904	M	CU	1 Set(s) of 2/0	AWG	10755		480	45	0.7	100	0.000100	0.000054	0.795399							0.255	0.80	13,467	-0.18%	-0.65%	19
	TX-LRL1 SECONDARY	19	3	13,467	TX						480							DOE	150	112.5	4.37	208		4.349	0.19	5,810		-0.65%	20
	TO LRL1	20	3	5,810	M	CU	2 Set(s) of 3/0	AWG	12844		208	10	0.7	48	0.000079	0.000052	0.795399							0.019	0.98	5,703	-0.02%	-0.67%	21
	TO LRL2	21	3	5,703	M	CU	1 Set(s) of 4/0	AWG	15082		208	88	0.7	48	0.000063	0.000051	0.795399							0.277	0.78	4,465	-0.28%	-0.95%	22
	TO BYPASS PANEL	21	3	5,703	M	CU	1 Set(s) of 6	AWG	2425		208	70	0.7	48	0.000490	0.000064	0.795399							1.371	0.42	2,405	-1.09%	-1.76%	23
	TO LRUPS	23	3	2,405	M	CU	1 Set(s) of 6	AWG	2425		208	10	0.7	48	0.000490	0.000064	0.795399							0.083	0.92	2,222	-0.16%	-1.91%	24
	TO L1A	5	3	3,166	M	CU	1 Set(s) of 3	AWG	4774		208	180	0.7	48	0.000250	0.000059	0.795399							0.994	0.50	1,588	-1.56%	-1.92%	25
	TO RTU-1	18	3	16,904	M	CU	1 Set(s) of 4	AWG	3806		480	180	0.85	64	0.000310	0.000060	0.554811							2.885	0.26	4,351	-1.23%	-1.70%	26
	TO RTU-2	18	3	16,904	IM	CU	1 Set(s) of 8	AWG	1557		480	55	0.85	36	0.000780	0.000065	0.554811							2.155	0.32	5,358	-0.50%	-0.97%	27
28	TO RTU-3	18	3	16,904	M	CU	1 Set(s) of 8	AWG	1557		480	115	0.85	36	0.000780	0.000065	0.554811							4.505	0.18	3,071	-1.04%	-1.52%	28

BUILDING OCCUPANCY: OFFICE	BUILDING		SERV	ICE VOLTAGE:
BUILDING SQUARE FOOTAGE: 2	22600		4	80Y/277 V
LOAD TYPE	CONNECTED LOAD		MAND	NEC DEMAND
EXISTING LOAD (E)	0 VA	1	100%	0 VA
COOLING (C)	130533 VA	1	100%	130533 VA
HEATING (H)	79009 VA		0%	0 VA
LIGHTING (L) (PER NEC-220)	79100 VA	1	125%	98875 VA
RECEPTACLES (R)	63320 VA	;	58%	36660 VA
MOTORS (M)	38761 VA	1	100%	38761 VA
SUPPLEMENTAL HEAT (U)	8342 VA	1	100%	8342 VA
MISC EQUIP (Z)	98944 VA	1	100%	98944 VA
REFRIGERATION (F)	0 VA	1	100%	0 VA
SIGNAGE (S)	0 VA	1	125%	0 VA
KITCHEN (K)	15983 VA	1	100%	15983 VA
LARGEST MOTOR	9909 VA	1	125%	12386 VA
SHOW WINDOW (W)	0 VA	1	125%	0 VA
TRACK LIGHTING	0 VA	1	100%	0 VA
TOTAL LOAD	523901		VA	440484
TOTAL AMPACITY	630	А	MPS	530
SERVICE AMPACITY		A	MPS	800
SPARE CAPACITY		A	MPS	270

HENDERSON ENGINEERS 8345 LENEXA DRIVE. SUITE 300 LENEXA, KS 66214
TEL 913.742.5000 FAX 913.742.5001 WWW.HENDERSONENGINEERS.COM



ELECTRICAL ONELINE 04/18/2024

A Drawn by: Author

**E500** 

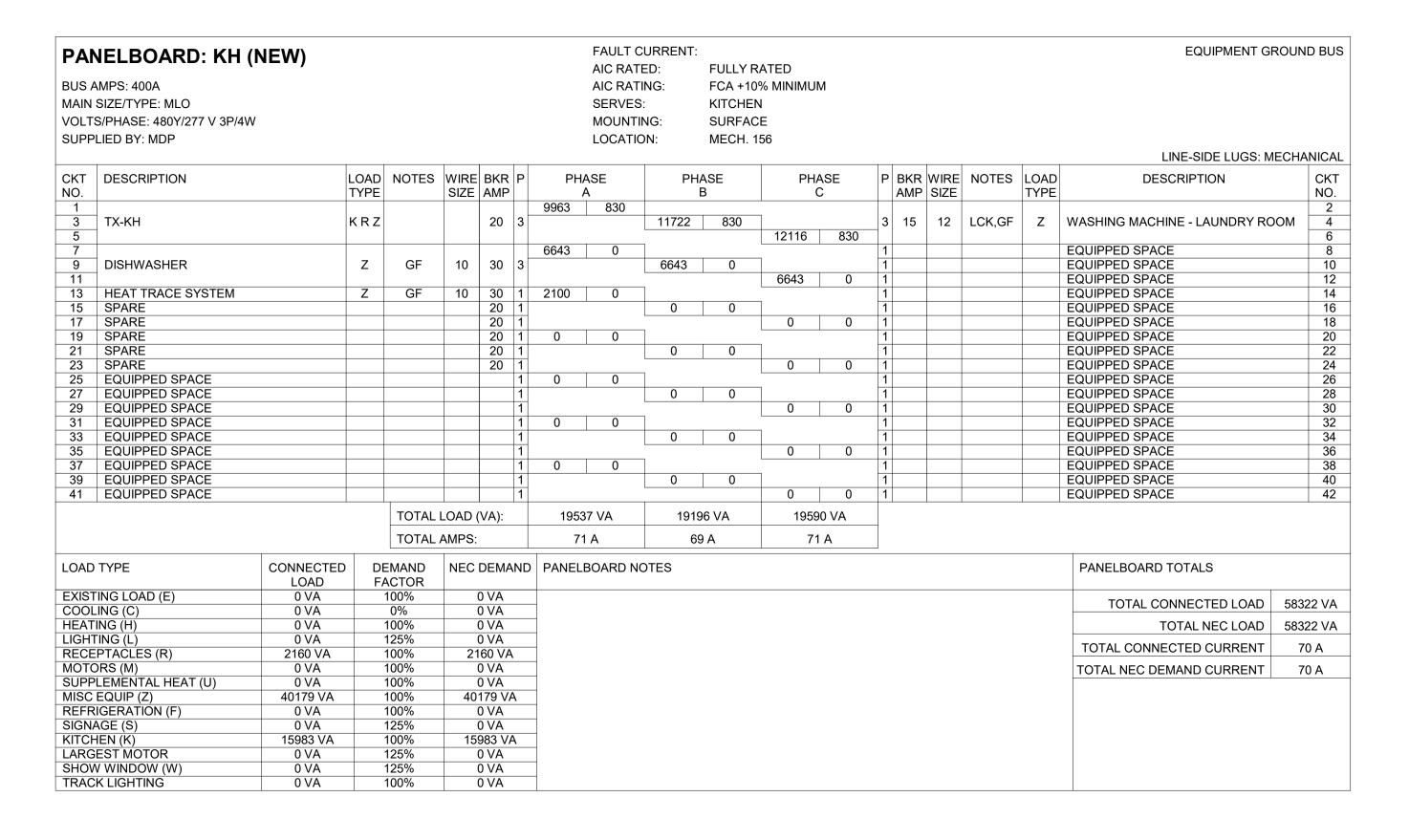
Overland Park, Kansas 66210 913.451.9075 phone 913.451.9080 fax **hmn**architects.com

CENTER

EDGAR COUNTY PUBLIC S

EDGAR COUNTY, ILLINOIS
12636 950TH ROAD
PARIS, ILLINOIS 61944

21003.003



PAN	IELBOARD: KL						FAULT AIC RA	CURRENT: TED:	FULLY R	ATED						EQUIPMENT G	ROUND BU
BUS A	MPS: 225A						AIC RA			% MINIMUM	1						
	SIZE/TYPE: 150A MCB						SERVE		KITCHE		•						
	S/PHASE: 208Y/120 V 3P/4W						MOUN <sup>-</sup>		SURFAC								
SUPP	LIED BY: KH VIA TX-KL						LOCAT	ION:	MECH. 1	56						LINE-SIDE LUGS: N	MECHANICA
01/7	DECODIDEION			NOTEO		DICE 5	BUAGE			D		D DICE		NOTES			
CKT	DESCRIPTION		LOAD	NOTES		BKR F			ASE	PHA		P BKR		NOTES	LOAD		CK
NO.	DODT DM 454 NODTH		TYPE			AMP	A		В	C			SIZE		TYPE		NO
1	RCPT-RM 154, NORTH		R		12	20 1	540 0	720	0	7		1 20			-	SPARE (GF)	2
3	RCPT-RM 155, 156		R		12	20 1		720	0	000	0	1 20			+	SPARE (GF)	4
5 7	RCPT-RM 154, SOUTH ICE MAKER		R Z	GF	12 12	20 1 20 1	500 0	$\neg$		900	0	1 20			+	SPARE (GF) SPARE	6 8
9	OVERHEAD DOOR - KITCH	JENI	Z	GF	12	20 1	500 0	754	0	7		1 20				SPARE	10
<u>9</u> 11	GVERTILAD DOOR - KITCH	ILIN	-		12	20	_	7 04	U	528	0	1 20				EQUIPPED SPACE	12
13	FOOD DISPOSER		K	GF	12	20 3	528 0	$\neg$		320	U	1				EQUIPPED SPACE	14
15	1 000 DIGI OOLIK		'`	OI .	12	20	020 0	528	0	7		1				EQUIPPED SPACE	16
17	OVEN, FOOD WARMING E	QUIPMENT	Z	GF	10	30 2		020		2288	0	1				EQUIPPED SPACE	18
19		QUII III.	_	O.	.0	"	2288 0	$\neg$		2200		1				EQUIPPED SPACE	20
21								4800	0	1		1				EQUIPPED SPACE	22
23	OVEN-MODEL 10-10EVH		K	GF	6	55 3				4800	0	1				EQUIPPED SPACE	24
25							4800 0					1				EQUIPPED SPACE	26
27	INDUCTION RANGE - COU	NTER TOP	Ζ	GF	8	40 2		3037	0	]		1				EQUIPPED SPACE	28
29										3037	0	1				EQUIPPED SPACE	30
31	FRIDGE - MODEL RB72HC	-1S	Z	GF	12	20 1	744 0					1				EQUIPPED SPACE	32
33	FRIDGE - MODEL HBF44H0	C-1	Z	GF	12	20 1		1320	0			1				EQUIPPED SPACE	34
35	SPARE (GF)					20 1				0	0	1				EQUIPPED SPACE	36
37							564 0			_		1				EQUIPPED SPACE	38
39	DRYER - LAUNDRY ROOM		Z	GF	12	15 3		564	0			1				EQUIPPED SPACE	40
41										564	0	1				EQUIPPED SPACE	42
				TOTAL I	LOAD	(VA):	9963 VA	117	22 VA	12116	S VA						
				TOTAL	AMPS:		83 A	10	00 A	103	Α						
LOAD	TYPE	CONNECTED		EMAND ACTOR	NEC	DEMAN	D PANELBOARD I	NOTES								PANELBOARD TOTALS	
EXIST	ING LOAD (E)	0 VA		100%		0 VA											
	ING (C)	0 VA		0%		0 VA										TOTAL CONNECTED LOAD	33802 VA
	ING (H)	0 VA		100%		0 VA										TOTAL NEC LOAD	33802 VA
LIGHT	ING (L)	0 VA	•	125%		0 VA											
	PTACLES (R)	2160 VA		100%		160 VA										TOTAL CONNECTED CURRENT	94 A
	PRS (M)	0 VA		100%		0 VA										TOTAL NEC DEMAND CURRENT	94 A
	LEMENTAL HEAT (U)	0 VA		100%		0 VA											
	EQUIP (Z)	15659 VA		100%		659 VA											
	IGERATION (F)	0 VA		100%		0 VA											
	AGE (S)	0 VA		125%		0 VA											
	IEN (K)	15983 VA		100%		983 VA											
	EST MOTOR	0 VA		125%		0 VA	_										
	/ WINDOW (W)	0 VA		125%		0 VA											
IKAC	K LIGHTING	0 VA	1	100%	1	0 VA											

PANELBOARD: H	2					FAULT C	CURRENT: ED:	FULLY R	ATED						EQUIPMENT GRO	UND BUS
BUS AMPS: 225A						AIC RAT	ING:	FCA +10	% MINIMUN	Л						
MAIN SIZE/TYPE: MLO						SERVES	):	OFFICE								
VOLTS/PHASE: 480Y/277 V 3F	P/4W					MOUNTI	NG:	SURFAC	E							
SUPPLIED BY: MDP						LOCATIO		ELECTR								
OOI I EIED DI. WIDI						200/1110		LLLOTT	O/ (E 124						LINE-SIDE LUGS: MEC	HANICAL
CKT DESCRIPTION NO.		LOAD TYPE		WIRE BKR P		ASE A	PHA B	SE	PHA C	ASE C		KR WIRE		LOAD TYPE		CKT NO.
1					18295	1279			1		1 2	0 10	VD,RP	L	LTG - FLAG POLE, MONUMENT, WALL	2
3 TX-H2				OL 90 3			19866	2891								4
5							_		14730	2891	3 2	0   12		М	LIFT STATION (PUMP 1)	6
7 LTG-RM 125, 133		L		12 20 1	588	2891			1							8
9 LTG-RMS 129, 131, 12		L		12 20 1			335	2891	212			_				10
11 LTG-RMS 107 THROU		L		12 20 1		2001	7		210	2891	3 2	0   12		М	LIFT STATION (PUMP 2)	12
13 LTG-RMS 101, 103, 10-		L		12 20 1	285	2891			1							14
15 LTG-RMS 154, 155, 14		L L		12 20 1			935	800	000	1000	1 1			H	VAV 1-7	16
17 LTG-RMS 126, 113, 11.		L L		12 20 1	070	2000	7		696	4800	1 2			Н	VAV 1-5	18
19 LTG-RMS 146, 150, 14	<u>,                                      </u>	L		12 20 1	872	2000	000	4000	1		1 1			H	VAV 1-10, 1-20	20
21 LTG-SALLYPORT & DE		L		12 20 1			689	1600	400	000	1 1			H	VAV 1-11	22
23 LTG-RMS 136 THROU	GH 141	L		12 20 1	200	500	٦		480	900	1 1			H	VAV 1-12	24
25 LTG-RMS 142, DV1	C 447 404	L		12 20 1	392	500	400	000	1		1 1			H	VAV 1-8	26
27 LTG-RMS 119, 115, 11	0, 117, 121	L		12 20 1			408	900	FG	1007	1 1			H	VAV 1-9	28
29 LTG-RM 162, 160		L		12 20 1	416	3200	٦		56	1997	1 1			H	VAV 1-19, 1-21 VAV 1-16	30
31 33 PWR - MUA-1 ON ROC	ne ne	M		12   15   3	410	3200	416	2100	1		1 2			Н	VAV 1-10 VAV 1-17, 1-18	32 34
35 FWIN - MOA-1 ON NOC	JI	IVI		12   13   3			410	2100	416	0	1 2			11	SPARE	36
37					10000	0	٦		410		1 2				SPARE	38
39 PWR - DH-1 BOOKING	146	Н		6 50 3	10000		10000	0	1		1 2				SPARE	40
41	140	''					10000	0	10000	0	1 2				SPARE	42
71			TOTAL	LOAD (VA):	436	I0 VA	43832	Σ \/Δ	4006		1 2	<u> </u>			OI / WAL	72
			TOTAL			9 A	160		145							
		Τ									J					
LOAD TYPE	CONNECTED LOAD	F/	EMAND ACTOR	NEC DEMANI	PANEL	BOARD N	JIES								PANELBOARD TOTALS	
EXISTING LOAD (E)	0 VA		100%	0 VA											TOTAL CONNECTED LOAD 12	27510 VA
COOLING (C)	3459 VA 53797 VA		0% 100%	0 VA												
HEATING (H) LIGHTING (L)	7325 VA		125%	53797 VA 9156 VA											TOTAL NEC LOAD 1	17531 VA
RECEPTACLES (R)	31040 VA		66%	20520 VA											TOTAL CONNECTED CURRENT	153 A
MOTORS (M)	16909 VA		100%	16909 VA											TOTAL NEC DEMAND CURRENT	141 A
SUPPLEMENTAL HEAT (U)	1666 VA		100%	1666 VA											TOTAL NEC DEMAND CORRENT	141 A
MISC EQUIP (Z)	4640 VA		100%	4640 VA												
REFRIGERATION (F)	0 VA		100%	0 VA												
SIGNAGE (S)	0 VA		125%	0 VA												
KITCHEN (K)	0 VA		100%	0 VA												
LARGEST MOTOR	8674 VA		125%	10843 VA												
SHOW WINDOW (W)	0 VA		125%	0 VA												
TDACK LICHTING	0 \/ \		1000/	0 1/4	_											

PANELBOARD: L2							CURRENT:	EULLVD	ATED						EQUIPMENT GRO	OUND BUS
US AMPS: 225A						AIC RAT		FULLY R	ATED % MINIMU	N/I						
AIN SIZE/TYPE: 150A MCB						SERVES		OFFICE	70 IVIIINIIVIO	IVI						
OLTS/PHASE: 208Y/120 V 3P/4W						MOUNTI		SURFAC	_							
UPPLIED BY: H2 VIA TX-L2						LOCATION		ELECTRI								
DEFELIED BT. FIZ VIA TA-LZ						LOCATIO	JIN.	ELECTRI	ICAL 124						LINE-SIDE LUGS: MEC	CHANICAL
T DESCRIPTION	LOAD	NOTES			PH	ASE	PHA			ASE			NOTES	LOAD	DESCRIPTION	СКТ
D. RCPT-LOBBY 101 NORTH	TYPE	VD		AMP 1		A	В	3		<u> </u>		SIZE	VD	TYPE	DODT OFFICE 440	NO.
1 RCPT-LOBBY 101 NORTH 3 RCPT-LOBBY 101 & 103 SOUTH	R R	VD VD	10	20 1	540	900	720	360	1		1 20	10	VD	R	RCPT-OFFICE 110 RCPT-STAFF BREAK FLOOR - NORTH	2
5 RCPT-DISPATCH BREAK 140 AC	R	VD	10	20 1	1		120	000	720	360	1 20	12		R	RCPT-STAFF BREAK FLOOR - SOUTH	
7 RCPT-COFFEE MAKER 140	R	VD	10	20 2	900	720					1 20	12		R	RCPT-RM 113 NW WALL	8
9							900	1080			1 20	12		R	RCPT-RM 111, 112, 136, 137	10
1 RCPT-DISPATCH BREAK FRIDGE 140	Z		12	20 1	700	000	٦		800	800	1 20	12	GF	Z	DRINKING FOUNTAIN, RM 112	12
3   RCPT-RM 117, 119 5   RCPT-RM 140, 141, DV1	R R	VD	12 10	20 1	720	360	540	900	1		1 20	12 12		R	RCPT-RESTROOMS 129 & 131 RCPT-RM 126, 127	14 16
7 RCPT-DISPATCH 138 NORTH	R	VD	10	20 1	1		040	300	720	180	1 20	12	GF	R	RCPT-MIRCOWAVE, BREAK ROOM 12	
9 RCPT-DISPATCH 138 SOUTH	R	VD	10	20 1	720	1000					1 20	12	_	R	RCPT-COFFEE MAKER, RM 126	20
1 RCPT-DISPATCH SUPERVISOR 137	R		12	20 1	1		360	540			1 20	12		R	RCPT-ARRESTING OFFICER RM 166	22
3 RCPT-COPIER/PRINTER WORK AREA S	R		12	20 1	900	720	٦		800	180	1 20	12 12	GF	Z	RCPT-FRIDGE RM 126	24
5 RCPT-COPIER/PRINTER WORK AREA N 7 RCPT-WORK AREA AC	R R		12 12	20 1 20 1	800	120	360	360	1		1 20	12		R	RCPT-RM 113 EAST WALL RCPT-RM 113 EAST WALL NORTH	26 28
9 RCPT-OFFICE 107	R	VD	10	20 1	1		000	000	720	1080	1 20	12		R	RCPT-RM 123, 124, 133	30
1 RCPT-OFFICE 108	R	VD	10	20 1	900	900					1 20	12		R	RCPT-MEDICAL EXAM 144	32
RCPT-OFFICE 109	R	VD	10	20 1			900	800			1 20	12		Z	RCPT-MEDICAL EXAM 144, FRIDGE	34
5 RCPT-RM 121, N & E	R		12	20 1	4000	000	٦		720	800	1 20	12	\/D	Z	AUTOMATED MEDICINE DISPENSER	36
7   RCPT-RM 121, 142, 143, SP2 9   RCPT - ROOF	R R		12 12	20 1	1080	900	1260	1080	1		1 20	10	VD VD	R	RCPT-RM 115, 116, 161, 160 RCPTS-SALLYPORT & EXTERIOR	38 40
1 EF -3,4 ON ROOF	M		12	15 1	1		1200	1000	669	360	1 20	12	V D	R	RCPT-FIRST APPEARANCE VIDEO 122	
3 PLUMBING FIXTURES - HOLDING CELLS	Z		12	20 1	100	1260	7				1 20	12		R	RCPT-RMS 146 (TV), 148, 149, 151, 152	
5 PWR - UH-3 RECEIVEING 155	Н		8	35 2			2500	1176			1 20	12		М	PWR - SEF-7 ROOF SOUTH	46
7			10	45 4	450	4.470	7		2500	100	1 20	12		L	LTG-MONUMENT SIGN, FLAG POLE	48
9 PWR - UH-1 SALLYPORT SP4 1 RCPT-EVIDENCE STOR. WEST	U R		12 12	15 1 20 1	456	1176	900	1176	7		1 20	12 12		M	OVERHEAD DOOR - NW - SP4 OVERHEAD DOOR - NE - SP4	50 52
3 RCPT-EVIDENCE STOR. WEST	R		12	20 1	1		900	1170	900	1176	1 20	12		M	OVERHEAD DOOR - NE - 3F4	54
5 PWR - OU-15/IU-15	C		10	30 2	1729	1176	7				1 20	12		M	OVERHEAD DOOR - SE - SP4	56
7 <u>/</u>		~~~				•	1729	800			1 20	12	GF	Z	RCPT-FRIDGE RM 159	58
PWR - DOOR OPENER	Z		12 .	20 1	4000	000	٦		1000	180	1 20	12	05	R	RCPT-ABOVE COUNTER RM 159	60
PWR - DOOR ACCESS	$\mathcal{L}^{\mathcal{Z}}$	www.	<u>_12</u>	20 1	1000	800	0	1000	1		1 20	12 12	GF GF	R	RCPT-COFFEE MAKER RM 159 RCPT-MICROWAVE RM 159	62 64
S SPARE				20 1	1			1000	0	725	1 15	12	<u> </u>	ZU	WHG-3-STORAGE 143	66
7 SPARE				20 1	0	210			_		1 15	12		М	RP-1-STORAGE 143	68
9 SPARE				20 1			0	0		000	1 20	12		Z	MECH PNLBD - RM 134	70
1 SPARE 3 SPARE				20 1 20 1	0	0	٦		0	360	1 20	12		Z	MOTO B V MECH 157, HOLD 2 & 3  EQUIPPED SPACE	72 74
5 SPARE				20 1	0	0	0	0	1		1				EQUIPPED SPACE	76
7 SPARE				20 1	1				0	0	1				EQUIPPED SPACE	78
9 RP2 - MECH RM 111	М		12	15 1	228	0			7		1				EQUIPPED SPACE	80
1 WHG-2 MECHANICAL 111 3 EQUIPPED SPACE	U		12	15 1	-		605	0	0	0	1	_			EQUIPPED SPACE	82 84
3   EQUIPPED SPACE				1							1				EQUIPPED SPACE	04
		TOTAL	LOAD	(VA):	1929	95 VA	2004	6 VA	158	50 VA						
		TOTAL	AMPS:		16	65 A	171	I A	13	2 A						
DAD TYPE CONNECTED LOAD		EMAND ACTOR	NEC	DEMANI	PANEL	BOARD N	OTES								PANELBOARD TOTALS	
(ISTING LOAD (E) 0 VA		100%		0 VA											TOTAL CONNECTED LOAD 5	55192 VA
OOLING (C) 3459 VA EATING (H) 5000 VA		0% 100%		0 VA 000 VA												41442 VA
GHTING (L) 3000 VA		125%		25 VA												
ECEPTACLES (R) 31220 VA		66%	20	610 VA											TOTAL CONNECTED CURRENT	153 A
OTORS (M) 5811 VA		100%	58	311 VA											TOTAL NEC DEMAND CURRENT	115 A
UPPLEMENTAL HEAT (U) 1666 VA		100%		66 VA												
ISC EQUIP (Z) 6760 VA EFRIGERATION (F) 0 VA		100% 100%		760 VA 0 VA												
IGNAGE (S) 0 VA		100% 125%		0 VA 0 VA												
ITCHEN (K) 0 VA		100%		0 VA												
ARGEST MOTOR 1176 VA		125%	14	170 VA												
HOW WINDOW (W) 0 VA		125%		0 VA	1										1	

# PANELBOARD LEGEND

ABBF	REVIATIONS V1.	0
AF	ARC FAULT CIRCUIT INTERRUPTER.	
C# CL	CIRCUIT VIA CONTACTOR #. CIRCUIT VIA CURRENT LIMITING DEVICE.	
D	DISCONNECT CIRCUITRY FOR REMOVED LOAD, UPDATE CIRCUIT DIRECTORY SPARE AND TURN OFF.	T
EM	EMERGENCY LIGHTING HANDLE-ON CLAMP.	
EX	EXISTING.	
	ELITLIDE LOAD: NOTE AS SDADE AND TLIDN OFF	

FUTURE LOAD; NOTE AS SPARE AND TURN OFF. RED/HANDLE-ON CLAMP. GF GROUND-FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER (5 mA). GFEP GROUND FAULT EQUIPMENT PROTECTION BREAKER (30 mA). HT PROVIDE HANDLE-TIE FOR MULTI-WIRE BRANCH CIRCUIT PÉR CODE.

ISOLATED GROUND CIRCUIT. L# LIGHTING CONTROL SCHEME NUMBER. LCK HANDLE PADLOCKABLE-OFF DEVICE. HANDLE-ON CLAMP. PROVIDE NEW CIRCUIT BREAKER.

REFER TO ELECTRICAL ONE-LINE/RISER DIAGRAM. PS POWER-SWITCHING CIRCUIT BREAKER. PSE EMERGENCY POWER-SWITCHING CIRCUIT BREAKER. REUSE EXISTING CIRCUIT BREAKER FOR NEW/REVISED LOAD. RP CIRCUIT VIA RELAY PANEL. SHUNT TRIP CIRCUIT BREAKER.

VERIFY EXISTING LOAD AND UPDATE DIRECTORY, IF UNUSED, NOTE AS SPARE AND TURN OFF. VD BRANCH CIRCUITRY HAS BEEN UPSIZED TO REDUCE VOLTAGE DROP. ADJUST GROUND WIRE SIZE PER CODE. PROVIDE LUG ADAPTORS IF REQUIRED. CORRECT/REPAIR EXISTING HAZARD TO MAKE CODE COMPLIANT INSTALLATION.

NOT ALL ABBREVIATIONS ARE USED.

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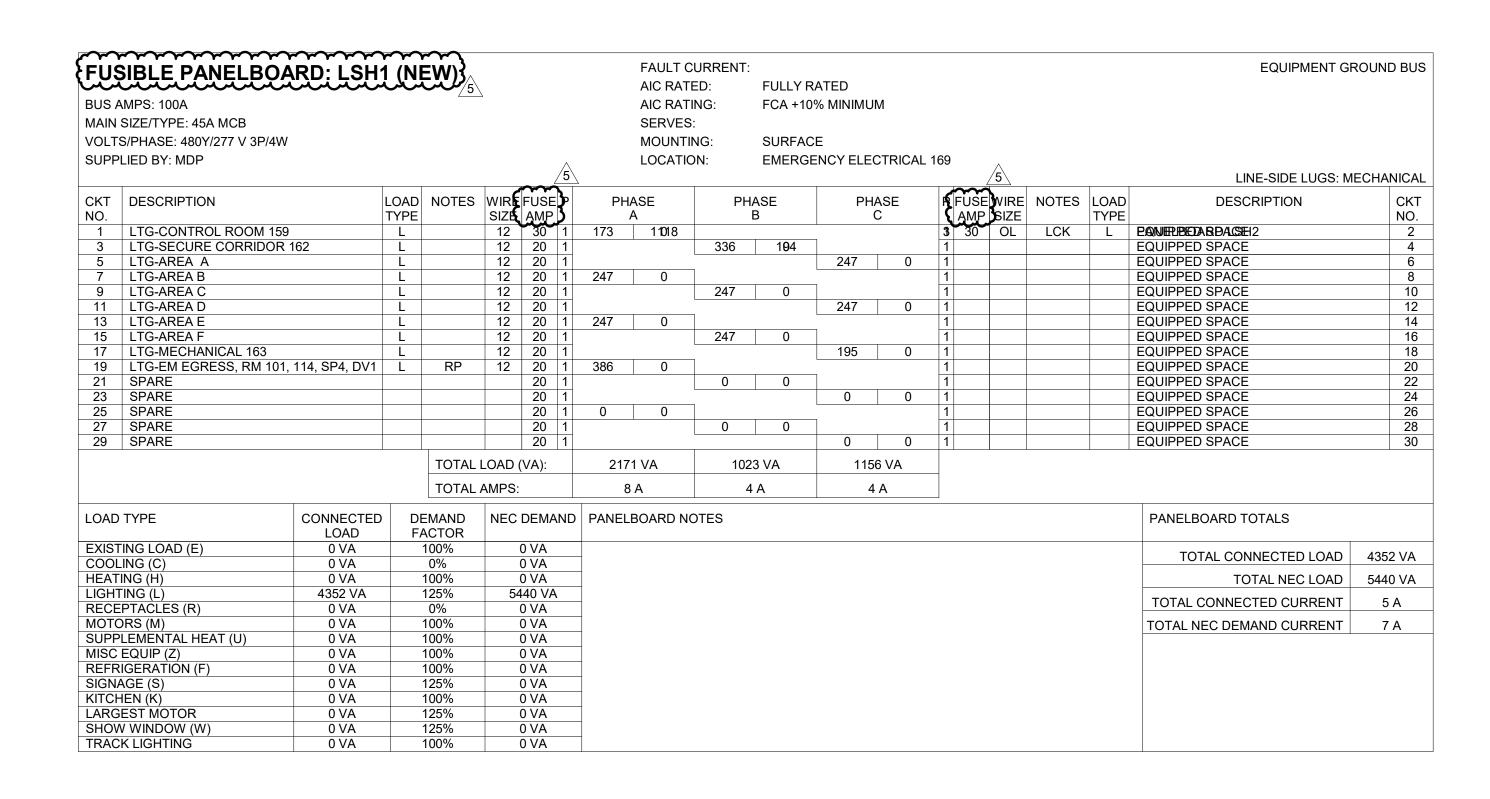
PANELBOARD SCHEDULES

**E502** 

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TRACK LIGHTING



FUSIBLE PANELBO BUS AMPS: 100A MAIN SIZE/TYPE: MLO VOLTS/PHASE: 480Y/277 V 3P/4V SUPPLIED BY: LSH1	ARD: LSH2	(NEW)		<b>\_</b> 5		FAULT C AIC RATI AIC RATI SERVES MOUNTII LOCATIC	ING: FCA +10 <sup>o</sup> : NG: SURFAC	% MINIMUM E		<u>\</u>		EQUIPMENT GF LINE-SIDE LUGS: M	
CKT DESCRIPTION NO.		DAD NOTES	WIRE	FUSE P AMP		IASE A	PHASE B	PHASE C		FUSE WIRE NOTES	LOAD TYPE		CK <sup>-</sup>
1 LTG-RM 113, 112, 106		L	12	20 1	343	0			14			EQUIPPED SPACE	2
3 LTG-RM 156		L	12	20 1	0.10		39 0		1			EQUIPPED SPACE	4
5 LTG-RM 101		L	12	20 1			00 0	102 0	1			EQUIPPED SPACE	6
7 LTG-RM 146, 166		L	12	20 1	441	0	]	102 0	1			EQUIPPED SPACE	8
9 LTG-RM 136, 138		L	12	20 1			155 0		1			EQUIPPED SPACE	10
11 LTG-SECURE CORRIDOR		L	12	20 1			100	366 0	1			EQUIPPED SPACE	12
13 LTG-RM 114, 119, 121, 12		L	12	20 1	334	0	]		1			EQUIPPED SPACE	14
15 SPARE	.,	_	+	20 1			0 0		1			EQUIPPED SPACE	16
17 SPARE				20 1				0 0	1			EQUIPPED SPACE	18
19 SPARE				20 1	0	0	]		1			EQUIPPED SPACE	20
21 SPARE				20 1			0 0		1			EQUIPPED SPACE	22
23 SPARE				20 1				0 0	1			EQUIPPED SPACE	24
25 SPARE				20 1	0	0	]	<u> </u>	1			EQUIPPED SPACE	26
27 SPARE				20 1			0 0		1			EQUIPPED SPACE	28
29 SPARE				20 1				0 0	1			EQUIPPED SPACE	30
							101111	400.144					
		TOTAL	LOAD	(VA):	111	18 VA	194 VA	468 VA					
		TOTAL	AMPS:		4	4 A	1 A	2 A					
LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC	DEMAND	PANEL	BOARD NO	OTES					PANELBOARD TOTALS	
EXISTING LOAD (E)	0 VA	100%		0 VA								TOTAL COMMENTED LOAD	47001/4
COOLING (C)	0 VA	0%		0 VA								TOTAL CONNECTED LOAD	1780 VA
HEATING (H)	0 VA	100%		0 VA								TOTAL NEC LOAD	2225 VA
LIGHTING (L)	1780 VA	125%	22	225 VA									
RECEPTACLÉS (R)	0 VA	0%		0 VA								TOTAL CONNECTED CURRENT	2 A
MOTORS (M)	0 VA	100%		0 VA								TOTAL NEC DEMAND CURRENT	3 A
SUPPLEMÈNTAL HEAT (U)	0 VA	100%		0 VA									-
MISC EQUIP (Z)	0 VA	100%		0 VA									
REFRIGERATIÓN (F)	0 VA	100%		0 VA									
SIGNAGE (S)	0 VA	125%		0 VA									
KITCHEN (K)	0 VA	100%		0 VA									
_ARGEST MOTOR	0 VA	125%		0 VA									
SHOW WINDOW (W)	0 VA	125%		0 VA									
TRACK LIGHTING (	0 VA	100%		0 VA									

UND BUS	EQUIPMENT GR							· D			FAULT C							EW)	BOARD: L1 (NEW	PAN
									FULLY RA		AIC RATE							-	-	
								IINIMUM	FCA +10%		AIC RATI									BUS AI
									BUILDING		SERVES:								TYPE: 150A MCB	MAIN S
									SURFACE	IG:	MOUNTIN								ASE: 208Y/120 V 3P/4W	VOLTS
								_ 163	ELECTRIC	N:	LOCATIO								BY: MDP VIA TX-L1	SUPPL
CHANICAL	LINE-SIDE LUGS: ME																			
СКТ	DESCRIPTION	OAD		N	WIRE			PHASE		PH		PHA		E BKR		NOTES			CRIPTION	
NO.		YPE			SIZE	AMP		С	3		•	Α		AMP			TYPE			NO.
2					ا ۵. ا						1440	1080			12				PTS-MECH RMS 164, 163, & E	
4	PANELBOARD L1A	RM			OL	60	3		2080	675					10	VD	R		PT-PLUGMOLD RM 159, SOU	
6	LILLA EL ECTRICAL ACC		\ /D		10	00		675			4.450	075			10	VD	R		PT-PLUGMOLD RM 159, SE	
8	UH-4 ELECTRICAL 163	нυ	VD		10	20	2		4.450	075	1456	675	1		10	VD	R		PT-PLUGMOLD RM 159, NE	
10	LILLE MECHAEO		VD		40	20	2	700	1456	675			1		10	VD	R		PT-PLUGMOLD RM 159, N	
12	UH-5 MECH 158	но	VD		10	20	2	760 1			4.450	700			12		LR		PT-POD B & POD C	
14	MOTO B V CELL E22, 21, 20, ELEC 17	7			12	20	1		600	892	1456	760	1 1		12		LR		PT-EXERCISE, POD D & E -POD B & POD C	
16 18	PLUMBING FIXTURES - POD A,B,C				12 12	20 20	1	892	000	092				20	12 12		L		-POD B & POD C -POD D & POD E	
20	PLUMBING FIXTURES - POD D, E, F				12	20	1	092	L		800	228			12		M		- MECH RM 158	
	POPT-SECURE CORRIDOR 102				1 1		1		540	564	600	220			12		U		G-1 - MECH RM 158	
24	PWR - DOOR OPENER		~ ~ ~	Y	12	20	1	288	340	304			++		12		U		2 EXERCISE EXE	
ستثسب	RCPT-DAY ROOM POP A.B.	بہ	سبع	W	سئهر	20	1	200	Ĺ		540	1667	1		12		Z		I. JACKET HEATER	
28	RCPT - DAY ROOM POD D.E.F		GF		12	-	1		540	278	040	1007	1		12		Z	FN	I-CONDENSATION HTR-GEN	
30	SPARE		0.				1	222	0.10	210			1		12		Z		TERY CHARGER GENERAT	
32	SPARE						1		L		0	540	1	20	12		R		PT-MECH 158 & EXTERIOR	
34	SPARE					20	1		0	1080		0.0	1	20	12		R		PT - EXT ROOF	
36	SPARE						1	1500					1		12		R		PT-TVS, POD F AND E	
38	SPARE					20	1		L		0	1500			12		R		PT-TVS, POD E AND D	
40	SPARE					20	1		0	1500			1		12		R		PT-TVS, POD B AND C	
42	SPARE					20	1	1500					1		12		R		PT-TVS, POD A AND B	41
'			'					9307 VA	0 VA	1088	2 VA	1214		(VA):	LOAD	TOTAL		'		'
								78 A	Α			103		, ,		TOTAL				
	PANELBOARD TOTALS											PANELE	AND			EMAND ACTOR		CONNECTED LOAD	CO	OAD <sup>-</sup>
32329 VA	TOTAL CONNECTED LOAD													0 VA		100%	1	0 VA	OAD (E)	
													-	0 VA		0%		0 VA		COOLI
29561 VA	TOTAL NEC LOAD													0 VA		100%		0 VA		HEATI
90 A	TOTAL CONNECTED CURRENT													3230 VA		125%		2584 VA		_IGHTI
														3630 V		79%		17260 VA		
82 A	TOTAL NEC DEMAND CURRENT													228 VA		100%		228 VA		MOTO
												_		676 VA		100%		6676 VA		
												_	١	1717 VA	4	100%		4717 VA		MISC E
												-		0 VA		100%		0 VA	ATION (F)	
												-		0 VA		125%		0 VA		SIGNA
												_		0 VA	1	100%		0 VA		KITCHI
												-	١	080 VA 0 VA		125% 125%		864 VA 0 VA		
												-							DOW (W)	
														0 VA		100%	1	0 VA	HTING	IKAUK

PAI	NELBOARD: L1A (	NEW)								CURRENT	:							EQUIPMENT GR	ROUND BUS
	_	,							AIC RA	TED:									
BUS A	AMPS: 100A								AIC RA	TING:									
MAIN	SIZE/TYPE: 125A MCB								SERVE	S:	SHELTE	R							
	S/PHASE: 208Y/120 V 3P/4W								MOUNT		SURFA								
														).CD					
SUPP	LIED BY: L1								LOCATI	ION:	CONFE	RENCE STO	JRAGE 13	SOB					
	1																	LINE-SIDE LUGS: MI	ECHANICAL
CKT	DESCRIPTION		LOAD NO	OTES W	IRE	BKR	Р	PH	ASE	PI	HASE	PH.	ASE	P BKR	WIRE	NOTES	LOAD	DESCRIPTION	CKT
NO.			TYPE			AMP			4		В		0	AMP	SIZE	-	TYPE		NO.
1	RCPT-CONF ROOM 135 SO	UTH	R		12	20	1	720	720					1 20	12		R	RCPT-CONF ROOM 135 FLOOR BOX	
3	RCPT-CONF ROOM 135 N 8		R		12		1			1080	1000			1 20	12		R	RCPT-COFFEE MAKER RM 135	4
5	PWR - SF-1 VIA UPS		М		12	15	1				-	864	0	1 20				SPARE	6
7	SPARE					20	1	0	0					1 20				SPARE	8
9	SPARE					20	1		'	0	0			1 20				SPARE	10
11	SPARE					20	1					0	0	1 20				SPARE	12
13	SPARE					20	1	0	0					1 20				SPARE	14
15	SPARE					20	1			0	0			1 20				SPARE	16
17	SPARE					20	1					0	0	1 20				SPARE	18
19	EQUIPPED SPACE						1	0	0					1				EQUIPPED SPACE	20
21	EQUIPPED SPACE						1			0	0			1				EQUIPPED SPACE	22
23	EQUIPPED SPACE						1			_		0	0	1				EQUIPPED SPACE	24
25	EQUIPPED SPACE						1	0	0					1				EQUIPPED SPACE	26
27	EQUIPPED SPACE						1			0	0			1				EQUIPPED SPACE	28
29	EQUIPPED SPACE						1					0	0	1				EQUIPPED SPACE	30
			T	OTAL LO	AD (	VA):		144	0 VA	20	80 VA	864	· VA						
			T	OTAL AM	PS:			13	3 A		18 A	7	Α						
	TYPE	CONNECTED	DEMA	VND N	EC I	DEMA	ND	DANEI	BOARD N	IOTES								PANELBOARD TOTALS	
LOTE	111 2	LOAD	FACT				10	1 / ((4)		10120								17 TALLESON TO 17 LEG	
EXIS	ING LOAD (E)	0 VA	100		C	) VA												TOTAL CONNECTED LOAD	4204 \ / A
	ING (C)	0 VA	0%	o o	C	) VA												TOTAL CONNECTED LOAD	4384 VA
HEAT	ING (H)	0 VA	100	%		) VA												TOTAL NEC LOAD	4600 VA
	ΓING (L)	0 VA	125			) VA												TOTAL CONNECTED CURRENT	10.4
	PTACLES (R)	3520 VA	100			20 VA	١											TOTAL CONNECTED CURRENT	12 A
MOT	ORS (M)	0 VA	100			) VA												TOTAL NEC DEMAND CURRENT	13 A
	LEMENTAL HEAT (U)	0 VA	100			) VA												·	
	EQUIP (Z)	0 VA	100			) VA													
	IGERATION (F)	0 VA	100			) VA													
	AGE (S)	0 VA	125			) VA													
	HEN (K)	0 VA	100			) VA													
	EST MOTOR	864 VA	125			80 VA	١.												
SHO	V WINDOW (W)	0 VA	125	%	C	) VA													

2250004109 IL. CORPORATE NO: 184-002965 EXPIRES 4/30/2025 EXPIRES ON: 11/30/2025 04/18/2024

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PANELBOARD SCHEDULES

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KLINGNE & A S S O C I A T E S, P.

FUSIBLE PANELBOARD: LRL1 (NEW) FAULT CURRENT: EQUIPMENT GROUND BUS AIC RATED: **FULLY RATED** BUS AMPS: 400A AIC RATING: FCA +10% MINIMUM MAIN SIZE/TYPE: 400A MCB SERVES: BUILDING OPTIONAL STANDBY VOLTS/PHASE: 208Y/120 V 3P/4W MOUNTING: SURFACE SUPPLIED BY: LRH3 VIA TX-LRL1 LOCATION: **EMERGENCY ELECTRICAL 169** LINE-SIDE LUGS: MECHANICAL CKT DESCRIPTION LOAD NOTES WIRE FUSE DESCRIPTION CKT PANELBOARD LRL2 OL 125 3 R Z PANELBOARD LRUPS VIA 15 KW/15KVA 25293 2430 UPS C PWR - OU-4/IU-4 PWR - OU-3/IU-3 11 PWR - OU-9/IU-9 C PWR - OU-5/IU-5 PWR - SEF-4,5,6 M SEF-1 ROOF EAST 15 PWR - SEF-4,5,6

17 RCPT-PLUGMOLD RM 159, NORTH
19 RCPT-PLUGMOLD RM 159, SE
21 RCPT-PLUGMOLD RM 159, NE
23 RCPT-PLUGMOLD RM 159, SOUTH
25 RCPT-RM 159 CEILING & TV
27 PWR - RM 164, 162, 157, DAMPERS M SEF -2 ROOF EAST M SEF-3 ROOF EAST M SEF -5 ROOF EAST 675 864 M SEF-6 ROOF EAST SPARE
Z PWR - DAMPERS, AREA D, E, F
Z PWR - DAMPERS, AREA A, B, C 29 PWR - RM 162 DAMPERS 31 LCP - RELAY PANEL 12 20 1 500 0 SPARE 33 FFSCP
35 FACP
37 RPS
39 EQUIPPED SPACE SPARE FA 12 20 1 FA 12 20 1 500 0 0 EQUIPPED SPACE EQUIPPED SPACE EQUIPPED SPACE 41 EQUIPPED SPACE EQUIPPED SPACE TOTAL LOAD (VA): 34086 VA 34119 VA TOTAL AMPS: 306 A 284 A PANELBOARD TOTALS LOAD TYPE CONNECTED DEMAND | NEC DEMAND | PANELBOARD NOTES DEMAND FACTOR 100% 100% 0% 125% 91% 100% LOAD 0 VA EXISTING LOAD (E) TOTAL CONNECTED LOAD 104867 VA 34543 VA 0 VA 0 VA 12320 VA 7096 VA 0 VA COOLING (C) 34543 VA HEATING (H) 0 VA TOTAL NEC LOAD 103957 VA 0 VA 11160 VA 7096 VA 0 VA LIGHTING (L) TOTAL CONNECTED CURRENT 291 A RECEPTACLES (R) MOTORS (M) TOTAL NEC DEMAND CURRENT 289 A SUPPLEMENTAL HEAT (U)

RAC	K LIGHTING	0 VA		100%	0 VA										
	SIBLE PANELBOAR					FAULT C	URRENT:							EQUIPMENT GROUND	 ) BU
ىر	AMPS: 400A					AIC RATE AIC RATE		ATED % MINIMUM							
	SIZE/TYPE: MLO					SERVES		70 IVIII VIIVI OIVI							
	S/PHASE: 208Y/120 V 3P/4W LIED BY: LRL1					MOUNTII LOCATIO									
- [- [	LIED DT. LNLT				<u> </u>		JN. ELECTRI	ICAL 124			<u></u>			LINE-SIDE LUGS: MECHAN	NICA
Γ	DESCRIPTION			NOTES	WIRE FUSE P	PHASE	PHASE	PHAS	E	FUSE	WIRE	NOTES	LOAD		CK
	RCPT-DISPATCH 138 NORTH		TYPE R	VD	SIZE AMP 10 20 1	720   1000	В	C		1 20	12 12		TYPE M	CTRLS-VAV 8, 19, 21,14,16,17,18,15,13	NO 2
	RCPT-DISPATCH 138 SOUTH RCPT-DISPATCH SUPER. 137		R R	VD	10 20 1 12 20 1		720 1100	360	800	1 20	12 12		Z M	CTRLS-VAV 1, 2, 3, 5, 6, 7, 9, 10, 11, 20, 12 PWR - NORTH OFFICE SMOKE DAMPER	4 6
	RCPT-WORK AREA 106, VIDE		R R	VD VD	10 20 1	540 880	720 640	7		1 15	12		Z	PWR - BOOKING AREA DAMPERS PWR - STORAGE, & CONF. RM DAMPERS	8
	RCPT-OFFICE 107, 108 RCPT-OFFICE 109, 110		R	VD	10 20 1 12 20 1		720 640	720	90	1 15 2 30	12 8	VD	Z	SERVER RACK 7 (L6-30R) - RM 134	12
	RCPT-ROAD PATROL 113, NO RCPT-ROAD PATROL 113, NO		R		12 20 1 12 20 1	720 90	540 180	7		1 20	8	VD	Z	SERVER RACK 7 (L5-20R) - RM 134	14 16
	RMPIT-ROAD PATROL 113, SC RCPT-JAIL ADMIN 145		R		12 20 1 12 20 1	540 90	]	720	90	2 30	8	VD	Z	SERVER RACK 8 (L6-30R) - RM 134	18
	RCPT-MEDICAL EXAM 144		R		12 20 1	J40   90	180 180			1 20	8	VD	Z	SERVER RACK 8 (5-20R) - RM 134	22
	RCPT-SALLYPORT SP4 PWR - OU-6/IU-6		R C	VD	10 20 1 12 25 2	1009 90		360	540	1 20 2 30	12 8	VD	R Z	RCPTS-SERVER ROOM 134 WALL SERVER RACK 1 (L6-30R) - RM 141	24 26
	PWR - OU-7/IU-7					, 55	1009 90	1620	180	1 20		VD		SERVER RACK 1 (5-20R) - RM 141	28
			С			1620 180		1020	100	1 20	8	VD	Z	SERVER RACK 2 (5-20R) - RM 141	32
	PWR - OU-11/IU-11 (PRIMARY	()	С		10 35 2		1986 2496	1986	2496	2 30	8	VD	Z	SERVER RACK 2 (L6-30R) - RM 141	34 36
	PWR - OU-12/IU-12 (REDUND)	ANT)	С		10 35 2	0 1230	0 1230	7		2 30	8	VD	Z	SERVER RACK 3 (L6-30R) - RM 141	38
	OU-14/IU-14 ROOF PLAN		С	VD	10 25 2		0 1230	1009	180	1 20	8	VD	Z	SERVER RACK 3 (5-20R) - RM 141	42
	EF 1, 2 ON ROOF		M		12 15 1	1009 890	912 890			2 30	8	VD	Z	SERVER RACK 4 (L6-30R) - RM 141	44
	PWR - SOUTH OFFICE SMOK		Z	VD	12 15 1	2406 2406	1	800	180	1 20	8	VD VD	Z	SERVER RACK 4 (5-20R) - RM 141	48
	SERVER RACK 1 (L6-30R) - R		Z	VD	8 30 2	2496 2496	2496 2496				8		Z	SERVER RACK 5 (L6-30R) - RM 141	50 52
	SERVER RACK 1 (5-20R) - RM SERVER RACK 2 (L6-30R) - RI		Z	VD VD	8 20 1 8 30 2	2496 540	1	1500	180	1 20	8 10	VD VD	Z R	SERVER RACK 5 (5-20R) - RM 141 RCPTS-SERVER ROOM 141 WALL	54 56
						2100   010	2496 0	4500		1 20	10	, U		SPARE	58
	SERVER RACK 2 (5-20R) - RM SERVER RACK 3 (L6-30R) - RM		Z	VD VD	8 20 1 8 30 2	90 0	]	1500	0	1 20				SPARE SPARE	60 62
	SERVER RACK 3 (5-20R) - RM	1 134	Z	VD	8 20 1	·	90 1009	1200	1009	2 25	12		С	PWR - OU-1/IU-1	64 66
	SERVER RACK 4 (L6-30R) - RI		Z	VD	8 30 2	90 1009	00 1000	1200	1000	2 25	12		С	PWR - OU-2/IU-2	68
	SERVER RACK 4 (5-20R) - RM		Z	VD	8 20 1		90   1009	600	1986	2 35	10		С	PWR - OU-8/IU-8	70 72
	SERVER RACK 5 (L6-30R) - R	M 134	Z	VD	8 30 2	90 1986	90 1986			2 35	10		С	PWR - OU-10/IU-10 (PRIMARY)	74 76
	SERVER RACK 5 (5-20R) - RM SERVER RACK 6 (L6-30R) - RI		Z Z	VD VD	8 20 1 8 30 2	90 0	1	600	1986	2 35	10		С	PWR - OU-13/IU-13 (REDUNDANT)	78 80
						90   0	90 0							,	82
	SERVER RACK 6 (5-20R) - RM PWR - OU-18/IU-18 (REDUND)		Z C	VD	8 20 1 10 35 2	0 0	]	180	800	1 20 2 35	12 10	GF	R	RCPT-FRIDGE, EVIDENCE STORAGE PWR - OU-16/IU-16 (REDUNDANT)	84 86
	PWR - OU-17/IU-17	,	С		10 35 2	'	0 0	1620	0	1 20				SPARE	88
						1620 0		1020		1 20				SPARE	92
	SPARE SPARE				20 1		0 0	0	0	1 20				SPARE SPARE	94
	SPARE SPARE				20 1	0 0	0 0			1 20				SPARE SPARE	98
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7	EQUIPPED SPACE EQUIPPED SPACE				1	·	0 0	0	0	1				EQUIPPED SPACE EQUIPPED SPACE	11 12
-	, 133 22 51,7,52			TOTAL I	LOAD (VA):	23611 VA	24726 VA	25293			İ			25 01.102	
				TOTAL	, ,	197 A	207 A	212 /		1					
۱D	TYPE	CONNECTED		MAND	NEC DEMANE	PANELBOARD NO	OTES		_	_				PANELBOARD TOTALS	
	ING LOAD (E)	LOAD 0 VA	1	CTOR 100%	0 VA									TOTAL CONNECTED LOAD 7363	1 \/^
	ING (C) ING (H)	26471 VA 0 VA		0%	26471 VA 0 VA	_								TOTAL CONNECTED LOAD 7363	
ΗТ	TING (L)	0 VA	1	125%	0 VA									TOTAL CONNECTED CURRENT 204	
TC	PTACLES (R) DRS (M)	8720 VA 1912 VA	1	100% 100%	8720 VA 1912 VA									TOTAL NEC DEMAND CURRENT 205	
	LEMENTAL HEAT (U) EQUIP (Z)	0 VA 35528 VA		100%	0 VA 35528 VA	_									
FR	IGERATION (F)	0 VA	1	100%	0 VA										
CH	AGE (S) HEN (K)	0 VA 0 VA	1	125% 100%	0 VA 0 VA										
RG	EST MOTOR V WINDOW (W)	1000 VA 0 VA	1	125% 125%	1250 VA 0 VA	_									
	K LIGHTING	0 VA		100%	0 VA										

سس	SIBLE PANELBO MPS: 400A	ARD: LRH	3 (NE	<b>EW)</b> 3				AIC RAT		FULLY R	ATED % MINIMUN	1						EQUIPMENT GR	KOUND BUS
MAIN S	SIZE/TYPE: MLO							SERVES	S:	BUILDING	G OPTIONA	L STAND	BY						
VOLTS	S/PHASE: 480Y/277 V 3P/4W	l						MOUNTI	NG:	SURFAC	E								
SUPPL	LIED BY: MDP							LOCATIO	ON:	EMERGE	NCY ELEC	TRICAL 1	169						
						/	5							,	5			LINE-SIDE LUGS: ME	ECHANICAL
CKT NO.	DESCRIPTION		LOAD TYPE			FUSE AMP	PH	ASE A		ASE B	PHA			USE		NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1 3	PANELBOARD LRL1 VIA T	X-LRL1			•	175 3	34086	7455	36661	7455			3	45	8		С	PWR - RTU-2 ON ROOF	2
5 7							1330	7455			34119	7455							6 8
9	PWR - BP MECHANICAL 1	58	М		12	15 3			1330	7455	1330	7455	3	45	8		С	PWR - RTU-3 ON ROOF	10 12
13 15	PWR - RTU-1 ON ROOF		С		6	80 3	15934	3303	15934	3303	45004	2222	3	20	12		М	PWR - ERV-1 ON ROOF	14 16
	LTG-RMS 129, 131, 128, 13 LTG-RMS 107 THROUGH		L		12 12	20 1 20 1	459	195	330	291	15934	3303		20 20	12 12	RP	L	LTG-MECHANICAL 158 LTG-WALL SCONCES JAIL AREA	18 20 22
23	LTG-PAD1,2 & HD1,2,3		L		12	20 1				291	410	413	1	20	10	VD,RP	L	LTG-PARKING LOT, NORTH & EAST	24
	LTG-KITCHEN & MEDCEL	<u>L</u> .	L		12	20 1	224	413			1		1	20	10	VD,RP	L	LTG-PARKING LOT, SOUTH& WEST	26
27	LTG-SALLYPORT		L		12	20 1			168	3800	040	2000		00	40			\\A\\\ 4 \ 4	28
	LTG-AREA A LTG-AREA B		L		12 12	20 1 20 1	774	3800	7		648	3800	3	20	12		Н	VAV 1-1	30 32
	LTG-AREA C		L		12	20 1	774	3000	691	2800	]		1	15	12		Н	VAV 1-2	34
	LTG-EXERCISE AREA		L		12	20 1					328	2800	1	15	12		Н	VAV 1-3	36
	LTG-AREA D		L		12	20 1	691	1000					1	15	12		Н	VAV 1-6	38
	LTG-AREA E		L		12	20 1			691	1200			1	15	12		Н	VAV 1-14, 1-15	40
41	LTG-AREA F		L		12	20 1					648	6012	1	30	10		Н	VAV 1-13	42
				TOTAL LC	DAD (	VA):	771	19 VA	8210	)9 VA	84656	S VA							
				TOTAL AN	ЛРS:		27	78 A	29	9 A	308	Α							
LOAD	TYPE	CONNECTED LOAD		EMAND N ACTOR	NEC I	DEMANI	PANEL	BOARD N	OTES									PANELBOARD TOTALS	
	ING LOAD (E)	0 VA		100%		) VA												TOTAL CONNECTED LOAD	243883 VA
	ING (C) ING (H)	127074 VA 25212 VA		100% 0%		074 VA ) VA													
	ING (L)	7374 VA		125%		18 VA	-												221832 VA
	PTACLES (R)	12320 VA		91%		160 VA												TOTAL CONNECTED CURRENT	293 A
	DRS (M)	12086 VA		100%		086 VA												TOTAL NEC DEMAND CURRENT	267 A
	LEMENTAL HEAT (U)	0 VA		100%		) VA													
	EQUIP (Z)	49908 VA		100%		AV 806													
	IGERATION (F)	0 VA		100%		) VA	_												
	AGE (S)	0 VA		125%		) VA	$\dashv$												
	IEN (K) EST MOTOR	0 VA 9909 VA		100% 125%		0 VA 386 VA	_												
	WINDOW (W)	0 VA		125%		) VA	$\dashv$												
	V VVIIND(VV (VV)	U V/L	1 1	120/0		, v.	1											T. Control of the Con	

BUS AM			IEW)	5\			AIC RATE	ED: FU	LLY RAT	ED								
MAIN SI	/IPS: 100A			<u> </u>			AIC RATI	NG: FC	A +10%	MINIMUM								
171/ VII V O I/	IZE/TYPE: MLO						SERVES	: SE	CURITY	UPS								
	/PHASE: 208Y/120 V 3P/4W						MOUNTI		IRFACE									
	IED BY: LRL1						LOCATIO			ELECTRO	MICS 12	20						
JOFFLIL	LD DT. LINET				<u>\</u>		LOCATIC	JN. JL	.COMIT	LLLOTING	INICO 12	/	5			LINE-SIDE I	_UGS: M	IECHANICA
CKT E	DESCRIPTION	LOAD TYPE	NOTES		FUSE		ASE	PHASE		PHAS C	E	FUSE AMP		NOTES	LOAD TYPE	DESCRIPTION		CK
	RCPT-AUDIO RACK (1)				AMP 1	750	A 0	Ь		U		1 20	SIZE		1	SPARE		NO
	RCPT-AUDTIO RACK (1)	Z		12	20 <u>1</u> 20 <u>1</u>	750	0	750	0			1 20				SPARE		2
5 F	RCPT-AUDITIO RACK (2)	Z		12 12	20 1			750	0	750	0	1 20				SPARE		6
	RCPT-PLC RACK, 2 (2)	Z		12	20 1	750	0	]		730	- 0	1 20				SPARE		8
	RCPT-PLC RACK 2, (1)	Z		12	20 1	730	0	750	0			1 20				SPARE		10
	RCPT-PLC RACK 2, (1)	Z		12	20 1			700	J	750	0	1 20				SPARE		12
	RCPT-VMS PANEL (1)	Z		12	20 1	750	0	]	L	700		1 20				SPARE		14
	RCPT-VMS PANEL (2)	Z		12	20 1	. 50		750	0			1 20				SPARE		16
	RCPT-ACC PANEL	Z		12	20 1			7.00		180	0	1 20				SPARE		18
	RCPT-UTILITY PANEL	Z		12	20 1	180	0	]				1 20				SPARE		20
	RCPT-BOOKING 146	RZ		12	20 1			1680	0			1 20				SPARE		22
	RCPT-CONTROL ROOM 159, 1	Z		12	20 1					750	0	1 20				SPARE		24
	RCPT-CONTROL ROOM 159, 2	Z		12	20 1	750	0					1 20				SPARE		26
27 F	RCPT-JAIL ADMIN 145	Z		12	20 1			1500	0			1 20				SPARE		28
	SPARE				20 1					0	0	1 20				SPARE		30
	SPARE				20 1	0	0					1 20				SPARE		32
	SPARE				20 1			0	0			1 20				SPARE		34
	SPARE				20 1					0	0	1 20				SPARE		36
	SPARE				20 1	0	0					1 20				SPARE		38
	SPARE				20 1			0	0			1 20				SPARE		40
41   5	SPARE				20 1					0	0	1 20				SPARE		42
			TOTAL L	OAD (	VA):	318	0 VA	5430 VA	١	2430 \	/A							
			TOTAL A	AMPS:		27	7 A	46 A		20 A	١							
LOAD TY	TYPE CONNECTE LOAD		MAND CTOR	NEC	DEMANI	PANEL	BOARD NO	OTES								PANELBOARD TOTALS		
EXISTIN	NG LOAD (E) 0 VA		00%		) VA		·			·						TOTAL CONNECTED	LOAD	11040 V
COOLIN	NG (C) 0 VA		0%		) VA													
HEATING			00%		) VA											TOTAL NEC	LOAD	11040 VA
LIGHTIN			25%		) VA											TOTAL CONNECTED CUP	RENT	31 A
	PTACLES (R) 180 VA		00%		30 VA	_												
MOTOR			00%		) VA	_										TOTAL NEC DEMAND CUP	RENT	31 A
	EMENTAL HEAT (U) 0 VA		00%		) VA	_												
	QUIP (Z) 10860 VA		00%		360 VA	$\dashv$												
	GERATION (F) 0 VA		00%		) VA	_												
SIGNAG			25%		) VA	_												
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LARGES	ST MOTOR 0 VA WINDOW (W) 0 VA		25% 25%		) VA ) VA													

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PANELBOARD SCHEDULES

E504

PLUMBING FIXTURE SCHEDULE PLUMBING FIXTURE SCHEDULE PLUMBING FIXTURE SCHEDULE PLUMBING PLAN PLUMBING PLAN MARK **DESCRIPTION** MARK DESCRIPTION MARK DESCRIPTION SINK: ELKAY # LR-1517-2, 15" x 17-1/2" x 7-1/2" DEEP, SINGLE AIR ADMITTANCE VALVE; STUDOR "MINI-VENT" # 20301, MEETING ASSE FLOOR DRAIN: WILLOUGHBY # LRFD SERIES, CAST IRON BODY AND 1051 TYPE "A", POLYSTYRENE PROTECTIVE COVER, ABS VALVE WITH CLAMPING COLLAR, NIKALOY ADJUSTABLE HOUSING, 6" ROUND COMPARTMENT, SELF-RIMMING, 18 GAUGE TYPE 302 STAINLESS STEEL, ELASTROMERIC MEMBRANE AND PVC CONNECTOR, 2" INLET, AND FIXTURE WITH FAUCET LEDGE. SET IN BED OF PUTTY. STAINLAEE STEEL LIGATURE-RESISTANT STRAINER AND VANDAL ATMOSPHERIC PORT. PROOF PIN TORX SCREWS. USE PUSH-ON JOINT OF OUTLET SIZE AS FAUCET: CHICAGO FAUCET # 895-207589AB 4" CENTERSET LEAD FREE FAUCET WITH VANDAL RESISTANT # 369 LEVER HANDLES. GN1A SHOWN ON PLANS WITH DEEP SEAL TRAP. AREA DRAIN: JAY R. SMITH # 2120L (-M), CAST IRON BODY GOOSENECK SPOUT, # E36VP 1.5 GPM VANDAL RESISTANT, LAMINAR HEAVY-DUTY, 8" DIAMETER, DUCTILE IRON GRATE, SEEPAGE PAN, AND FLUSHING FLOOR WILLOUGHBY #FD-1400-WF-EFVP-WMSII 14" DIAMTER. FLOW AERATOR, QUARTER TURN CERAMIC CARTRIDGES MEMBRANE FLASHING CLAMP. USE PUSH-ON JOINT OR CAULK OUTLET 14 GAUGE. 304 STAINLESS STEEL FLOOR DRAIN WITH INTEGRAL P-TRAP TRIM: McGUIRE # LF2165CC LEAD FREE BRASS WHEEL HANDLE ANGLE OF SIZE AS SHOWN ON PLANS. WITH 3" NO-HUB CONNECTION, 1-1/2" COLD WATER FLUSH CONNECTION, STOP VALVES WITH RISERS AND ESCUTCHEONS, McGUIRE # 151M CUP 7 GAUGE STAINLESS STEEL FLUSH GRATE WITH 1/2" WIDE ELONGATED ACCESS PANEL: JAY R. SMITH # 4762 - 12" x 12" - CL, TYPE 304 STRAINER WITH 1-1/2" 17 GAUGE TAIL PIECE McGUIRE # B8912CE 1-1/2" STAINLESS STEEL PANEL AND FRAME WITH CONCEALED HINGE, KEY 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP WITH OPERATED CYLINDER LOCK. PROVIDE WITH NAILER SLOTS FOR BRASS CLEANOUT AND ESCUTCHEON. INSTALLATION IN STUD WALLS AND ANCHOR STRAPS FOR TRIM: ELECTONICALLY ACTUATED FLUSH VALVE WITH SWEAT ADAPTER SINK (ADA ACCESSIBLE): ELKAY # LRAD-3319-55-3, 33" x 19-1/2" x 5-1/2" INSTALLATION IN MASONRY CONSTRUCTION. DEEP. DOUBLE COMPARTMENT, SELF-RIMMING, 18 GAUGE TYPE 302 KIT, WHEEL HANDLE STOP VALVE, SOLENOID VALVE ACTUATOR AND CONDENSATE DRAIN BOX: SIOUX CHIEF "OXBOX" MODEL # 696-3 PIEZO ELECTRIC PUSHBUTTON ASSEMBLY WITH REMOTE FRONT STAINLESS STEEL, FIXTURE WITH FAUCET LEDGE. SET IN BED OF OUTLET BOX, MODEL #696-CF SECONDARY DRAINAGE FUNNEL AND ACCES JUNTION BOX. INSTALL WHERE INDICATED ON THE DRAWINGS. #696-SC SOLID COVER PLATE PROVIDE 1-1/2' TYPE "K" FLUSH TUBE FROM FLUSH VAVLE OUTLET TO FAUCET: CHICAGO FAUCET # 201-214914AB 8" SPREAD LEAD FREE SECURITY STRAIGHT WATER CLOSET / LAVATORY COMBINATION: DRAIN FLUSH CONNECTION.. PROVIDE TYPE "K" COPPER TUBING FAUCET WITH VANDAL RESISTANT # 317 WRISTBLADE HANDLES, L9 WILLOUGHBY FROM FLUSH VALVE TO FLOOR DRAIN AS INDICATED ON DETAIL. SWING SPOUT, # E36VP 1.5 GPM VANDAL RESISTANT, LAMINAR FLOW #1846-EWC-C-BC-E1L2-MA4-PZPB-WMSII-EB-LW1-TWE-PC4-TWC4C-EFVP PROVIDE 1/2" CONDIUT PER ELECTRICAL SPECIFICATIONS FROM AERATOR, QUARTER TURN CERAMIC CARTRIDGES. -ET4-TFE-FVT-RTH-TF24H-WS 18" WIDE X 12" DEEP LAVATORY BOWL JUNCTION BOX TO ABOVE CEILING AND INTO TOILET CHASE AND LAND TRIM: McGUIRE # LF2165CC LEAD FREE BRASS WHEEL HANDLE ANGLE WITH STRAIGHT 1.28 GALLON PER FLUSH WATER CLOSET BOWL, CABLE AT "CVC2" ELECTRONIC CONTROLLER. STOP VALVES WITH RISERS AND ESCUTCHEONS, (2) McGUIRE # 151M FLOOR MOUNTED. BACK OUTLET TYPE OF 14 GAUGE 304 STAINLESS CUP STRAINERS WITH 1-1/2" 17 GAUGE TAILPIECE. McGUIRE # FLOOR SINK: JAY R. SMITH # 3111L (-12), 6" DEEP CAST IRON BODY STEEL WELDED CONSTRUCTION. # 4 FINISH, WITH PENAL BUBBLER 111C16G17 1-1/2" 17 GAUGE CONTINUOUS WASTE. McGUIRE # B8912CF WITH ACID RESISTING ENAMELED INTERIOR, ANCHOR FLANGE WITH WITH 0.5 GPM FLOW CONTROL, HOT AND COLD ELECTRONIC 1-1/2" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP SEEPAGE HOLES, CLAMP COLLAR, ALUMINUM SEDIMENT BUCKET, AND ACTIVATED CONTROL VALVES WITH PIEZO ELECTRIC PUSH BUTTONS WITH BRASS CLEANOUT AND ESCUTCHEON, AND PLUMBEREX # E03061 12" SQUARE NICKEL BRONZE RIM AND HALF GRATE. USE PUSH-ON CONFIGURED TO FEED TWO LAVATORIES FED WITH FDA KITCHEN END OUTLET AND P-TRAP INSULATION KIT AND # X-4112 VALVE JOINT OF OUTLET SIZE AS SHOWN ON PLANS. POLYETHYLENE TUBING AS INDICATED ON THE DRAWINGS, TOILET AND SUPPLY COVERS. PAPER HOLDER, 1-1/2" REMOVABLE P-TRAP WITH THROUGH WALL FLOOR SINK: JAY R. SMITH # 3131L (-12), 10" DEEP CAST IRON BODY SINK (ADA ACCESSIBLE): ELKAY # LRAD-1517-2, 15" x 17-1/2" x 5-1/2" EXTENSION, CLEANOUT TEE WITH 3" PLAIN WASTE INLET, 4" NO-HUB WITH ACID RESISTING ENAMELED INTERIOR, ANCHOR FLANGE WITH OUTLET WITH CLEANOUT PIN (EXTEND PIN TO 2" ABOVE FLOW LINE), DEEP, SINGLE COMPARTMENT, SELF-RIMMING, 18 GAUGE TYPE 302 SEEPAGE HOLES, CLAMP COLLAR, WHITE ABS SEDIMENT BUCKET, AND AND ELECTRONIC ANTI FLOOD CONTROL DEVICE. INSTALL WITH WALL STAINLESS STEEL, FIXTURE WITH FAUCET LEDGE. SET IN BED OF 12" SQUARE NICKEL BRONZE RIM AND HALF GRATE. USE PUSH-ON SLEEVE, FLUSH VALVE THROUGH WALL EXTENSION LENGTH AS JOINT OF OUTLET SIZE AS SHOWN ON PLANS. REQUIRED AND FLUSH VALVE CONNECTION KIT. FAUCET: CHICAGO FAUCET # 895-201199AB 4" CENTERSET LEAD FREE GREASE INTERCEPTOR: GREENTURTLE PROCEPTOR GMC 1000, FAUCET WITH VANDAL RESISTANT # 317 WRISTBLADE HANDLES, GN1A TRIM: ELECTONICALLY ACTUATED FLUSH VALVE WITH SWEAT ADAPTER FIBERGLASS REINFORCED PLASTICS BODY, SINGLE BAFFLE DESIGN, GOOSENECK SPOUT, # E36VP 1.5 GPM VANDAL RESISTANT, LAMINAR KIT, WHEEL HANDLE STOP VALVE, SOLENOID VALVE ACTUATOR AND 1000 GALLON CAPACITY AND RATED FOR 577 GALLONS OF GREASE PIEZO ELECTRIC PUSH BUTTON. 120VAC / 24VAC HARD WIRED FLOW AERATOR, QUARTER TURN CERAMIC CARTRIDGES STORED, WITH (1) 24" GASKETED, AASHTO H-20 LOAD RATED COVER TRANSFORMER AND ELECTRONIC CONTROLLER THAT CAN SUPPORT TRIM: McGUIRE # LF2165CC LEAD FREE BRASS WHEEL HANDLE ANGLE WITH EXTENSIONS, TRAPPED INLET AND OUTLET AND (2) 3" VENT UP TO (2) COMBI'S "CVC2" ELECTRONIC CONTROLLERS AND STOP VALVES WITH RISERS AND ESCUTCHEONS, McGUIRE # 151M CUP CONNECTIONS. EXTEND CLEANOUTS TO GRADE. UNIT SHALL INCLUDE STRAINER WITH 1-1/2" 17 GAUGE TAILPIECE, McGUIRE # B8912CF 1-1/2" ELECTRÓNIC VALVE ACTUATOR ASSEMBLY. 30 YEAR WARRANTY AGAINST LEAKS AND STRUCTURAL FAILURE. 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP WITH SECURITY ANGLED WATER CLOSET / LAVATORY COMBINATION: HOSE BIBB: PRIER PRODUCTS # C-255CP.75, POLISHED CHROME BRASS CLEANOUT AND ESCUTCHEON. PLUMBEREX "PRO-EXTREME" # WILLOUGHBY #1846-EWC-L OR PLATED BRASS 3/4" FEMALE INLET, 3/4" THREADED HOSE CONNECTION, X-4222 INSULATION KIT FOR WATER AND WASTE PIPES. R--BC-E1L2-MA4-PZPB-WMSII-EB-LW1-TWE-PC4-TWC4C-EFVP-ET4-TFE-F LOOSE KEY HANDLE, AND ASSE 1011 INTEGRAL VACUUM BREAKER. OIL INTERCEPTOR: GREENTURTLE PROCEPTOR OMC 1500. VT-RTH-TF24H-WS 18" WIDE X 12" DEEP LAVATORY BOWL WITH LEFT OR HUB DRAIN FLOOR SINK: JAY R. SMITH # 3811T (-DBS), 7" DEEP x 6" FIBERGLASS REINFORCED PLASTICS BODY. SINGLE BAFFLE DESIGN. RIGHT HAND ANGLED 1.28 GALLON PER FLUSH WATER CLOSET BOWL, DIAMETER CAST IRON BODY WITH ACID RESISTING ENAMELED 1500 GALLON CAPACITY AND RATED FOR 819 GALLONS OF GREASE AS SHWON ON THE DRAWINGS, FLOOR MOUNTED, BACK OUTLET TYPE INTERIOR AND EXTERIOR FUNNEL WITH 2" CAST IRON SCREWED STORED, WITH (1) 24" GASKETED, AASHTO H-20 LOAD RATED COVER OF 14 GAUGE 304 STAINLESS STEEL WELDED CONSTRUCTION, #4 OUTLET, SCREWED x HUBLESS ADAPTER, HUBLESS CAST IRON P-TRAP WITH EXTENSIONS. TRAPPED INLET AND OUTLET AND (2) 3" VENT FINISH, WITH PENAL BUBBLER WITH 0.5 GPM FLOW CONTROL, HOT AND AND ALUMINUM DOME BOTTOM STRAINER CONNECTIONS. EXTEND CLEANOUTS TO GRADE. UNIT SHALL INCLUDE COLD ELECTRONIC ACTIVATED CONTROL VALVES WITH PIEZO FIRE RATED ICE MAKER BOX: GUY GRAY MODEL # FRMIB12ABDS, ASTM 30 YEAR WARRANTY AGAINST LEAKS AND STRUCTURAL FAILURE. ELECTRIC PUSH BUTTONS CONFIGURED TO FEED TWO LAVATORIES E814 LISTED, WHITE POWDER COAT ON COLD ROLLED STEEL BOX WITH FED WITH FDA POLYETHYLENE TUBING AS INDICATED ON THE SHOWER VALVE (ADA ACCESSIBLE): SYMMONS # 9605-X-PLR, PISTON TWO INTUMESCENT PADS ATTACHED. BOTTOM INLET WATER SUPPLY DRAWINGS, TOILET PAPER HOLDER, 1-1/2" REMOVABLE P-TRAP WITH TYPE PRESSURE BALANCING MIXING VALVE WITH BRASS STEM. WITH 1/2" x 1/4" LEAD FREE COMPRESSION ANGLE STOP VALVE. THROUGH WALL EXTENSION. CLEANOUT TEE WITH 3" PLAIN WASTE MEETING ASSE 1016P, SINGLE BLADE LEVER HANDLE, SET TRIM: LOOP 4 FEET OF 1/4" TYPE "K" SOFT COPPER TUBING. INLET, 4" NO-HUB OUTLET WITH CLEANOUT PIN (EXTEND PIN TO 2" ADJUSTABLE LIMIT STOP SCREW TO 110F, INTEGRAL SERVICE STOPS, ICE MAKER BOX: GUY GRAY MODEL # BIM875, 20 GAUGE GALVANIZED ABOVE FLOW LINE), AND ELECTRONIC ANTI FLOOD CONTROL DEVICE. DIVERTER VALVE, [1.5 GPM][2.0 GPM] "CLEAR-FLO" SHOWER HEAD WITH STEEL BOX, 18 GAUGE STEEL FACEPLATE, BOTTOM INLET WATER INSTALL WITH WALL SLEEVE, FLUSH VALVE THROUGH WALL EXTENSION ARM AND FLANGE. [1.5 GPM][2.0 GPM] WALL / HAND SHOWER WITH LENGTH AS REQUIRED AND FLUSH VALVE CONNECTION KIT. SUPPLY WITH 1/2" x 1/4" COMPRESSION ANGLE STOP VALVE. FLEXIBLE METAL HOSE, IN-LINE VACUUM BREAKER, WALL CONNECTION TRIM: ELECTONICALLY ACTUATED FLUSH VALVE WITH SWEAT ADAPTER TRIM: LOOP 4 FEET OF 1/4" TYPE "K" SOFT COPPER TUBING AND FLANGE, AND 30" SLIDE BAR. KIT, WHEEL HANDLE STOP VALVE, SOLENOID VALVE ACTUATOR AND JANITOR'S SINK: STERN-WILLIAMS # MTB-2424, 24" x 24" x 10" HIGH SECURITY SHOWER VALVE: ACORN # 1741-EVS1-PYY-RD, "PENAL-PAK", PIEZO ELECTRIC PUSH BUTTON. INSTALL, WHERE INDICATED ON THE TERRAZZO BASIN WITH INTEGRAL STAINLESS STEEL DRAIN BODY. 14 GAUGE, TYPE 304 STAINLESS STEEL WALL SHOWER AND PANEL. DRAWINGS SUPPORTING TWO FIXTURES. WITH A JOSAM # 15984 STAINLESS STEEL OR CHROME-PLATED TRIM, NO-HUB VERTICAL 90 DEGREE PRISON FITTING WITH 2" THREADED FAUCET: CHICAGO FAUCET # 897-CP FAUCET WITH WALL BRACE, ELECTRONICALLY-CONTROLLED METERING VALVE CONFORMING TO AUXILIARY INLET, 2" COMMON NO-HUB VENT AND ANCHOR FEET INTEGRAL VACUUM BREAKER, PAIL HOOK, AND 3/4" MALE HOSE NSF61, NON-HOLD OPEN TYPE PUSHBUTTON, 2.5 GPM VANDAL SECURELY BOLTED TO THE FLOOR. 120VAC / 24VAC HARD WIRED THREADED OUTLET. SECURE FAUCET IN WALL WITH BACKBOARD. RESISTANT PENAL SHOWERHEAD WITH LOCKABLE UNIVERSAL BALL TRANSFORMER AND ELECTRONIC CONTROLLER THAT CAN SUPPORT JOINT AND RECESSED SOAP DISH. (2) COMBI'S "CVC2" ELECTRONIC CONTROLLERS AND ELECTRONIC TRIM: # BP TYPE 304, 20 GAUGE, STAINLESS STEEL WALL SURROUNDS, SECURITY SHOWER VALVE (ADA ACCESSIBLE): ACORN# VALVE ACTUATOR ASSEMBLY. # T-35 THREE FOOT LONG REINFORCED HOSE WITH 3/4" CHROME 1741-04-EVS1-PSO-RD, "PENAL-PAK", 14 GAUGE, TYPE 304 STAINLESS COUPLING AND WALL HOOK, # V-70 EXTRUDED VINYL BUMPER GUARD, CU3 ADA COMPLIANT SECURITY WATER CLOSET / LAVATORY COMBINATION: STEEL WALL SHOWER AND PANEL, FRONT ACCESS, STAINLESS STEEL AND # T-40 24" STAINLESS STEEL MOP HANGER. OR CHROME-PLATED TRIM. ELECTRONICALLY-CONTROLLED METERING WILLOUGHBY #4896-L OR JANITOR'S SINK: STERN-WILLIAMS # SB-500. 36" x 36" x 12" HIGH R-ON-DMBH-E1L2-MA2-PZPB-WMSII-EB-LW1-PC4-TWC4C-EFVP-ET4-TFE-VALVE CONFORMING TO NSF61, NON-HOLD OPEN TYPE PUSHBUTTON, TERRAZZO BASIN WIT ONE PIECE STAINLESS STEEL CAP AND 2.5 GPM VANDAL RESISTANT PENAL SHOWERHEAD WITH LOCKABLE FVT-RTH-TF24H-MT 49-1/2" WIDE X 21" DEEP LAVATORY BOWL WITH LEFT INTEGRAL STAINLESS STEEL DRAIN BODY. UNIVERSAL BALL JOINT HANDHELD SHOWER WITH VACUUM BREAKER, OR RIGHT HAND 1.28 GALLON PER FLUSH WATER CLOSET BOWL. FAUCET: CHICAGO FAUCET # 897-CP FAUCET WITH WALL BRACE. QUICK DISCONNECT WITH POSITIVE SHUTOFF AND MOUNTING BRAKET FLOOR MOUNTED, BACK OUTLET TYPE OF 14 GAUGE 304 STAINLESS INTEGRAL VACUUM BREAKER, PAIL HOOK, AND 3/4" MALE HOSE STEEL WELDED CONSTRUCTION WITH INTEGRAL GRAB BAR, # 4 FINISH, AND RECESSED SOAP DISH. THREADED OUTLET. SECURE FAUCET IN WALL WITH BACKBOARD. WITH PENAL BUBBLER WITH 0.5 GPM FLOW CONTROL, HOT AND COLD TRENCH DRAIN: ZURN # Z-886-HD-E1-U4-GDE-USA, 6-3/4" WIDE HIGH TRIM: # RP TYPE 304 20 GALIGE STAINLESS STEEL WALL SURROLINDS. ELECTRONIC ACTIVATED CONTROL VALVES WITH PIEZO ELECTRIC DENSITY POLYETHYLENE STRUCTURAL COMPOSITE TRENCH DRAIN # T-35 THREE FOOT LONG REINFORCED HOSE WITH 3/4" CHROME PUSH BUTTONS CONFIGURED TO FEED ONE LAVATORIES WITH FDA WITH GALVANIZED DUCTILE SLOTTED CLASS E GRATE, CUT IN 20" COUPLING AND WALL HOOK, AND # T-40 24" STAINLESS STEEL MOP POLYETHYLENE TUBING AS INDICATED ON THE DRAWINGS, TOILET SECTIONS FOR REQUIRED LENGTH AS SHOWN ON FLOOR PLAN. PAPER HOLDER, 1-1/2" REMOVABLE P-TRAP WITH THROUGH WALL PROVIDE WITH END CAPS AND 4" BOTTOM OUTLET. INSTALL PER EXTENSION, CLEANOUT TEE WITH 3" PLAIN WASTE INLET, 4" NO-HUB WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): AMERICAN STANDARD # MANUFACTURER'S RECOMMENDATIONS OUTLET WITH CLEANOUT PIN (EXTEND PIN TO 2" ABOVE FLOW LINE) 0355.012 "LUCERNE" 20-1/2" X 18-1/4" RECTANGULAR WALL MOUNTED THERMOSTATIC MIXING VALVE: POWERS # LFe480, SOLID LEAD FREE AND ANTI FLOOD CONTROL DEVICE WITH MANUAL RESET. INSTALL WHITE VITREOUS CHINA FIXTURE WITH FAUCET BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT WITH WALL TEMPLATE. FLUSH VALVE THROUGH WALL EXTENSION LEDGE AND FRONT OVERFLOW. LENGTH AS REQUIRED AND FLUSH VALVE CONNECTION KIT. INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM TRIM: ELECTONICALLY ACTUATED FLUSH VALVE WITH SWEAT ADAPTER FAUCET: CHICAGO FAUCET # 802-VE2805ABXKCP 4" CENTERSET, FLOW RATE OF 0.5 GPM. SET TEMPERATURE TO 110F FOR DUEL KIT, WHEEL HANDLE STOP VALVE, SOLENOID VALVE ACTUATOR AND VANDAL RESISTANT, LEAD FREE FAUCET WITH # 390 LEVER HANDLES. TEMPERATURE LAVATORIES AND HAND SINKS, 100F FOR SINGLE PIEZO ELECTRIC PUSH BUTTON. INSTALL WITH SINGLE VENTED CERAMIC QUARTER TURN CARTRIDGES AND # E2805 0.5 GPM AERATOR. TEMPERATURE LAVATORIES AND HAND SINKS AND 120F FOR SINKS. CLOSET TEE FITTING WHERE INDICATED ON THE DRAWINGS. 120VAC / MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON 24VAC HARD WIRED TRANSFORMER AND ELECTRONIC CONTROLLER TRIM: McGUIRE # 155A GRID DRAIN WITH TAILPIECE, McGUIRE # THAT CAN SUPPORT (2) COMBI'S "CVC2" ELECTRONIC CONTROLLERS LF2165CCLK LEAD FREE BRASS LOOSE KEY COMPRESSION ANGLE AND ELECTRONIC VALVE ACTUATOR ASSEMBLY. THERMOSTATIC MIXING VALVE: POWERS # LFLM491-2, SOLID LEAD STOP VALVES WITH RISERS AND ESCUTCHEONS. McGUIRE # B8872CF FREE BRASS BODY WITH 3/4" SWEAT CONNECTIONS, CORROSION 1-1/4" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP DOUBLE CHECK VALVE BACKFLOW PREVENTER: WATTS # LF007QT-S. AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, RESISTANT INTERNAL PARTS, AND CHECK VALVES, ASSE 1017 MEETING ASSE 1015. LEAD FREE CAST BRONZE BODY. SCREW DRIVER COMPLIANT, CAPABLE OF 7.6 GPM WITH A 5 PSI DIFFERENTIAL AND A CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, AND SLOTTED TEST COCKS, QUARTER TURN BALL VALVES, AND STRAINER. MINIMUM FLOW RATE OF 0.5 GPM. SET MAXIMUM TEMPERATURE TO PLUMBEREX "PRO-EXTREME" # X-4333 INSULATION KIT FOR WATER AND DOWNSPOUT BOOT: JAY R. SMITH # 1787-24, 24" LONG CAST IRON WASTE PIPES. BODY WITH CAST IRON SECURING STRAPS, 4" ROUND INLET, 2" URINAL (ADA ACCESSIBLE): AMERICAN STANDARD # 6561.017 CLEANOUT PLUG, AND 4" DIAMETER OUTLET. THERMOSTATIC MIXING VALVE: POWERS # LFe480, SOLID LEAD FREE 'TRIMBROOK" WHITE VITREOUS CHINA FIXTURE WITH FLUSHING RIM. BRASS BODY. THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT DOWNSPOUT NOZZLE: JAY R. SMITH # 1770T, CAST BRONZE BODY AND 3/4" TOP SPUD AND SIPHON FLUSH ACTION FLANGE. PROVIDE OUTLET SIZE AS SHOWN ON PLANS. INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, VALVE: SLOAN "OPTIMA – SLOAN MODEL" # 186 ES-S TMO 1.0 GALLON CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM PER FLUSH, EXPOSED, CHROME-PLATED, HARD WIRED, WALL EXTERIOR CLEANOUT: JAY R. SMITH # 4261L SERIES DUCO CAST IRON FLOW RATE OF 0.5 GPM. SET TEMPERATURE TO 110F FOR DUEL DOUBLE FLANGED HOUSING WITH HEAVY DUTY SECURED SCORIATED MOUNTED SENSOR OPERATED, DIAPHRAGM TYPE, FLUSH VALVE LESS TEMPERATURE LAVATORIES AND HAND SINKS. MOUNT BELOW THE CAST IRON COVER WITH LIFTING DEVICE AND CLEANOUT BODY WITH TRANSFORMER WITH CHLORAMINE RESISTANT DIAPHRAGM AND PLUMBING FIXTURE WHERE INDICATED ON PLAN(S). ABS PLASTIC PLUG WITH GASKET SEAL AND PUSH-ON JOINT. REFER PROTECTED ORIFICE, MECHANICAL OVERRIDE BUTTON, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP, VACUUM BREAKER, 3/4" FLUSH TUBE, TO SPECIFICATIONS FOR INSTALLATION. MOTORIZED BALL VALVE: LINE SIZED APOLLO # 82LF-200, THREE PIECE AND SWEAT ADAPTER KIT. EXTERIOR CLEANOUT (2-WAY): JAY R. SMITH # 4261L SERIES DUCO LEAD-FREE BODY, SWEAR ENDS, FULL PORT BRASS BALL WITH TRIM: SUITABLE CARRIER WITH STANCHIONS TO FLOOR. CAST IRON DOUBLE FLANGED HOUSING WITH HEAVY DUTY SECURED APPOLLO MOTORIZED ACTUATOR # AE20010-7, PERMANENTLY SCORIATED CAST IRON COVER WITH LIFTING DEVICE AND CLEANOUT LUBRICATED GEAR TRAIN AND BEARINGS, 2 SPDT SWITCHES, NEMA 4 FLOOR-MOUNTED WATER CLOSET: AMERICAN STANDARD # 2234.001 BODY WITH ABS PLASTIC PLUG WITH GASKET SEAL AND PUSH-ON "MADERA" WHITE VITREOUS CHINA FIXTURE WITH ELONGATED ENCLOSURE, POSITION TRANSMITTER AND # 78153201 STAINLESS JOINT. REFER TO SPECIFICATIONS FOR INSTALLATION. UNIVERSAL BOWLAND DIRECT-FED SIPHON JET ACTION. STELL MOUNTING KIT ELECTRICAL REQUIREMENTS: 120 VOLT SINGLE PHASE POWER VALVE- SLOAN "SLOAN" # 111-1.6 GALLON PER FLUSH EXPOSED ELECTRIC WATER COOLER (ADA ACCESSIBLE): ELKAY # EZSTL8C CHROME-PLATED DIAPHRAGM TYPE FLUSH VALVE WITH CHLORAMINE SUPPLY, 1 FLA. | WALL-MOUNTED, LEAD FREE, BARRIER FREE, DUAL-LEVEL, FRONT AND | RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, OSCILLATING ADA SIDE PUSH ACTUATOR BARS. STAINLESS STEEL BOWL. FLEXIBLE NON-FREEZE WALL HYDRANT: PRIER PRODUCTS # C-634NBX1, SATIN COMPLIANT HANDLE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP POLYESTER ELASTOMER SAFETY BUBBLER AND GALVANIZED STEEL NICKEL PLATED BRASS 1" MALE INLET BY 3/4" FEMALE INLET, 3/4" WITH VANDAL RESISTANT CAP, VACUUM BREAKER, AND SWEAT FRONT AND SIDES, CHILLER WITH 8.0 GALLONS PER HOUR CAPACITY THREADED HOSE CONNECTION, LOOSE KEY HANDLE, HYDRANT ADAPTER KIT. 50° F DRINKING WATER AT 80° F INLET TEMPERATURES 90° F ROOM LENGTH AS REQUIRED FOR INSTALLED WALL THICKNESS, ADJUSTABLE TRIM- CHURCH # 9500SSCT WHITE OPEN-FRONT CONTOURED, SOLID TEMPERATURE. WALL CLAMP, BRASS BOX WITH SATIN NICKEL PLATED FINISH AND PLASTIC. HEAVY DUTY. SEAT LESS COVER WITH SELF-SUSTAINING TRIM: McGUIRE # LF2165CC LEAD FREE BRASS COMPRESSION ANGLE INTEGRAL ASSE 1052 DOUBLE CHECK VACUUM BREAKER. CHECK HINGES AND STAINLESS STEEL BOLTS. STOP VALVE WITH RISER AND ESCUTCHEON, McGUIRE # B8912CF 1-1/2" OVERFLOW ROOF DRAIN: JAY R. SMITH # 1330Y (-C-R-CID-WD-02), 8-1/2' 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND FLOOR-MOUNTED WATER CLOSET (ADA ACCESSIBLE): AMERICAN DIAMETER CAST IRON BODY, FLASHING CLAMP, GRAVEL STOP, WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, AND SUITABLE STANDARD # 3043.001 "MADERA" WHITE VITREOUS CHINA FIXTURE UNDERDECK CLAMP, SUMP RECEIVER, HUBLESS OUTLET, AND CAST CARRIER WITH STANCHIONS TO FLOOR WITH ELONGATED UNIVERSAL BOWL AND DIRECT-FED SIPHON JET IRON DOME BOLTED OR LOCKED DOWN AND 2" HIGH WATER DAM. ELECTRICAL REQUIREMENTS: 120-VOLT, 4 FULL LOAD AMPS. PROVIDE OUTLET SIZE AS SHOWN ON PLANS. VALVE- SLOAN "SLOAN" # 111-1.6 GALLON PER FLUSH EXPOSED FLEXIBLE CONNECTOR: UNITED FLEXIBLE #AFBX1, 3" X 12" LONG PRISON WASTE FITTING: CHARLOTTE PIPE AND FOUNDRY, # NH 502, 4 CHROME-PLATED DIAPHRAGM TYPE FLUSH VALVE WITH CHLORAMINE CORRUGATED 316L STAINLESS STEEL BELLOWS AND 304 STAINLESS WITH TAP. CAST IRON MEETING STANDARDS CISPI 301, ASTM A888 AND RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, OSCILLATING ADA STEEL SINGLE BRAID WITH CLASS 150 STAINLESS STEEL WELDED BEARING CISPI AND ASTM TRADEMARKS, 4" NO-HUB PRISON FITTING COMPLIANT HANDLE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP PLATE FLANGE ON EACH PIPE WITH A MAXIMUM OPERATING WITH 2" TOP VENT. INTERIOR BAFFLE TO PREVENT PASSAGE OF WITH VANDAL RESISTANT CAP, VACUUM BREAKER, AND SWEAT PRESSURE OF 290 PSI. CONTRABAND BETWEEN CELLS AND TAPPING BOSS FOR CLEANOUT ADAPTER KIT. INSTALL FLUSH VALVE HANDLE ON THE WIDE SIDE OF FLOOR CLEANOUT: JAY R. SMITH, CAST IRON BODY, FLASHING FLANGE THE STALL. WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE, ROUND, ROOF DRAIN: JAY R. SMITH # 1330Y (-C-R-CID), 8-1/2" DIAMETER CAST TRIM- CHURCH # 9500SSCT WHITE OPEN-FRONT CONTOURED. SOLID SECURED, NICKEL BRONZE, TOP. # 4031L (-F-C), SCORIATED TOP FOR IRON BODY, FLASHING CLAMP, GRAVEL STOP, UNDERDECK CLAMP, PLASTIC, HEAVY DUTY, SEAT LESS COVER WITH SELF-SUSTAINING EXPOSED, FLUSH WITH FINISHED FLOOR, APPLICATION(S), # 4031L CHECK HINGES AND STAINLESS STEEL BOLTS. SUMP RECEIVER, HUBLESS OUTLET, AND CAST IRON DOME BOLTED OR (-F-C-Y), STAINLESS STEEL MARKER FOR INSTALLATION IN CARPETED LOCKED DOWN. PROVIDE OUTLET SIZE AS SHOWN ON PLANS. FLOOR AREA(S), # 4151 (-F-C), 1/8" RECESS FOR INSTALLATION IN TILED WALL CLEANOUT: JAY R. SMITH # 4530S. CAST IRON CLEANOUT TEE. ROOF NON-FREEZE POST HYDRANT: MAPA PRODUCTS # MPH-24FP FLOOR AREA(S), # 4191 (-F-C), 1/2" RECESS FOR INSTALLATION IN COUNTER SUNK PLUG, STAINLESS STEEL ROUND COVER AND SCREW, FREEZE PROOF POST HYDRANT MEETING ASSE #1057 WITH BLACK TERRAZZO AND SIMILAR POURED FLOOR AREA(S). REFER TO AND IRON PLUG WITH GASKET SEAL. REFER TO SPECIFICATIONS FOR POWDER COATED CAST ALUMINUM WEATHER-GUARD DOME HANDLE SPECIFICATIONS FOR INSTALLATION. INSTALLATION. STAINLESS STEEL SHROUD WITH WELDED STAINLESS STEEL FLANGE, WATER HAMMER ARRESTER: PRECISION PLUMBING PRODUCTS, HARD FLOOR CLEANOUT: HEAVY DUTY: JAY R. SMITH #4111L CAST IRON UNDER DECK CLAMP, BRONZE GLOBE ANGLE VALVE, 3/4" HOSE DRAWN COPPER BODY WITH WROUGHT COPPER FITTINGS, PISTON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND CONNECTION, QUICK DISCONNECT WITH BUILT-IN VACUUM BREAKER, TYPE WITH LUBRICATED EPDM "O" RING SEALS. MEETING ASSE 1010 ADJUSTABLE, ROUND, SECURED, HEAVY DUTY SCORIATED NICKEL STAINLESS STEEL RESERVOIR. OR PDI WH-201. PROVIDE PDI SIZES "A" THROUGH "F" AS SHOWN ON BRONZE TOP. REFER TO SPECIFICATIONS FOR INSTALLATION. REDUCED PRESSURE ZONE BACKFLOW PREVENTER: WATTS # PLANS. PROVIDE SIZE "A" UNLESS SHOWN OTHERWISE ON THE PLANS. FLOW CONTROL VALVE: FLOWDESIGN # ICSS "AUTOFLOW", SERIES 300 LF009QT-S, MEETING ASSE 1013, LEAD FREE CAST BRONZE BODY, STAINLESS UNION BODY WITH NICKEL PLATED UNION NUT, STAINLESS QUARTER TURN TEST COCKS, QUARTER TURN BALL VALVES, BRONZE STEEL PRESSURE COMPENSATING CARTRIDGE, MEETING NSF 61 STRAINER AND # 909AG AIR GAP FITTING ANNEX G, NAMEPLATE AND 1/2" VALVE BODY SIZE UNLESS SHOWN SEWAGE GRINDER: JWC ENVIRONMENTAL MODEL 10000-0806 "MUFFIN OTHERWISE ON PLANS. PROVIDE 0.5 GPM FLOW RATE CARTRIDGE MONSTER". GRINDER SUITABLE FOR 80 GPM. GRINDERSTACK WITH UNLESS SHOWN OTHERWISE ON PLANS. ALLOY STEEL CUTTERS, GREEN EPOXY COATED DUCTILE IRON END FLOW CONTROL VALVE: FLOWDESIGN # ICSS "AUTOFLOW", SERIES 300 HOUSING AND HIGH FLOW SIDE RAILS, 304 STAINLESS STEEL GUIDE HENDERSON STAINLESS UNION BODY WITH NICKEL PLATED UNION NUT, STAINLESS RAILS AND LIFT BAIL. TEEL PRESSURE COMPENSATING CARTRIDGE, MEETING NSF 6 CONTROLLER: JWC ENVIRONMENTAL #PC2200 STANDARD MOTOR ENGINEERS ANNEX G, NAMEPLATE AND 1/2" VALVE BODY SIZE UNLESS SHOWN CONTROLLER IN NEMA 4X IN FIBERGLASS ENCLOSURE ACCEPTING 8345 LENEXA DRIVE, SUITE 300 OTHERWISE ON PLANS. PROVIDE 0.5 GPM FLOW RATE CARTRIDGE 480V-3-60 INPUT POWER, INCLUDE IEC STARTER WITH OVER CURRENT UNLESS SHOWN OTHERWISE ON PLANS. LENEXA KS 66214 PROTECTION, JAM SENSING CURRENT TRANSFORMER AND MICRO PLC. TEL 913.742.5000 FAX 913.742.5001 FLOW CONTROL VALVE: BELL & GOSSETT # LF-CB "CIRCUIT SETTER ELECTRICAL REQUIREMENTS: 480V-3-60, 3HP PLUS", LEAD FREE CAST BRONZE BODY, BRASS BALL, CALIBRATED WWW.HENDERSONENGINEERS.COM BALANCE VALVE, DIFFERENTIAL PRESSURE READOUT PORTS, DRAIN PORT, MEMORY STOP, NAMEPLATE AND 1/2" VALVE BODY SIZE UNLESS II CORPORATE NO: 184-002965 SHOWN OTHERWISE ON PLANS. SET AND BALANCE TO 0.5 GPM FLOW EXPIRES 4/30/2025 RATE UNLESS SHOWN OTHERWISE ON PLANS AND PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. FLOOR DRAIN: JAY R .SMITH # 2005L(A)-U-NB. CAST IRON BODY AND EXPIRES ON: 11/30/2025 CLAMPING COLLAR, ADJUSTABLE 6" ROUND NICKEL BRONZE STRAINER AND VANDAL PROOF SCREWS. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS. TRAP SEAL: PROVIDE TRAP SEAL PER SPECIFICATIONS FOR ACTUAL FLOOR DRAIN MODEL AND SIZE. FLOOR DRAIN: ZURN FD2250 SHOWER DRAIN, PVC BODY, CLAMP SCOTT A. COLLAR WITH ADJUSTABLE PVC HEAD AND STAINLESS STEEL WALTER STRAINER USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS. 062.075**705** 

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Architect's Name
License #: XXXXX

Date: 03/01/2024

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PLUMBING SCHEDULES

04/18/2024

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#### Addendum No. 5

Project: Edgar County Public Safety Center

Issued to: CORE Construction

12636 950<sup>th</sup> Road Paris, IL 61944

Owner: Edgar County Illinois

115 W. court Street Paris, IL 61944 Attention: Bidders

Project No.: 21003.003 Date of Issue: 04-18-2024

This Addendum supersedes and supplements all portions of the bidding documents with which it conflicts. Written addenda, including drawings or other graphic documents issued before execution of the contract modifies or interprets the bidding documents.

#### **Architectural**

#### Specifications:

- 1. 08 8853 Security Glazing
  - a. Removed paragraph 2.4. Bullet Resisting Transaction Window.
- 2. 08 5653 Security Windows
  - a. Added this specification section for Bullet Resisting Transaction Window.
- 3. 102813.63 Detention Accessories
  - a. Removed paragraph 2.8, Sill pass/deal tray.
  - b. Revised model number for Transaction Drawer.

#### Drawings:

- 1. A130 Enlarged Plans
  - a. A8 at Decon #165, door opening height is 7'-4".
  - b. Detention Equipment
    - i. Moved transaction drawer/package pass to from the Equipment Schedule to the Detention Equipment Schedule.
- 2. A300 Building Elevations
  - a. West Elevation Changed the glazing for the Dispatch exterior detention window to VT-1.
- 3. A801 Detention Opening Schedule and Details
  - a. F10 Frame Types Detention
    - i. Changed window sizes for HMC-5 and HMC-6
    - ii. Opening Schedule (Detention) Changed windows 112 and 121B to ballistic resistant glazing as provided by window manufacturer.
  - b. Added new details: A6, C6 and D6.
  - c. Revised details A10, C10, and D10.
  - d. Moved detail Anti-Pass Threshold Sill detail to H12.
  - e. Revised insect screen note at details A12, C12 and D12.

Attachments: Drawing Sheets: A130, A300 and A801.

ISSUED: HMN Architects, Inc.

Jill Ralph Architect

#### SECTION 10 2813.63 - DETENTION ACCESSORIES

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

#### A. Section Includes:

- 1. Safety hooks.
- 2. Shelves.
- Combination shelves with safety hooks.
- 4. Miscellaneous toilet accessories.
- 5. Stainless-steel mirrors.
- Grab bars.
- Shower seats.
- 8. Sill Pass/Deal Trav
- 9.8. Transaction Drawer/Package Pass
- 10.9. Cuff Rings

#### B. Related Requirements:

- 1. Section 01 3513.16 "Special Project Procedures for Detention Facilities" for general requirements for detention work.
- 2. Section 09 9123 "Interior Painting" for field painting of detention toilet accessories.
- 3. Section 10 2800 "Toilet, Bath, and Laundry Accessories" for non-detention toilet accessories.

#### 1.3 COORDINATION

- A. Coordinate installation of anchorages for detention toilet accessories. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in adjoining construction. Deliver such items to Project site in time for installation.
- B. Coordinate size and location of recesses in wall construction to receive recessed detention toilet accessories.

#### 1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

#### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Samples for Verification: For each type of detention toilet accessory indicated.
- C. Product Schedule: For detention toilet accessories. Indicate types, quantities, sizes, and installation locations by room of each accessory required. Use same designations indicated on Drawings.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Location of each built-in anchor supporting detention toilet accessories, including anchors to be installed as work of other Sections, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
  - 1. Locations, dimensions, and profiles of wall and floor reinforcements.
  - 2. Locations and installation details of built-in anchors.
  - 3. Elevations of each detention toilet accessory showing dimensions of accessory, preparations for receiving anchors, and locations of anchorage.
  - 4. Details of attachment of each detention toilet accessory to built-in anchors.
- B. Examination reports documenting inspection of substrates, areas, and conditions.
- C. Anchor inspection reports documenting inspections of built-in and cast-in anchors.
- D. Field quality-control certification signed by Contractor and Detention Specialist.

#### 1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: For detention toilet accessories to include in maintenance manuals.

#### 1.8 MAINTENANCE MATERIAL SUBMITTALS

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

#### 1.9 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace detention toilet accessories that fail in materials or workmanship within specified warranty period.

- 1. Failures include, but are not limited to, the following:
  - a. Structural failures including deflection exceeding 1/4 inch (6.3 mm).
  - b. Faulty operation of hardware.
  - c. Deterioration of metals, metal finishes, and other materials.
- 2. Warranty Period: Two years from date of Substantial Completion.

#### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Norix (Basis of design) One Innovation Drive Chicago, IL 60185
- B. Pro Form Inc. 3317 N State Highway 37 Quitman, TX 75783

#### 2.2 DETENTION SAFETY TOWEL HOOKS AND SHELF

- A. Multiple, Ball and Hook Strip: Minimum 5-1/2-inch- (140-mm-) high backplate by length indicated, formed from 0.125-inch- (3.18-mm-) thick, stainless-steel sheet. Provide stainless-steel ball and spring hooks attached to backplate; with each hook having a friction washer assembly, adjustable with a nonremovable security screw that maintains pressure on hook and allows hook to pivot when load exceeds preset limit.
  - 1. Products: Subject to compliance with requirements, basis of design:
    - a. Norix ITS #S565-520.
  - 2. Configuration: ITS-410 with stainless shelf.
  - 3. Mounting: Front mounting with security fasteners.

#### B. Materials:

1. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666 or ASTM A 240/A 240M, austenitic stainless steel, Type 304.

#### C. Stainless-Steel Finish:

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

#### 2.3 DETENTION SAFETY HOOKS

- A. Multiple, Straight, Safety Hook Strip: Minimum 5-1/2-inch- (140-mm-) high backplate by length indicated, formed from 0.141-inch- (3.58-mm-) thick, stainless-steel sheet. Provide 3/8-inch- (9.5-mm-) diameter, stainless-steel straight hooks attached to backplate. Provide pivoting assembly that maintains pressure on hook and snaps down when load exceeds 8 lbf (35.6 N).
  - 1. Products: Subject to compliance with requirements, Basis of Design:
    - a. Norix Group, Inc.; Ball Clothes Hooks, Model S575-528.
  - 2. Configuration: 16 inches (406 mm) long with two hooks.
  - 3. Mounting: Chase mounting with welded anchor nuts on backplate.

#### B. Materials:

1. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666 or ASTM A 240/A 240M, austenitic stainless steel, Type 304.

#### C. Stainless-Steel Finish:

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

#### 2.4 RECESSED, DETENTION TOILET TISSUE DISPENSER

- A. Recessed, Detention Toilet Tissue Dispenser: Minimum 5-inch diameter by 4-1/2 inches (127-mm diameter by 114 mm) deep; formed from 0.062-inch- (1.57-mm-) thick, stainless-steel sheet. Secure to wall with rear-mounting steel strap and adjustment bolts.
  - 1. Products: Basis of design:
    - a. Norix: Model ITP-110.
  - 2. Face: 1-inch (25.4-mm) lip around entire face.

#### B. Materials:

1. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666 or ASTM A 240/A 240M, austenitic stainless steel, Type 304.

#### C. Stainless-Steel Finish:

- 1. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- 2. Polished Finish: Grind and polish surfaces to produce uniform finish, free of cross scratches.

- a. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
- b. Directional Satin Finish: No. 4.

#### 2.5 DETENTION MIRRORS

- A. Small, Integrally Framed Detention Mirror: Mirror and integral frame formed from a single sheet of 18 gauge thick stainless steel; with round corners.
  - 1. Size: Approximately 9-1/2 by 11 inches (241 by 279 mm).
  - 2. Mounting: Front mounting with security fasteners to 0.168-inch (4.27-mm) nominal-thickness, metallic-coated steel mounting plate.

3.

#### B. Materials:

1. Type 430 Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666 or ASTM A 240/A 240M, austenitic stainless steel, Type 304.

#### C. Finishes:

- 1. Stainless-Steel Finish:
  - a. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
  - b. Polished Finish: Grind and polish surfaces to produce uniform finish, free of cross scratches.
    - 1) When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
    - 2) Mirrorlike Reflective, Nondirectional Polish: No. 8.

#### 2.6 DETENTION GRAB BARS

- A. Grab Bars: 1-1/2 inches (38.1 mm) in diameter; formed from 0.038-inch- (0.95-mm-) thick, stainless-steel tubing, with 3-inch- (76.2-mm-) diameter flanges formed from 0.125-inch- (3.18-mm-) thick, stainless steel. Closure plates formed from 0.125-inch- (3.18-mm-) thick, stainless steel. All-welded construction.
  - 1. Products: Subject to compliance with requirements, Basis of Design:
    - a. Norix IGS-36, 36" grab bar
    - b. Norix IGS-42, 42" grab bar
  - 2. Length: As indicated on Drawings.
  - 3. Mounting: Chase mounting with welded anchor nuts on backplate.

#### B. Materials:

1. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666 or ASTM A 240/A 240M, austenitic stainless steel, Type 304.

2. Stainless-Steel Tubing: ASTM A 1016 /A 1016M-08, austenitic stainless steel, Type 304, seamless.

#### C. Stainless-Steel Finish:

- 1. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- 2. Polished Finish: Grind and polish surfaces to produce uniform finish, free of cross scratches.
  - a. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
  - b. Directional Satin Finish: No. 4.

#### 2.7 DETENTION SHOWER SEATS

- A. Shower Seats: Double-pan retractable, recessed shower seat with recessed handle. Approximately 35-inch by 25-inch overall size formed from 14-gauge thick, stainless-steel sheet. Seat pivots on solid 0.375-inch- (9.5-mm-) diameter stainless-steel rod and self-latches when closed. Minimum 750-lb. (340-kg) loading capacity.
  - 1. Products: Subject to compliance with requirements, Basis of Design:
    - a. Norix: ISS-200.

#### B. Materials:

1. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666 or ASTM A 240/A 240M, austenitic stainless steel, Type 304.

#### C. Stainless-Steel Finish:

- 1. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- 2. Polished Finish: Grind and polish surfaces to produce uniform finish, free of cross scratches.
  - a. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
  - b. Directional Satin Finish: No. 4.

#### 2.8 SILL PASS / DEAL TRAY

- A. Deal Tray: Stainless steel drop in model deal tray. Recessed into countertop or hollow metal frame opening for flush appearance. Level 1 bullet resistant.
  - 1. Products: Subject to compliance with requirements, Basis of Design: a. Norix: IDT-100.
- 3. Materials:
  - Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666 or ASTM A 240/A 240M, austenitic stainless steel. Type 304.
  - 2. 16 gauge stainless steel.

#### C. Stainless-Steel Finish:

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

#### 2.92.8 TRANSACTION DRAWER

- A. Transaction Drawer: Stainless steel self-opening and closing transaction area cover to prevent simultaneous customer and operator access. Engineered and sealed to restrict outside airflow and external environment penetration Includes one built-in speaker compatible with pre-existing commercial intercom systems. UL® approved Level 3 bullet resistance. Unit designed to be installed in up to an 8" thick wall.
  - 1. Products: Subject to compliance with requirements, Basis of Design:
    - a. Shure: Model #-670330SPT353
- B. Installation:
  - 1. Coordinate with thickness of wall.

#### 2.102.9 CUFF RING – MASONRY INSTALLATION

- A. Cuff Ring: Stainless steel recessed cuff ring for masonry installation. Recessed into wall for flush appearance. Masonry reinforcing shall be inserted through the vertical bar.
  - 1. Products: Subject to compliance with requirements, Basis of Design:
    - a. Norix: ICR-200.
- B. Materials:
  - 1. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666 or ASTM A 240/A 240M, austenitic stainless steel, Type 304.
  - 2. 16-gauge stainless steel.
- C. Stainless-Steel Finish:
  - 1. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

#### 2.112.10 CUFF RING

- A. Cuff Ring: Stainless steel recessed cuff ring for masonry installation. Recessed into wall for flush appearance. Cast in place concrete installation. Concrete reinforcing shall be inserted through the vertical bar.
  - 1. Products: Subject to compliance with requirements, Basis of Design:
    - a. Norix: ICR-200
- B. Materials:

- 1. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666 or ASTM A 240/A 240M, austenitic stainless steel, Type 304.
- 2. 16-gauge stainless steel.
- C. Stainless-Steel Finish:
  - 1. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

#### 2.122.11 DETENTION SHOWER/PRIVACY CURTAIN

- A. Detention Shower Curtain: Flame Resistant. Anti-Bacterial, Anti Fungal, and Mildew Resistant. Can easily be cut to accommodate custom lengths on site, with no threads fraying. Original Velcro® brand tabs sealed every 10" along the top of each curtain. Durable vinyl-coated mesh screen curtain top (12") facilitates air flow. 16oz. Clear vinyl curtain base (12") to ensure safety & security. Privacy curtain middle is reinforced with a polyester scrim for greater rip stop.
- B. Detention Shower Track: Heavy duty, custom designed anodized aluminum curtain track includes secure end stop and bit. Pre-drilled holes. Stainless security mounting hardware and security bits.
- C. Curtain Tabs: 3/4" x 6" hook Velcro® brand tabs are fastened molded slides. Adjustable curtain tabs shall be easily adjusted to pull away easily slides for increased security.
  - 1. Products: Subject to compliance with requirements, Basis of Design:
    - a. Derby: Secure Shower Curtain System, Derby Industries, South Bend, IN. Phone: 866.233.4500

#### 2.132.12 BURGLAR BARS

A. Refer to the drawings.

#### 2.142.13 TELEVISION AND WALL BRACKET

A. OFCI: Owner Furnished and Contractor Installed.

#### 2.152.14 KEY CABINET

- A. Key Cabinet:
  - 1. Products: Subject to compliance with requirements, Basis of Design:
    - a. Norix Key Cabinet IKC-300.
- B. Constructed of 10-gauge flanged steel plate, with all seams welded and ground smooth.

- C. Door constructed of 10-gauge flanged steel plate and mounted to cabinet shell with a heavy duty continuous hinge welded to door and cabinet.
- D. Door provided with mounting plate for institutional level tumbler dead bolt. (See Hardware Schedule for keying information.)
- E. Provide two (2) hinged key panels for mounting of keys. Cabinet shall accommodate 300 keys.
- F. Panels to be securely mounted on the interior of the cabinet with pivot pins so panel can be swung out for easy access.
- G. Contractor to paint after welding or mechanical attachment.
- H. Size: 24" high x 16-5/8" wide x 6-7/8" deep.
- I. One piece welded assembly, all welds neatly finished and all sharp edges ground smooth.
- J. Provide anchorage devices and security fasteners.
- K. Assembly shall be provided with one coat of zinc chromate primer.
- L. Locate per Owner's instructions.

#### 2.162.15 FABRICATION

- A. Coordinate dimensions and attachment methods of detention toilet accessories with those of adjoining construction to produce integrated assemblies with closely fitting joints and with edges and surfaces aligned unless otherwise indicated.
- B. Shear and punch metals cleanly and accurately. Remove burrs.
- C. Form edges and corners to be free of sharp edges and rough areas. Fold back exposed edges of unsupported sheet metal to form a 1/2-inch- (12.7-mm-) wide hem on the concealed side, or ease edges to a radius of approximately 1/32 inch (0.8 mm) and support with concealed stiffeners.
- D. Form metal in maximum lengths to minimize joints. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- E. Weld corners and seams continuously to comply with referenced AWS standard and the following:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
  - 5. Weld before finishing components to greatest extent possible. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.

- F. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space anchoring devices to secure detention toilet accessories rigidly in place and to support expected loads. Build in straps, plates, and brackets as needed to support and anchor fabricated items to adjoining construction. Reinforce formed-metal units as needed to attach and support other construction.
- G. Cut, reinforce, drill, and tap detention toilet accessories to receive hardware, security fasteners, and similar items.
- H. Form exposed work true to line and level with accurate angles and surfaces. Grind off and ease edges unless otherwise indicated.
- I. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Use exposed security fasteners of type indicated or, if not indicated, flat-head (countersunk) security fasteners. Locate joints where least conspicuous.

#### 2.172.16 SECURITY FASTENERS

- A. Operable only by tools produced by fastener manufacturer or other licensed fabricator for use on specific type of fastener. Drive-system type, head style, material, and protective coating as required for assembly, installation, and strength, and as follows:
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Acument Global Technologies North America.
    - b. Bryce Fastener.
    - c. Safety Socket LLC.
    - d. Tamperproof Screw Co., Inc.
    - e. Tamper-Pruf Screws.
  - 2. Drive-System Type: Pinned Torx.
  - 3. Fastener Strength: 120,000 psi (827 MPa).
  - 4. Socket Button Head Fasteners:
    - a. Heat-treated alloy steel, ASTM F 835 (ASTM F 835M).
    - b. Stainless steel, ASTM F 879 (ASTM F 879M), Group 1 CW.
  - 5. Socket Flat Countersunk Head Fasteners:
    - a. Heat-treated alloy steel, ASTM F 835 (ASTM F 835M).
    - b. Stainless steel, ASTM F 879 (ASTM F 879M), Group 1 CW.
  - 6. Socket Head Cap Fasteners:
    - a. Heat-treated alloy steel, ASTM A 574 (ASTM A 574M).
    - b. Stainless steel, ASTM F 837 (ASTM F 837M), Group 1 CW.
  - 7. Protective Coatings for Heat-Treated Alloy Steel:

- a. Zinc and clear trivalent chromium where indicated.
- b. Zinc phosphate with oil, ASTM F 1137, Grade I, or black oxide unless otherwise indicated.

#### 2.182.17 SECURITY SEALANTS

A. Use "pick proof" sealant spectifed in Section 07 9216.

#### 2.192.18 ACCESSORIES

- A. Concealed Bolts: ASTM A 307, Grade A unless otherwise indicated.
- B. Cast-in-Place Anchors in Concrete: Fabricated from corrosion-resistant materials capable of sustaining, without failure, a load equal to four times the load imposed, as determined by testing according to ASTM E 488, conducted by a qualified testing agency; of type indicated below.
  - 1. Threaded or wedge type; galvanized ferrous castings, either ASTM A 47/A 47M malleable iron or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed; hot-dip galvanized according to ASTM A 153/A 153M or ASTM F 2329.
- C. Embedded Plate Anchors: Fabricated from mild steel shapes and plates, minimum 3/16 inch (4.8 mm) thick; with minimum 1/2-inch- (12.7-mm-) diameter, headed studs welded to back of plate.
- D. Proprietary Built-in Masonry Anchors: Fabricated from 1/4-inch (6-mm) nominal-thickness steel plate into 6-inch or 8-inch deep blocks matching size of concrete masonry units; with weld nuts attached on inside to receive field-bolted attachments.
  - 1. Products: Subject to compliance with requirements, Basis of Design:
    - a. M/Bed Block Systems, LLC.; M/Bed Block System.
  - 2. Finish: Factory primed for field painting for anchors with field-welded attachments.

#### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of detention toilet accessories.
  - 1. Examine roughing-in for embedded and built-in anchors to verify actual locations of detention toilet accessory connections before detention toilet accessory installation.
  - 2. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of detention toilet accessories.

- B. Inspect built-in and cast-in anchor installations before installing detention toilet accessories to verify that anchor installations comply with requirements. Prepare inspection reports.
  - 1. Remove and replace anchors where inspections indicate that they do not comply with specified requirements. Reinspect after repairs or replacements are made.
  - 2. Perform additional inspections to determine compliance of replaced or additional work. Prepare inspection reports.
- C. Verify locations of detention toilet accessories.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION

- A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing detention toilet accessories to in-place construction. Include threaded fasteners for concrete and masonry inserts, security fasteners, and other connectors.
- B. Provide temporary bracing or anchors in formwork for items that are to be built into concrete or masonry or similar construction.
- C. Apply polyurethane security sealant around perimeter in a continuous ribbon on back of detention toilet accessories before installation.
- D. Security Fasteners: Install detention toilet accessories using security fasteners with head style appropriate for installation requirements, strength, and finish of adjacent materials. Provide stainless-steel security fasteners in stainless-steel materials.

#### 3.3 FIELD QUALITY CONTROL

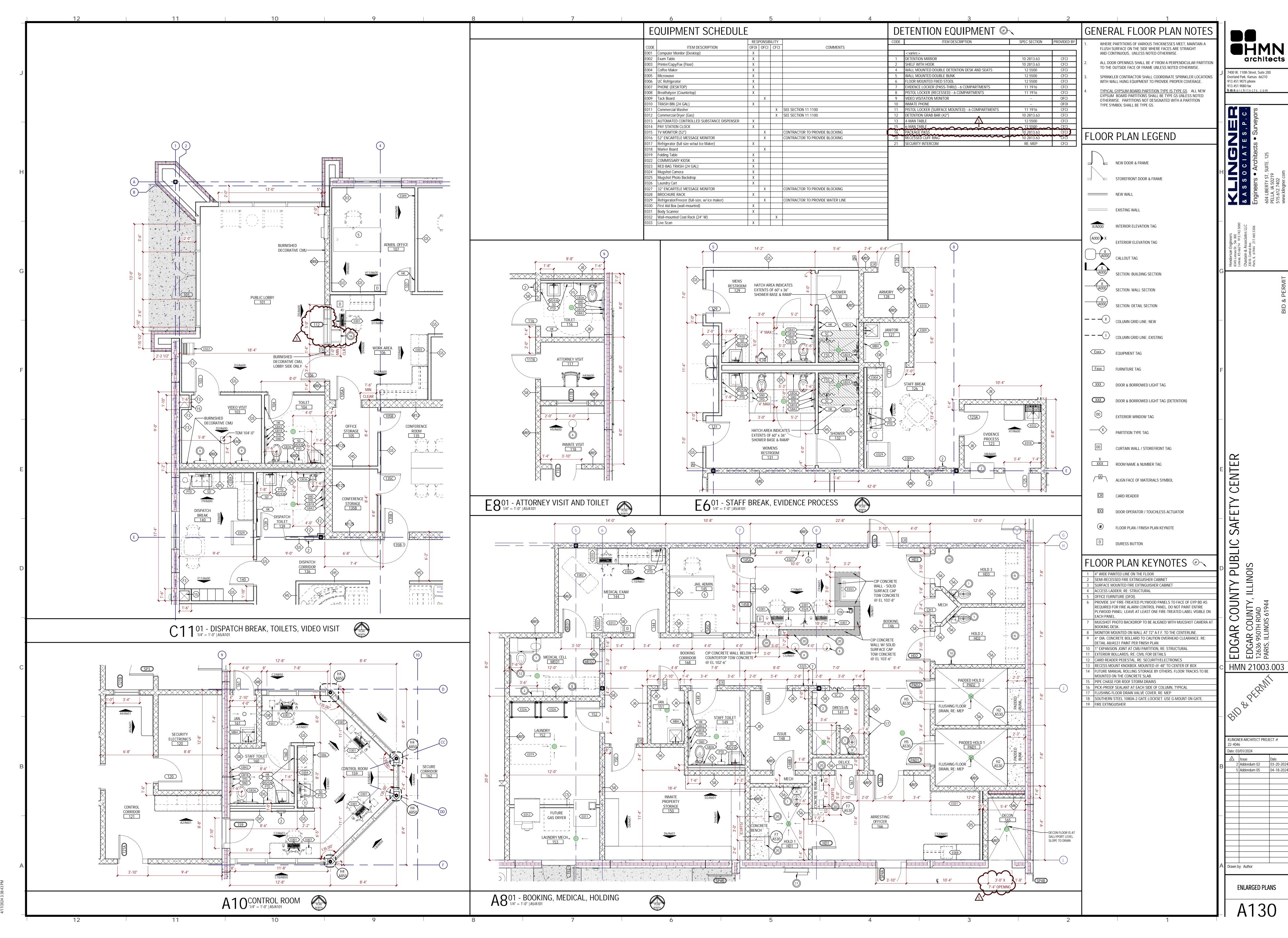
- A. Inspect installed products to verify compliance with requirements. Prepare inspection reports and indicate compliance with and deviations from the Contract Documents.
- B. Remove and replace detention work where inspections indicate that work does not comply with specified requirements.
- C. Perform additional inspections to determine compliance of replaced or additional work. Prepare inspection reports.

#### 3.4 ADJUSTING AND CLEANING

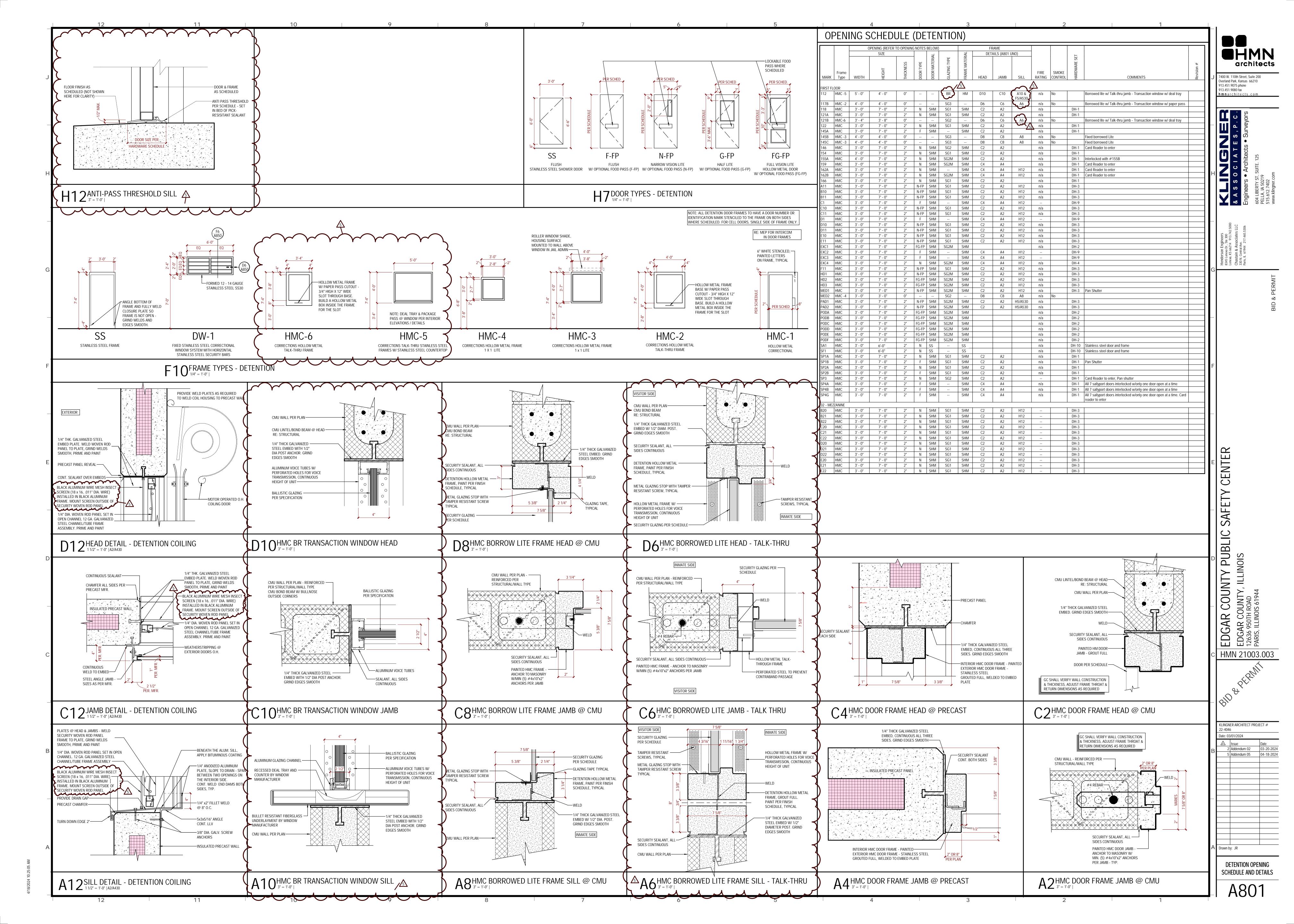
- A. Remove temporary labels and protective coatings.
- B. Adjust safety hooks to release with application of 8-lbf (35.6-N) load.
- C. Touchup Painting: Cleaning and touchup painting of bolted connections and abraded areas of shop paint are specified in Section 09 9123 "Interior Painting."

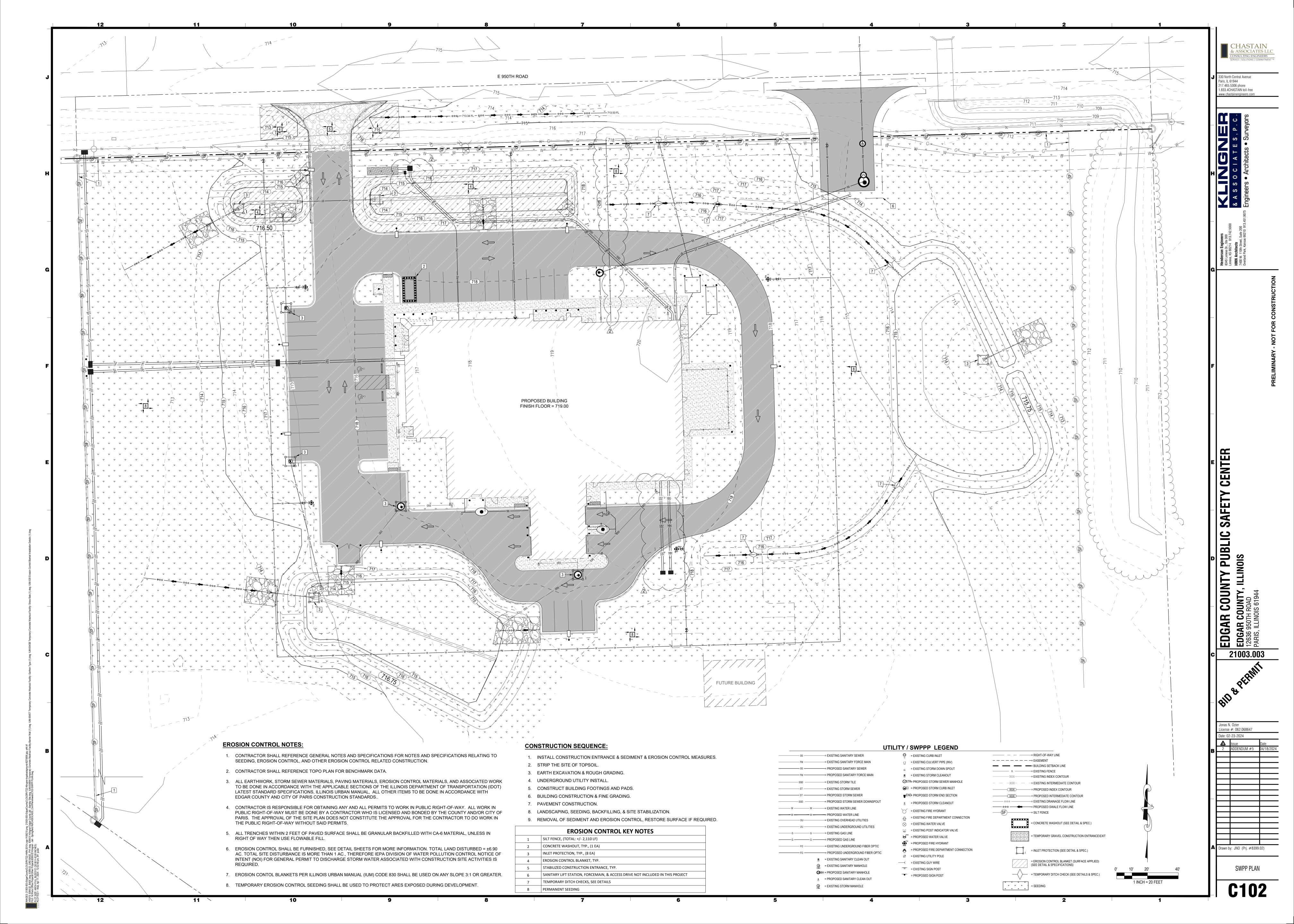
Edgar County, IL Edgar County Public Safety Center Paris, Illinois

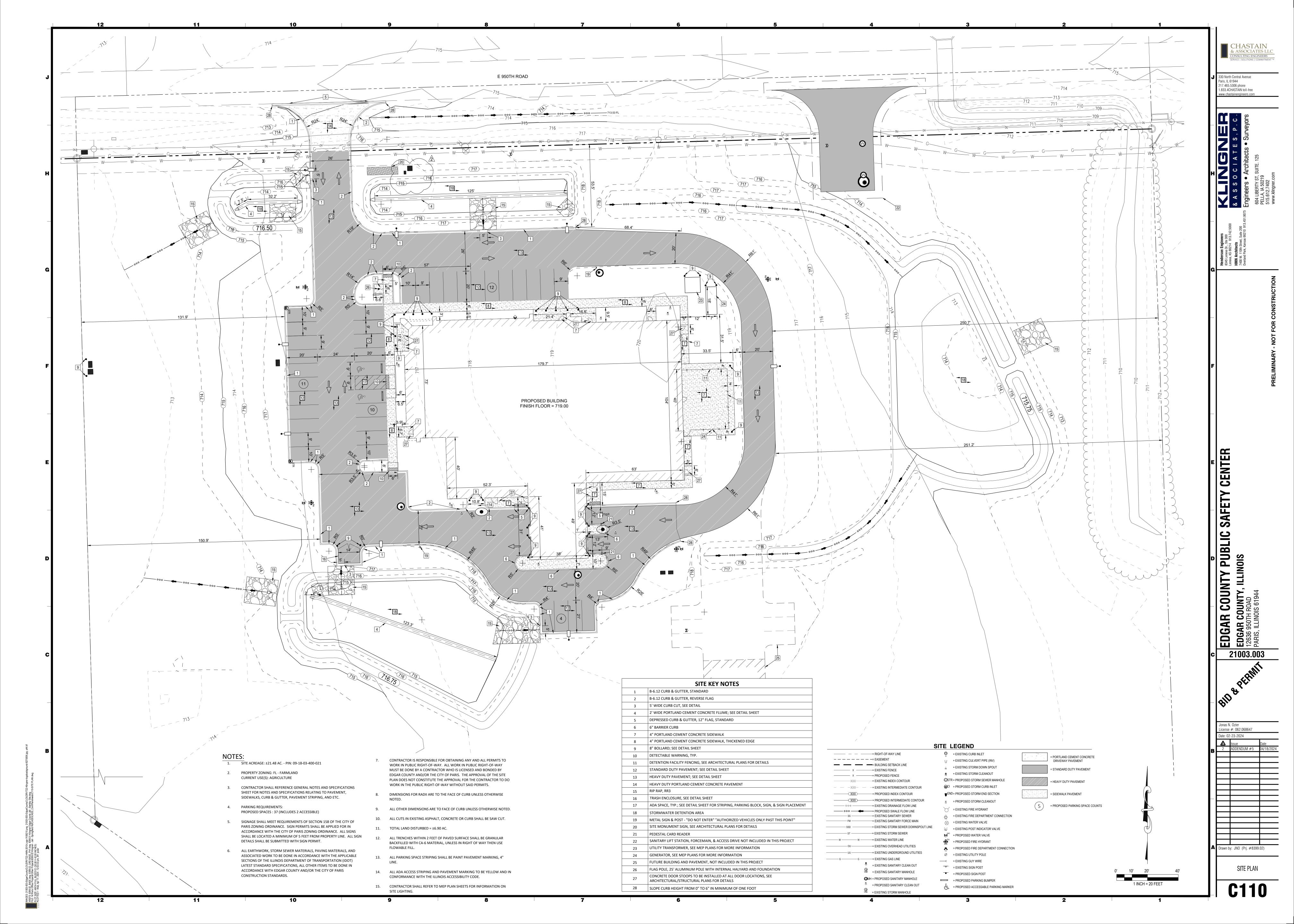
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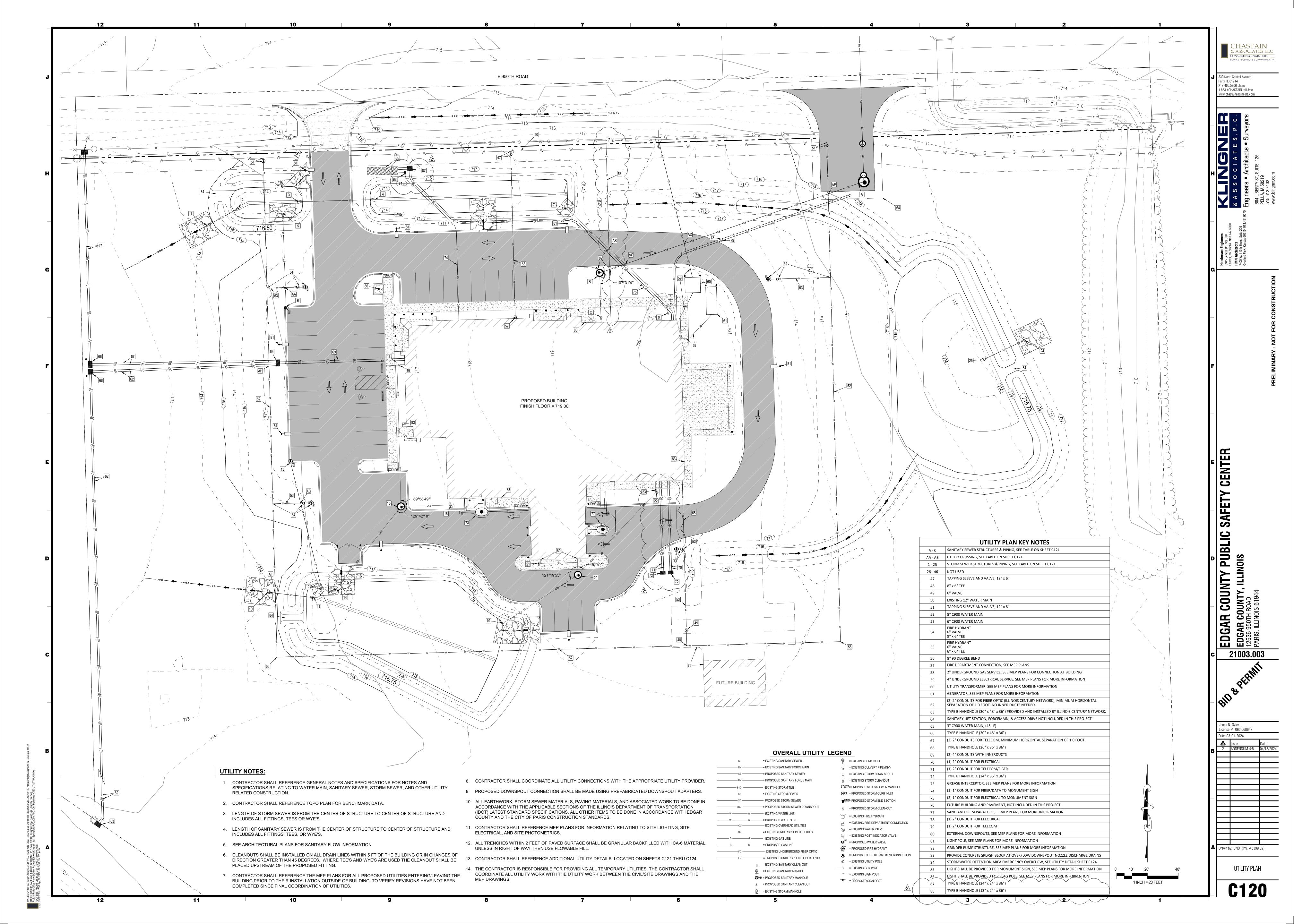


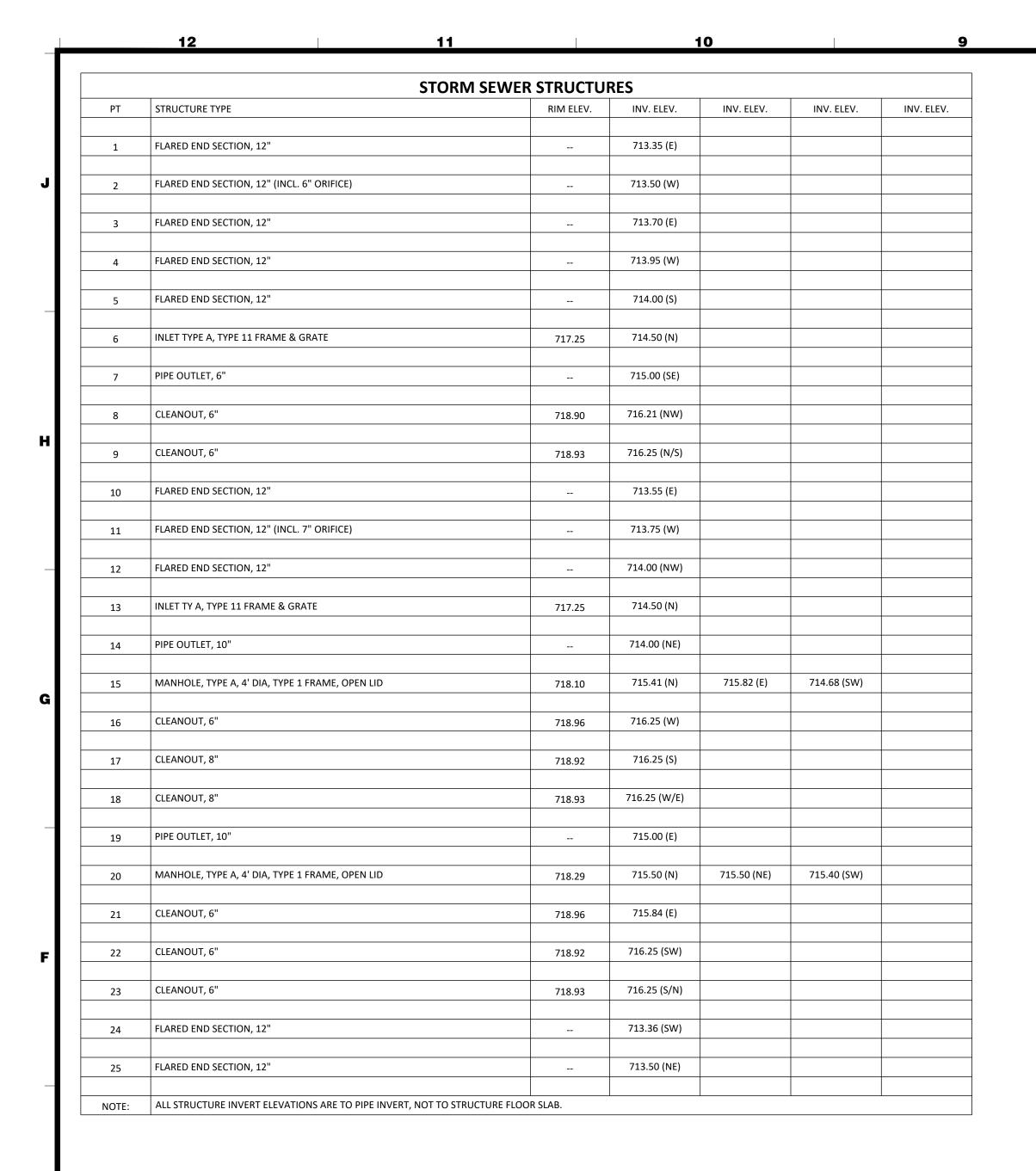












				STORM S	1	TV 1 CLD	TV 1 CLP	
			-	TY 1, CL B	TY 1, CL B	TY 1, CL B	TY 1, CL B	
				6" DIA (HDPE N-12)	8" DIA (HDPE N-12)	10" DIA (HDPE N-12)	12" DIA (HDPE N-12)	COMMENTS
PT		PT	SLOPE	(FOOT)	(FOOT)	(FOOT)	(FOOT)	
1		2	0.64%				20	****
2		4	0.500/				46	****
3		4	0.50%				46	44444
5		6	0.81%				60	****
			0.02/0					
7		8	1.30%	93				
8		9	1.30%	6				
9		BLDG	1.00%	5				
10		11	0.66%			-	26	****
10		11	0.00%			1	20	
12		13	0.58%				84	****
14		15	1.00%			68		
15		16	1.30%	33				
16		BLDG	1.30%	5				
15		17	0.90%		93			
13		17	0.5070		93			
17		18	0.91%		2			
18		BLDG	0.91%		3			
19		20	0.71%			57		
			4.000/					
20		21	1.03%	33				
20		22	1.00%	75				
-				<u>-</u>				
22		23	1.00%	3				
23		BLDG	1.00%	5				
24		25	0.47%				26	****
			TOTALS	258	98	125	262	
			IUIALS	238	38	125	202	
****	REINFORCED C	ONCRETE STORM	 ∕I SEWER IS ALLOW	ED IN ACCORDANC	 E with the projec <sup>t</sup>	T SPECIFICATIONS		
NOTE:				ARED END SECTIONS				
	LENGTH OF STO	ORM SEWER IS F	ROM THE CENTER	OF STRUCTURE TO	CENTER OF STRUCTU	JRE AND INCLUDES A	LL FITTINGS,	
		TEES, OR WYE'S						

	SANITARY SE					l
PT	STRUCTURE TYPE	RIM ELEV.	INV. ELEV.	INV. ELEV.	INV. ELEV.	INV. ELE
Α	INVERT, 6" AT SANITARY LIFT STATION (LIFT STATION BY OTHERS)		708.90 (SW)			
В	MANHOLE, TYPE A, 4' DIA, TYPE 1 FRAME, CLOSED LID (GRINDER PUMP STRUCTURE), SEE MEP PLANS FOR DETAILS	* 718.32	710.71 (NE)	711.71 (S)		
	* FUTURE RIM/PAVEMENT ELEVATION: 717.98					
С	CLEANOUT	+/- 718.95	712.00 (N/S)			
NOTE:	ALL STRUCTURE INVERT ELEVATIONS ARE TO PIPE INVERT, NOT TO STRUCTURE FLOOR SLAB.					

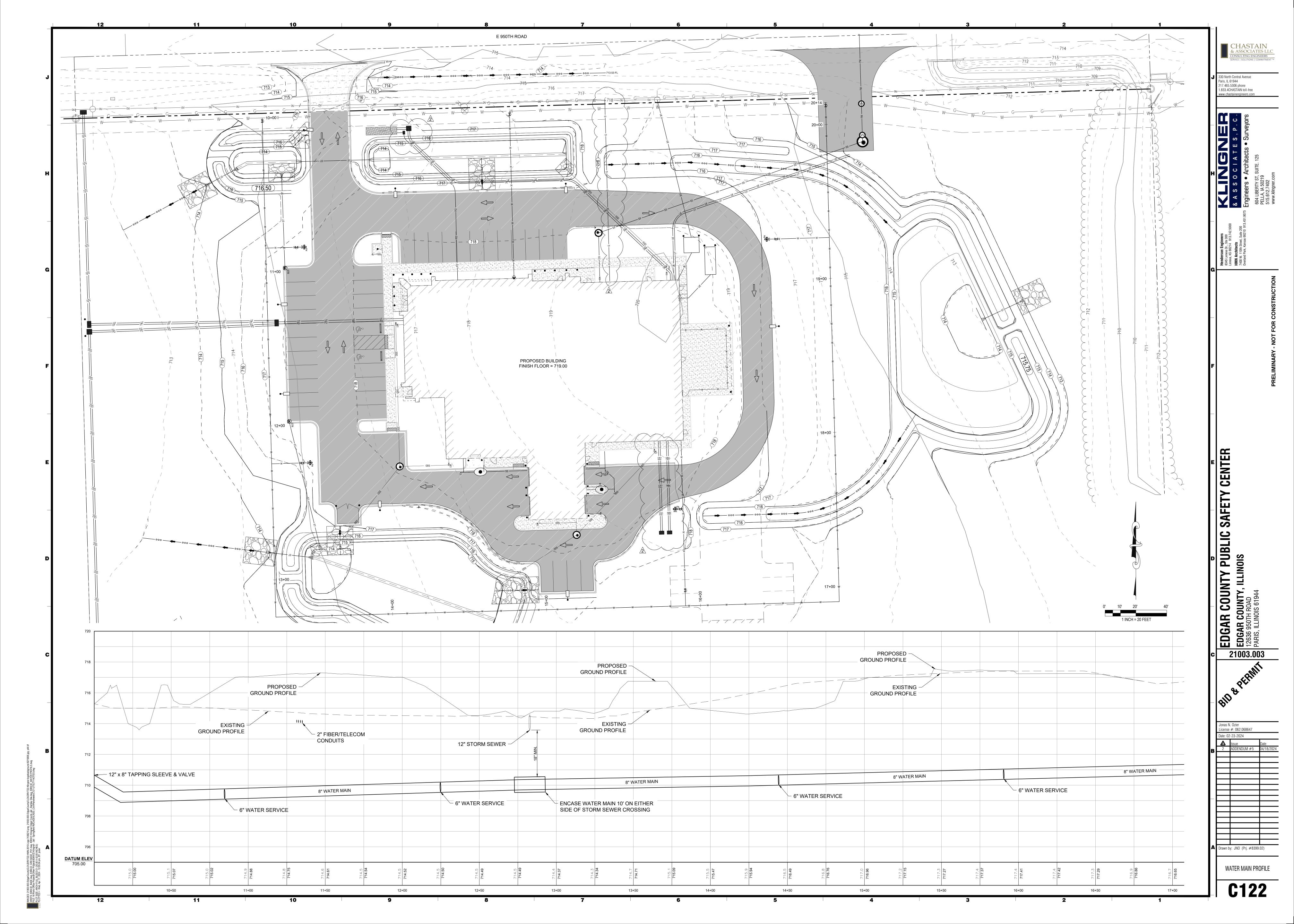
		SANI	TARY SEWE	R			
				6" DIA (PVC SDR 26)	COMMENTS		
PT		PT	SLOPE	(FOOT)			
Α		В	1.00%	181			
В		С	1.00%	29			
			TOTALS	210			
NOTE:	LENGTH OF SAI	NITARY SEWER I	S FROM THE CENTE	ER OF			
	STRUCTURE TO CENTER OF STRUCTURE AND INCLUDES ALL						
	FITTINGS, TEES, OR WYE'S.						

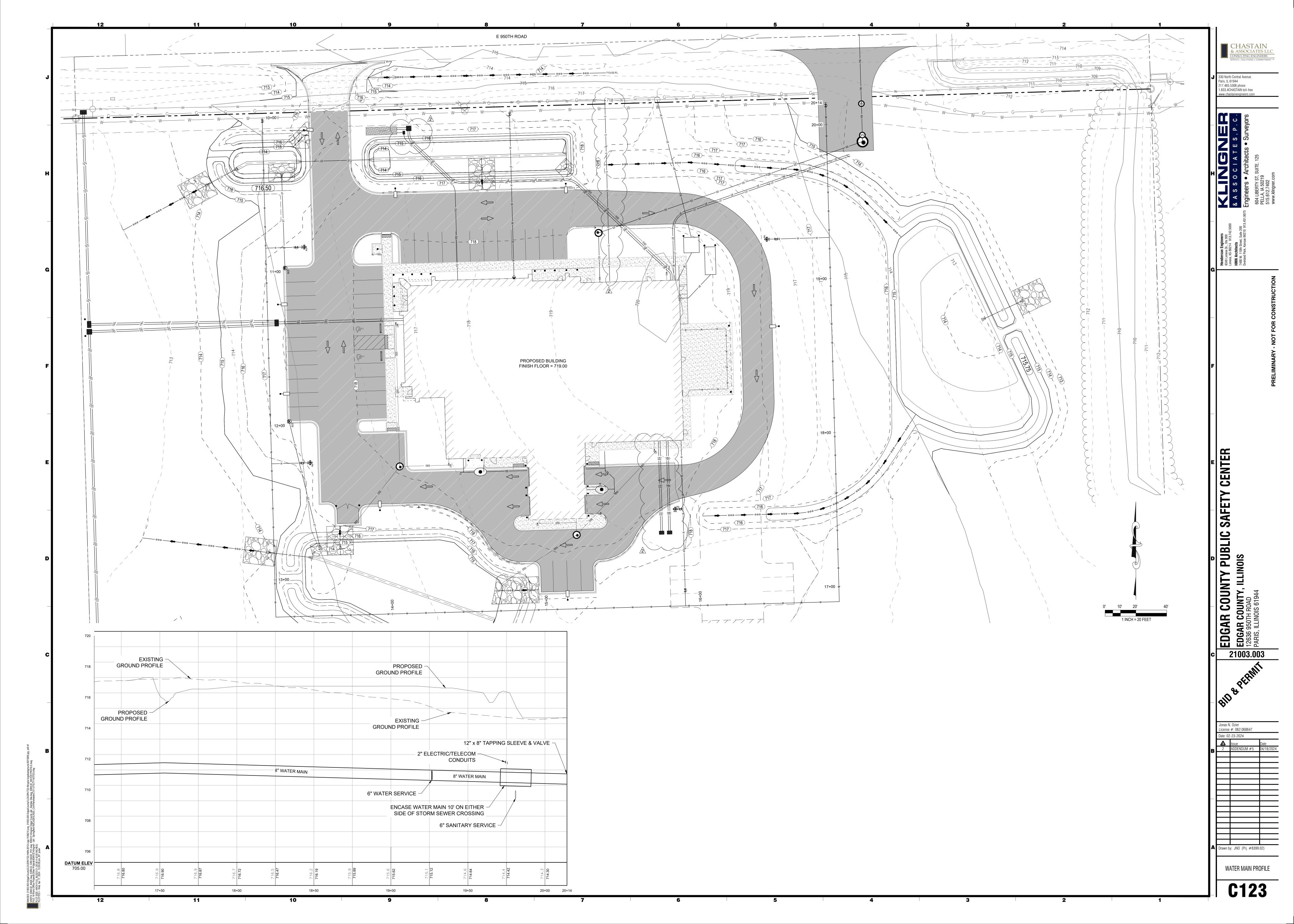
			<b>UTILITY CR</b>	OSSING	
PT	DESCRIPTION	BOTTOM - UPPER PIPE	TOP - LOWER PIPE	COMMENT	
AA	STM SEWER, 12"	714.28		BUILD WATER MAIN MINIMUM 18" BELOW STORM AND ENCASE 10	
	WTR MAIN, 6"		712.78	ON EITHER SIDE OF CROSSING.	
AB	STM SEWER, 6"	715.46		BUILD GAS SERVICE BELOW STORM SEWER.	
	GAS SERVICE, 2"		714.78		
AC	STM SEWER, 6"	715.64		BUILD SANITARY SERVICE BELOW STORM SEWER.	
	SAN SEWER, 6"		711.05		
AD	ELEC SERVICE, 4"	714.39		BUILD SANITARY SERVICE BELOW ELECTRIC SERVICE.	
	SAN SEWER, 6"		710.65		
AE	SAN SEWER, 6"		709.66	BUILD WATER MAIN ABOVE SANITARY SERVICE AND ENCASE 10' ON EITHER SIDE OF CROSSING.	
	WTR MAIN, 8"	710.17		ETTHER SIDE OF CROSSING.	
AF	STM SEWER, 12"	713.47		BUILD WATER MAIN BELOW STORM SEWER AND ENCASE 10' ON EITHER SIDE OF CROSSING.	
	WTR MAIN, 8"		710.67	ETTHER SIDE OF CROSSING.	
AG	STM SEWER, 12"	714.23		BUILD WATER MAIN BELOW STORM SEWER AND ENCASE 10' ON	
	WTR MAIN, 6"		712.45	EITHER SIDE OF CROSSING.	
АН	TELECOM/FIBER	714.06		BUILD WATER MAIN BELOW TELECOM/FIBER CONDUITS.	
	WTR MAIN, 8"		709.92		

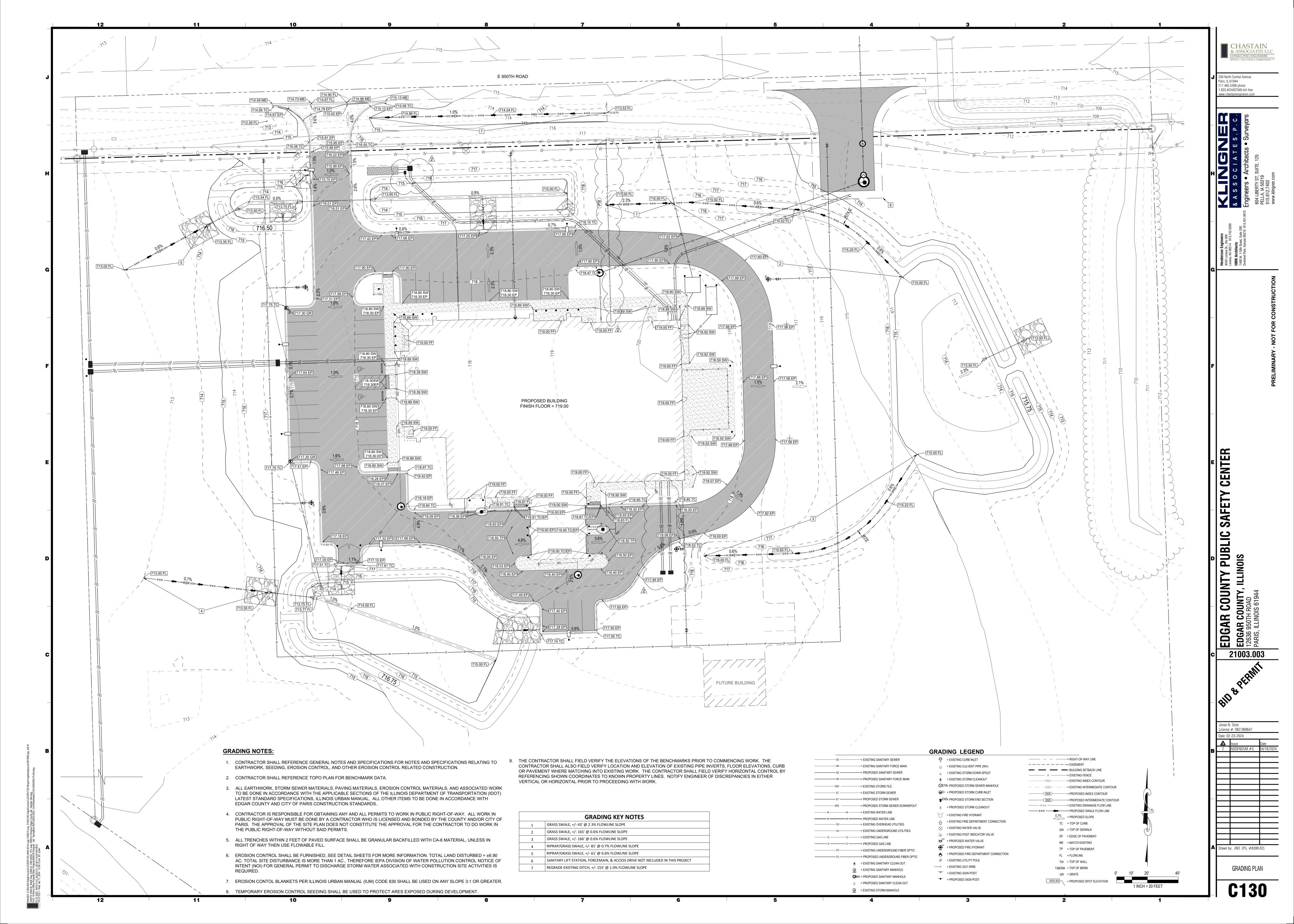
J 330 North Central Avenue Paris, IL 61944 217.465.5306 phone 1.833.4CHASTAIN toll-free

EDGAR COUNTY, ILLINOIS PARIS, ILLINOIS 61944

21003.003







#### Project No. 22-4046 March 2024 ADDENDUM 5

#### SECTION 03 3000 CAST-IN-PLACE CONCRETE

#### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

- A. Foundations
- B. Concrete Slabs on Metal Deck
- C. Concrete for composite floor construction.
- D. Floors and slabs on grade.
- E. Concrete foundation walls.
- F. Joint devices associated with concrete work.
- G. Miscellaneous concrete elements, including equipment pads, light pole bases, flagpole bases, and bollards.
- H. Concrete curing.
- I. Other items as indicated on drawings

#### 1.2 RELATED REQUIREMENTS

- A. Section 03 1000 Concrete Forming and Accessories: Forms and accessories for formwork.
- B. Section 03 2000 Concrete Reinforcing.
- C. Section 03 3511 Concrete Floor Finishes: Densifiers, hardeners, applied coatings, and polishing.
- D. Section 07 9200 Joint Sealants: Products and installation for sealants and joint fillers for saw cut joints and isolation joints in slabs.
- E. Section 32 1313 Concrete Paving: Sidewalks, curbs and gutters.

#### 1.3 REFERENCE STANDARDS

- A. ACI CODE-318 Building Code Requirements for Structural Concrete and Commentary; 2019 (Reapproved 2022).
- B. ACI PRC-211.1 Selecting Proportions for Normal-Density and High Density-Concrete Guide; 2022.

#### **ADDENDUM 5**

- C. ACI 305.1 Specification for Hot Weather Concreting; 2014.
- D. ACI 306.1 Standard Specification for Cold Weather Concreting; 2015.
- E. ACI 308.1 Specification for Curing Concrete; 2011.
- F. ACI PRC-302.1 Guide to Concrete Floor and Slab Construction; 2015.
- G. ACI SPEC-301 Specifications for Concrete Construction; 2020.
- H. ASTM C31/C31M Standard Practice for Making and Curing Concrete Test Specimens in the Field; 2024.
- I. ASTM C33/C33M Standard Specification for Concrete Aggregates; 2023.
- J. ASTM C39/C39M Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2023.
- K. ASTM C42/42M Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete; 2020.
- L. ASTM C94/C94M Standard Specification for Ready-Mixed Concrete; 2024.
- M. ASTM C109/C109M Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50 mm] Cube Specimens); 2021.
- N. ASTM C138/C138M Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete; 2023.
- O. ASTM C143/C143M Standard Test Method for Slump of Hydraulic-Cement Concrete; 2020.
- P. ASTM C150/C150M Standard Specification for Portland Cement; 2022.
- Q. ASTM C156 Standard Test Method for Water Loss [from a Mortar Specimen] Through Liquid Membrane-Forming Curing Compounds for Concrete; 2020.
- R. ASTM C171 Standard Specification for Sheet Materials for Curing Concrete; 2020.
- ASTM C172/C172M Standard Practice for Sampling Freshly Mixed Concrete; 2017.
- T. ASTM C173/C173M Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2023.
- U. ASTM C231/C231M Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method; 2022.
- V. ASTM C260/C260M Standard Specification for Air-Entraining Admixtures for Concrete; 2010a (Reapproved 2016).
- W. ASTM C309 Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2019.

#### ADDENDUM 5

- X. ASTM C494/C494M Standard Specification for Chemical Admixtures for Concrete; 2019, with Editorial Revision (2022).
- Y. ASTM C595/C595M Standard Specification for Blended Hydraulic Cements; 2021.
- Z. ASTM C618 Standard Specification for Coal Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2023, with Editorial Revision.
- AA. ASTM C827/C827M Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures; 2023.
- BB. ASTM C845/C845M Standard Specification for Expansive Hydraulic Cement; 2018.
- CC. ASTM C881/C881M Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2020a.
- DD. ASTM C989/C989M Standard Specification for Slag Cement for Use in Concrete and Mortars; 2022.
- EE. ASTM C1064/C1064M Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete; 17.
- FF. ASTM C1107/C1107M Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2020.
- GG. ASTM C1157 Standard Performance Specification for Hydraulic Cement; 2010.
- HH. ASTM C1202 Standard Test Method for Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration; 2019.
- II. ASTM C1315 Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete; 2019.
- JJ. ASTM C1602/C1602M Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2022.
- KK. ASTM D1752 Standard Specification for Preformed Sponge Rubber, Cork, and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction; 2018 (Reapproved 2023).
- LL. ASTM D5084 Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter; 2016a.
- MM. ASTM E96/E96M Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2023.
- NN. ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials; 2022.
- OO. ASTM E1155 Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers; 2020.

- PP. ASTM E1155M Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers (Metric); 2014.
- QQ. ASTM E1643 Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 2018a.
- RR. ASTM E1745 Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 2017 (Reapproved 2023).

#### 1.4 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
  - 1. For curing compounds, provide data on method of removal in the event of incompatibility with floor covering adhesives.
  - 2. For membrane-forming, moisture emission-reducing, curing and sealing compound, provide manufacturer's installation instructions.
  - 3. Submit data on vapor barrier materials include tape and accessories.
- Material Certificates: Submit material certificates signed by the manufacturer for the following:
  - 1. Admixtures
  - Cementitious Materials
  - 3. Coarse Aggregate
  - 4. Fine Aggregate

#### D. Design Data:

- 1. Mix Design: Submit proposed concrete mix design.
  - a. Indicate proposed mix design complies with requirements of ACI SPEC-301.
  - b. Indicate proposed mix design complies with requirements of ACI CODE-318.
  - c. Indicate proposed mix design complies with admixture manufacturer's written recommendations.
- 2. Submit concrete mix design for each concrete strength. Submit separate mix designs when admixtures are required for the following:
  - a. Include justification of concrete strength per ACI SPEC-301.

- b. Hot and cold weather concrete work.
- c. Air entrained concrete work.
- 3. Identify mix ingredients and proportions, including admixtures.
- 4. Identify chloride content of admixtures and whether or not chloride was added during manufacture.
- E. Samples: Submit samples of underslab vapor retarder to be used.
- F. Test Reports: Submit report for each test or series of tests specified.
- G. Manufacturer's Installation Instructions: For concrete accessories, indicate installation procedures and interface required with adjacent construction.
- H. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.
- I. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

#### 1.5 CLOSEOUT SUBMITTALS

A. Project Record Documents: Accurately record actual locations of embedded utilities and components concealed from view in finished construction.

# 1.6 QUALITY ASSURANCE

- Perform work of this section in accordance with ACI SPEC-301 and ACI CODE-318.
- B. Conform to ACI 305.1 when concreting during hot weather.
- C. Conform to ACI 306.1 when concreting during cold weather.
- D. Acquire cement and aggregate from one source for Work.
- E. Fire Rated Construction: Rating as indicated on Drawings.
  - 1. Tested Rating: Determined in accordance with ASTM E119.
- F. Perform Work in accordance with State and local standards.
- G. For slabs required to include moisture vapor reducing admixture (MVRA), do not proceed with placement unless manufacturer's representative is present for every day of placement.

### 1.7 ENVIRONMENTAL REQUIREMENTS

- A. Maintain concrete temperature after installation at minimum 50 degrees F for minimum 7 days.
- B. Maintain high early strength concrete temperature after installation at minimum 50 degrees F for minimum 5 days.

### 1.8 COORDINATION

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

## 1.9 WARRANTY

- A. See Section 01 7800 Closeout Submittals for additional warranty requirements.
- B. Slabs with Porosity Inhibiting Admixture (PIA) or Moisture Vapor Reducing Admixture (MVRA): Provide warranty to cover cost of flooring failures due to moisture migration from slabs for life of the concrete.
  - 1. Include cost of repair or removal of failed flooring, placement of topical moisture remediation system, and replacement of flooring with comparable flooring system.
- C. Moisture Emission-Reducing Curing and Sealing Compound, Membrane-Forming: Provide warranty to cover cost of flooring delamination failures for 10 years.
  - Include cost of repair or removal of failed flooring, remediation with a moisture vapor impermeable surface coating, and replacement of flooring with comparable flooring system.
- D. Moisture Emission-Reducing Curing and Sealing Compound, Penetrating: Provide non-prorated warranty to cover cost of flooring delamination failures for 20 years.
  - Include cost of repair or removal of failed flooring, remediation with a moisture vapor impermeable surface coating, and replacement of flooring with comparable flooring system.

# PART 2 PRODUCTS

#### 2.1 FORMWORK

A. Comply with requirements of Section 03 1000.

## 2.2 REINFORCEMENT MATERIALS

A. Comply with requirements of Section 03 2000.

#### 2.3 CONCRETE MATERIALS

- A. Cement: ASTM C150/C150M, Type II Moderate Sulfate Resistance Portland type, gray.
  - 1. Acquire cement for entire project from same source.
- B. Blended Cement: ASTM C595/C595M; Type IP (25% Class F), Type IL, or Type IL(LH), gray.
  - 1. Acquire cement for entire project from same source.
- C. Supplementary Cementitious Materials:
  - 1. Fly Ash: ASTM C618, Class F or Class C.
  - 2. Slag Cement: ASTM C989/C989M, Grades 100 or 120.
- D. Normal Weight Aggregates: Fine and Coarse Aggregates: ASTM C33/C33M.
  - 1. Coarse Aggregate Maximum Size: See concrete mix design, in accordance with ACI 318.
  - Aggregate sources shall not have a history of alkali silica reactivity. If alkali silica
    reactivity is possible proportion the concrete mixture according to IDOT specifications to
    mitigate detrimental effects of potentially reactive aggregates.
- E. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete. potable, without deleterious amounts of chloride ions according to ACI CODE-318

## 2.4 ADMIXTURES

- A. All admixtures shall be sourced from a single manufacturer and be approved for use in the concrete mix design.
- B. Do not use chemicals that will result in soluble chloride ions in excess of 0.06 percent by weight of cement.
- C. Air Entrainment Admixture: ASTM C260/C260M.
- D. Water Reducing Admixture: ASTM C494/C494M Type A.
- E. Retarding Admixture: ASTM C494/C494M Type B.
- F. Water Reducing and Retarding Admixture: ASTM C494/C494M Type D.
- G. Water Reducing and Accelerating Admixture: ASTM C494/C494M Type E.
- H. High Range Water Reducing Admixture: ASTM C494/C494M Type F.
- High Range Water Reducing and Retarding Admixture: ASTM C494/C494M Type G.
- J. Specific performance admixtures: ASTM C494/C494M Type S.

- 1. Shall not affect strength development.
- K. Porosity Inhibiting Admixture (PIA): ASTM C494/C494M Type S: Liquid, inorganic admixture free of volatile organic compounds (VOCs) and reactive silicates. Closes capillary systems formed during concrete curing to reduce moisture vapor emission and transmission. Reduces alkali silicate reaction (ASR) and concrete shrinkage with no adverse effect on concrete properties or applied flooring or roofing.
  - 1. Provide admixture in slabs to receive adhesively applied flooring or roofing.
  - 2. Hydraulic Conductivity: 6 x 10 exp(-8) fps, minimum, when tested according to ASTM D5084.
- L. Moisture Vapor Reducing Admixture (MVRA): Liquid, inorganic admixture free of volatile organic compounds (VOCs). Closes capillary systems formed during concrete curing to reduce moisture vapor emission and transmission. Reduces concrete shrinkage with no adverse effect on concrete properties or applied flooring or roofing.
  - 1. Provide admixture in slabs to receive adhesively applied flooring and epoxy flooring.

#### 2.5 ACCESSORY MATERIALS

- A. Vapor Barrier:
  - 1. ASTM E1745, Class A; 15-mil vapor barrier; type recommended for below grade application. Furnish joint tape recommended by manufacturer.
  - 2. Accessory Products: Vapor retarder manufacturer's recommended tape, adhesive, mastic, prefabricated boots, etc., for sealing seams and penetrations.
  - 3. Products:
    - a. Poly-America; Husky Yellow Guard Class A 15-mil Vapor Barrier: www.yellowguard.com/#sle.
    - b. Stego Industries, LLC; Stego Wrap Vapor Barrier: www.stegoindustries.com/#sle.
    - c. W. R. Meadows, Inc; PERMINATOR Class A 15-mil (0.38 mm): www.wrmeadows.com/#sle.
    - d. Substitutions: Permitted upon approval of Architect.
- B. Non-Shrink Cementitious Grout: Premixed compound consisting of nonmetallic aggregate, cement, water reducing and plasticizing agents.
  - 1. Grout: Comply with ASTM C1107/C1107M.
  - 2. Height Change, Plastic State; when tested in accordance with ASTM C827/C827M:
    - a. Maximum: Plus 4 percent.

- b. Minimum: Plus 1 percent.
- 3. Minimum Compressive Strength at 48 Hours, ASTM C109/C109M: 2400 pounds per square inch.
- 4. Minimum Compressive Strength at 28 Days, ASTM C109/C109M: 7,000 pounds per square inch.
- 5. Products containing aluminum powder are not permitted.

#### 2.6 BONDING AND JOINTING PRODUCTS

- A. Epoxy Bonding System:
  - 1. Complying with ASTM C881/C881M and of Type required for specific application.
- B. Bonding Agent:
  - Products:
    - a. Master Builders Solutions US LLC Master Emaco ACH Series.
    - b. Euclid Chemical Company; Duralbond: www.euclidchemical.com/#sle.
    - c. Substitutions: Permitted upon approval of Architect.
- C. Joint Filler Type A: ASTM D1751 or ASTM D994; Asphalt impregnated fiberboard or felt, 1/2 inch thick (unless noted otherwise in drawings); tongue and groove profile.
- D. Joint Filler Type B: ASTM D1752; recycled PVC.
- E. Joint Filler Type C: ASTM D1752; Premolded sponge rubber.
- F. Slab Isolation Joint Filler: 1/2-inch thick, height equal to slab thickness, with removable top section forming 1/2-inch deep sealant pocket after removal.
  - 1. Material: ASTM D1752, sponge rubber (Type I).
- G. Sealant and Primer: As specified in Section 07 9200.

# 2.7 CURING MATERIALS

- A. Evaporation Reducer: Liquid thin-film-forming compound that reduces rapid moisture loss caused by high temperature, low humidity, and high winds; intended for application immediately after concrete placement.
- B. Curing Compound, Naturally Dissipating: Clear, water-based, liquid membrane-forming compound; complying with ASTM C309.

- 1. Product dissipates within 4 to 6 weeks.
- C. Curing Agent, Water-Cure Equivalent Type: Clear, water-based, non-film-forming, liquid-water cure replacement agent.
  - 1. Comply with ASTM C309 standards for water retention.
  - 2. Comply with ASTM C309 standards for water retention.
  - 3. Compressive Strength of Treated Concrete: Equal to or greater than strength after 14-day water cure when tested in accordance with ASTM C39/C39M.
  - 4. VOC Content: Zero.
- D. Curing and Sealing Compound, Moisture Emission-Reducing, Membrane-Forming: Clear, liquid sealer for application to newly-placed concrete; capable of providing adequate bond for flooring adhesives, initially and over the long term; with sufficient moisture vapor impermeability to prevent deterioration of flooring adhesives due to moisture emission.
  - 1. Use this product to cure and seal all slabs to receive adhesively applied flooring or roofing.
  - 2. Comply with ASTM C309 and ASTM C1315 Type I Class A.
  - 3. VOC Content: Less than 100 g/L.
- E. Curing and Sealing Compound, Moisture Emission-Reducing, Penetrating: Clear, water-based, non-film-forming curing agent; capable of providing adequate bond for flooring adhesives, initially and over the long term; with sufficient moisture vapor impermeability to prevent deterioration of flooring adhesives due to moisture emission, moisture vapor emission, and alkalinity.
  - 1. Use this product to cure and seal all slabs to receive adhesively applied flooring or roofing.
  - 2. Compressive Strength of Treated Concrete: Equal to or greater than strength after 28-day water cure when tested according to ASTM C39/C39M.
  - 3. Chloride Ion Resistance of Treated Concrete: Equal to or greater than strength after 28-day water cure when tested according to ASTM C1202.
  - 4. Comply with ASTM C309 and ASTM C1315 Type I Class A.
- F. Moisture-Retaining Sheet: ASTM C171.
  - 1. Curing paper, regular.
  - 2. Polyethylene film, white opaque, minimum nominal thickness of 4 mil, 0.004 inch.
  - 3. White-burlap-polyethylene sheet, weighing not less than 3.8 ounces per square yard.

4. Provide a low permeance moisture-retaining cover that allows a moisture loss of no more than one pound per square yard in 72 hours when tested in accordance with ASTM C156. The material shall be non-staining and meet the requirements of ASTM C171.

# 2.8 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1.
  - Aggregate sources shall not have a history of alkali silica reactivity. If alkali silica reactivity is possible proportion the concrete mixture according to IDOT specifications to mitigate detrimental effects of potentially reactive aggregates.
- B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI SPEC-301.
  - 1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.
- C. Admixtures: Add acceptable admixtures as recommended in ACI PRC-211.1 and at rates recommended or required by manufacturer.
- D. Admixtures: Include admixture types and quantities indicated in concrete mix designs only when approved by Architect.
  - 1. Use accelerating admixtures in cold weather. Use of admixtures will not relax cold weather placement requirements.
  - 2. Do not use calcium chloride nor admixtures containing calcium chloride.
  - 3. Use set retarding admixtures during hot weather.
  - 4. Add air entrainment admixture to concrete mix for work exposed to freezing and thawing, or deicing chemicals.
  - 5. For concrete exposed to deicing chemicals, limit fly ash, pozzolans, silica fume, metakaolin, and slag content as required by ACI 318.
- E. Normal Weight Concrete: Provide concrete to the following criteria:
  - Exterior concrete exposed to deicing chemicals (Structural Stoop Slabs):

Material and Property	Measurement
Compressive Strength (7 day)	3750 psi
Compressive Strength (28 day)	5000 psi
Cement Type	ASTM C150/C150M and ASTM C595/C595M
Cement Content (minimum)	658 pounds/cu yd
Aggregate Type	Normal weight
Water-Cement Ratio (maximum)	0.40 by weight

Aggregate Size (maximum)	1 inch
Aggregate Size (minimum)	1/2 inch
Air Content	6.0 percent to 8.5 percent
Fly Ash Content	20 percent of cementitious materials by weight, maximum
Silica Fume Content	0 percent of cementitious materials by weight, maximum
Slag	15 percent of cementitious materials by weight, maximum
Slump	4 inches maximum prior to water reducer, 8 inches maximum after water reducer

# 2. Exterior concrete and concrete exposed to the weather or earth:

Material and Property	Measurement
Compressive Strength (7 day)	3300 psi
Compressive Strength (28 day)	4500 psi
Cement Type	ASTM C150/C150M and ASTM C595/C595M
Cement Content (minimum)	658 pounds/cu yd
Aggregate Type	Normal weight
Water-Cement Ratio (maximum)	0.42 by weight
Aggregate Size (maximum)	1 inch
Aggregate Size (minimum)	1/2 inch
Air Content	6.0 percent to 8.5 percent
Fly Ash Content	20 percent of cementitious materials by weight, maximum
Silica Fume Content	<ul><li>0 percent of cementitious materials by weight, maximum</li></ul>
Slag	15 percent of cementitious materials by weight, maximum
Slump	4 inches maximum prior to water reducer, 8 inches maximum after water reducer

# 3. Interior concrete:

Material and Property	Measurement
Compressive Strength (7 day)	3000 psi
Compressive Strength (28 day)	4000 psi
Cement Type	ASTM C150/C150M and ASTM C595/C595M
Cement Content (minimum)	564 pounds/cu yd
Aggregate Type	Normal weight
Water-Cement Ratio (maximum)	0.45 by weight
Aggregate Size (maximum)	1 inch
Aggregate Size (minimum)	1/2 inch
Air Content	0 percent to 3 percent

Fly Ash Content	20 percent of cementitious materials by weight, maximum
Silica Fume Content	<ul><li>0 percent of cementitious materials by weight, maximum</li></ul>
Slag	15 percent of cementitious materials by weight, maximum
Slump	4 inches maximum prior to water reducer, 8 inches maximum after water reducer

F. Average Compressive Strength Reduction: Permitted in accordance with ACI 318.

## 2.9 MIXING

- A. Ready Mixed Concrete: Mix and deliver concrete in accordance with ASTM C94/C94M.
- B. Site Mixed Concrete: Not permitted
- C. Adding Water: If concrete arrives on-site with slump less than suitable for placement, do not add water that exceeds the maximum water-cement ratio or exceeds the maximum permissible slump.
- D. Do not use expansive component in same concrete batch with MVRA or PIA.
- E. Do not use shrinkage-reducing admixture (SRA) in same concrete batch with MVRA or PIA.

### 2.10 LIQUID FLOOR TREATMENTS

- A. Water and Chloride Ion Repelling Penetrating Sealer: Clear, solvent based Silane or Siloxane penetrating sealer which reacts chemically with the concrete surface to function as a Chloride Ion screen with a minimum 90% factor when tested in accordance with NCHRP #244, Series II, 100% solids, and applied in accordance with the manufacturer's recommendation.
  - 1. Products: Subject to compliance with requirements, provide one of the following:
    - a. BASF Corporation: MasterProtect H 1000.
    - b. Lymtal International, Inc.; Iso-flex 618-100 CRS.
    - c. Evonik Industries; Protectosil Chem-Trete BSM-400.
    - d. SpecChem, LLC: SpecSilane 100.

# PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify requirements for concrete cover over reinforcement.
- B. Verify anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with placing concrete.
- C. Verify lines, levels, and dimensions before proceeding with work of this section.

#### 3.2 PREPARATION

- A. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning with steel brush and applying bonding agent in according to bonding agent (where indicated on drawings) manufacturer's instructions. Remove laitance, coatings, and unsound materials.
  - 1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.
  - 2. Do not use a latex bonding agent.
- B. Remove debris and ice from formwork, reinforcement, and concrete substrates.
- C. Remove water from areas receiving concrete before concrete is placed.
- D. Concrete can be place under water using tremie as approved by Architect.
- E. Interior Slabs on Grade: Install vapor retarder under interior slabs on grade. Comply with ASTM E1643. Lap joints minimum 6 inches. Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions. Repair damaged vapor retarder before covering.
  - 1. Vapor Retarder Over Granular Fill: Install compactible granular fill before placing vapor retarder as indicated on drawings. Do not use sand.
- F. Install vapor barrier under interior slabs on grade in accordance with ASTM E1643; place sheets in position with longest dimension parallel with direction of pour.
  - 1. Level and compact base material
  - 2. Extend vapor barrier to the perimeter of the slab. If practicable, terminate it at the top of the slab, otherwise (a) at a point acceptable to the Architect or (b) where obstructed by impediments (such as dowels, water-stops, or any other site condition requiring early termination of the vapor barrier). At the point of termination, seal vapor barrier to the foundation wall, grade beam or slab itself.
  - 3. Lap joints minimum 6 inch and seal watertight by taping edges and ends.
  - 4. Apply seam tape to a clean and dry vapor barrier.

- 5. Seal all penetrations (including pipes) per manufacturer's instructions
- 6. Avoid the use of non-permanent stakes driven through vapor retarder.
- 7. If non-permanent stakes are driven through vapor retarder, repair as recommended by vapor retarder manufacturer.
- 8. Repair vapor barrier damaged during placement of concrete reinforcing. Repair with vapor barrier material of same or better permeance, puncture, and tensile strength; lap over damaged areas minimum 6 inches and seal watertight by taping joints.

### 3.3 PLACING CONCRETE

- A. Place concrete in accordance with ACI 301.
- B. Notify testing laboratory and Architect minimum 48 hours prior to commencement of operations.
- C. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken. The Contractor shall collect and retain concrete batch trip tickets. The Contractor and Testing Laboratory shall immediately notify the Architect and each each other of tickets which do not meet the specificed criteria.
- D. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.
- E. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.
- F. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.
- G. Deposit concrete at final position. Prevent segregation of mix.
- H. Place concrete in continuous operation for each panel or section determined by predetermined joints.
- Consolidate concrete.
- J. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- K. Place concrete continuously between predetermined expansion, control, and construction joints.
- L. Do not interrupt successive placement; do not permit cold joints to occur.
- M. Place floor slabs in saw cut pattern indicated.

# 3.4 SLAB JOINTING

- A. Locate joints as indicated on drawings.
- B. Anchor joint fillers and devices to prevent movement during concrete placement.
- C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.
- D. Saw Cut Contraction Joints: Saw cut joints before concrete begins to cool, within 4 to 12 hours after placing; use 3/16 inch thick blade and cut at least 1 1/2 inch deep but not less than one quarter (1/4) the depth of the slab.
- E. Separate slabs on grade from vertical surfaces with 1/2 inch thick joint filler unless otherwise shown on the drawings.
- F. Place joint filler in floor slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- G. Extend joint filler from bottom of slab as required by Section 07 9200 for finish joint sealer requirements.
- H. Install construction joint devices in coordination with floor slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- I. Install joint device anchors. Maintain correct position to allow joint cover to be flush with floor and wall finish.
- J. Install joint covers in longest practical length, when adjacent construction activity is complete.
- K. Apply sealants in joint devices in accordance with Section 07 9200.

## 3.5 FLOOR FLATNESS AND LEVELNESS TOLERANCES

- A. Maximum Variation of Surface Flatness:
  - 1. Exposed Concrete Floors: 1/8 inch in 10 feet. Occur at wood floors and gymnasium floors.
  - 2. Under Seamless Resilient Flooring: 1/4 inch in 10 feet.
  - 3. Under Carpeting: 1/4 inch in 10 feet.
- B. Correct the slab surface if tolerances are less than specified.
- C. The minimum overall surface flatness shall be  $F_F35$ , levelness shall be  $F_L25$ , and local area minimums shall be  $F_F25$ ,  $F_L20$ .
- D. Measure F(F) Floor Flatness and F(L) Floor Levelness in accordance with ASTM E1155 (ASTM E1155M), within 48 hours after slab installation; report both composite overall values and local values for each measured section.

- E. Correct the slab surface if composite overall value is less than specified.
- F. Correct defects by grinding or by removal and replacement of the defective work. Re-measure corrected areas by the same process.
- G. Areas that have floor drains shall not be required to meet the levelness tests.

#### 3.6 CONCRETE FINISHING

- A. Repair surface defects, including tie holes, immediately after removing formwork.
- B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more in height.
- C. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:
  - 1. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal.
- D. Provide formed concrete surfaces as follows:
  - Rough formed Finish: As-cast concrete texture imparted by form-facing material with tie
    holes and defects repaired and patched. Remove fins and other projections that exceed
    specified limits on formed-surface irregularities.
    - a. Apply to concrete surfaces not exposed to public view.
  - Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
    - a. Apply to concrete surfaces exposed to public view.
  - Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.
- E. Steel trowel surfaces receiving carpeting, resilient flooring, seamless flooring, thin set quarry tile or thin set ceramic tile.
- F. Steel trowel surfaces which are indicated to be exposed at interior spaces.
- G. Concrete Slabs: Finish to requirements of ACI PRC-302.1 and ACI SPEC-301, and as follows:
  - Surfaces to Receive Thin Floor Coverings: "Steel trowel" as described in ACI PRC-302.1; thin floor coverings include carpeting, resilient flooring, seamless flooring, thin set quarry tile, and thin set ceramic tile.

- 2. Other Surfaces to Be Left Exposed: Trowel as described in ACI PRC-302.1, minimizing burnish marks and other appearance defects.
- H. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains 1/8 inch per foor.
- I. Finish concrete floor surfaces in accordance with ACI SPEC-301.

### 3.7 CURING AND PROTECTION

- A. Cure Concrete and floor sufaces in accordance with ACI SPEC-301.
- B. Comply with requirements of ACI 308.1. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
  - 1. Protect concrete footings from freezing until the concrete has reached the specified 28 day strength and a minimum of 5 days.
- C. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
  - 1. Normal concrete: Not less than seven days.
  - 2. High early strength concrete: Not less than four days.
- D. Formed Surfaces: Cure by moist curing with forms in place for full curing period.
- E. Surfaces Not in Contact with Forms:
  - Slabs and Floors To Receive Adhesive-Applied Flooring: Curing compounds and other surface coatings are usually considered unacceptable by flooring and adhesive manufacturers. If such materials must be used, either obtain the approval of the flooring and adhesive manufacturers prior to use or remove the surface coating after curing to flooring manufacturer's satisfaction.
  - 2. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding, water-saturated sand, water-fog spray, or saturated burlap.
    - a. Ponding: Maintain 100 percent coverage of water over floor slab areas, continuously for 7 days.
    - b. Spraying: Spray water over floor slab areas and maintain wet for 7 days.
    - Saturated Burlap: Saturate burlap-polyethylene and place burlap-side down over floor slab areas, lapping ends and sides; maintain in place.
  - 3. Final Curing: Begin after initial curing but before surface is dry.

- a. Moisture-Retaining Sheet: Lap strips not less than 3 inches and seal with waterproof tape or adhesive; secure at edges.
- b. Curing Compound: Apply in two coats at right angles, using application rate recommended by manufacturer.

#### 3.8 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 Quality Requirements.
- B. The Owner shall engage a qualified testing and inspecting agency to perform field special structural inspections and testing in accordance with the applicable International Building Code and to submit reports.
- C. The contractor shall be responsible for scheduling the tests. The contactor shall be required to notify the owner's representative a minimum of 48 hours prior to all placement of concrete. The Contractor shall provide a minimum of 48 hours notification to the Special Inspector prior to needing an inspection. The Contractor shall verify all testing and Special Inspections have been completed and discrepancies corrected prior to covering the work.
- D. Provide free access to Work and cooperate with appointed firm. The Contractor shall provide access to the work so the Special Inspections and testing can be completed.
- E. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.
- F. Tests of concrete and concrete materials may be performed at any time to ensure compliance with specified requirements.
- G. Concrete Inspections:
  - 1. Continuous Placement Inspection: Inspect for proper installation procedures.
  - 2. Periodic Curing Inspection: Inspect for specified curing temperature and procedures.
- H. Compressive Strength Tests: ASTM C39/C39M, for each test, mold and cure five concrete test cylinders.
- I. Strength Test Samples:
  - 1. Sampling Procedures: ASTM C172/C172M
  - 2. Cylinder Molding and Curing Procedures: ASTM C31/C31M, 4"x8" cylinder specimens, standard cured.
  - 3. Sample concrete and make one set of five cylinders for every 75 cu yds or less of each class of concrete placed each day and for every 5,000 sf of surface area for slabs.

- 4. When volume of concrete for any class of concrete would provide less than 5 sets of cylinders, take samples from five randomly selected batches, or from every batch when less than 5 batches are used.
- 5. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.

# J. Field Testing:

- 1. Slump Test Method: ASTM C143/C143M.
- Air Content Test Method: ASTM C231/C231M for normal weight concrete or ASTM C173/C173M.
- 3. Temperature Test Method: ASTM C1064/C1064M.
- 4. Measure slump, density, and temperature for each compressive strength concrete sample.
- 5. Measure air content in air entrained concrete for each compressive strength concrete sample.
- Density Testing ASTM C138/C138M.
- K. Cylinder Compressive Strength Testing:
  - Test Method: ASTM C39/C39M.
  - 2. Test Acceptance: In accordance with ACI 301.
  - 3. Test one cylinder at 7 days.
  - 4. Test three cylinders at 28 days.
  - 5. Retain one cylinder for 56 days for testing when requested by Architect.
- L. Core Compressive Strength Testing: Notify Architect prior to core testing.
  - 1. Sampling and Testing Procedures: ASTM C42/42M.
  - 2. Test Acceptance: In accordance with ACI SPEC-301.
  - 3. Drill three cores for each failed strength test from concrete represented by failed strength test. Locate reinforcing steel and avoid damaging reinforcing steel when cores are drilled.
- M. Test floor flatness and floor levelness per ASTM E1155. Floor levelness does not apply to unshored concrete slab-on-metal deck construction. Test structural floors prior to the removal of the formwork and shoring. Interpret and submit a summary of the test results with supporting data.

- N. Maintain records of concrete placement. Record date, location, quantity, air temperature and test samples taken.
- O. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
- P. Slab Testing: Cooperate with manufacturer of specified moisture vapor reducing admixture (MVRA) to allow access for sampling and testing concrete for compliance with warranty requirements.
- Q. Test Results: The testing agency shall report test results in writing to Architect and Contractor within 24 hours of test.
- R. The testing agency shall notify the Architect and Contractor of potentially deficient or deficient concrete.

# 3.9 PATCHING

- A. Allow Architect to inspect concrete surfaces immediately upon removal of forms.
- B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Architect upon discovery.
- C. Patch imperfections in accordance with ACI SPEC-301.

# 3.10 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not complying with required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by the Architect.
- C. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
- D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect for each individual area.

### 3.11 PROTECTION

A. Do not permit traffic over unprotected concrete floor surface until fully cured.

# **END OF SECTION**

# SECTION 088000 GLAZING

#### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. This Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:
  - Doors.
  - 2. Storefront framing.
  - 3. Curtain wall framing.

# 1.2 SUBMITTALS

- A. Product Data: For each glass product and glazing material indicated.
- B. Samples: 12-inch- square, for opaque glass.
- C. Preconstruction Adhesion and Compatibility Test Report: From glazing sealant manufacturer.

#### 1.3 DEFINITIONS

- A. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or a specified gas.
- B. Deterioration of Coated Glass: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in metallic coating.
- C. Deterioration of Insulating Glass: Failure of hermetic seal under normal use that is attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.

# 1.4 PERFORMANCE REQUIREMENTS

- A. General: Provide glazing systems capable of withstanding normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
- B. Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than

thicknesses and in strengths (annealed or heat treated) required to meet or exceed the following criteria:

- 1. Glass Thicknesses: Select minimum glass thicknesses to comply with ASTM E 1300, according to the following requirements:
  - a. Specified Design Wind Loads: As indicated.
    - 1) Basic Wind Speed: 120mph
    - 2) Importance Factor: Risk Category IV.
    - 3) Exposure Category: C.
  - b. Specified Design Snow Loads: As indicated, but not less than snow loads applicable to Project as required by ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Section 7.0, "Snow Loads."
  - c. Probability of Breakage for Vertical Glazing: 8 lites per 1000 for lites set vertically or not more than 15 degrees off vertical and under wind action.
    - 1) Load Duration: 3 seconds.
  - d. Minimum Glass Thickness for Exterior Lites: Not less than 6.0 mm.
  - e. Thickness of Tinted and Heat-Absorbing Glass: Provide the same thickness for each tint color indicated throughout Project.
- C. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120°F, ambient; 180°F, material surfaces.
- D. Thermal and Optical Performance Properties: Provide glass with performance properties specified based on manufacturer's published test data, as determined according to procedures indicated below:
  - 1. For monolithic-glass lites, properties are based on units with lites 6.0 mm thick.
  - 2. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite 6.0 mm thick and a nominal 1/2-inch- wide interspace.
  - 3. Center-of-Glass Values: Based on using LBL-44789 WINDOW 5.0 computer program for the following methodologies:
    - a. U-Factors: NFRC 100 expressed as Btu/sq. ft. x h x deg F.
    - b. Solar Heat Gain Coefficient: NFRC 200.
    - c. Solar Optical Properties: NFRC 300.

#### 1.5 QUALITY ASSURANCE

- A. Glazing for Fire-Rated Door Assemblies: Glazing for assemblies that comply with NFPA 80 and that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 257.
- B. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.

- 1. GANA Publications: GANA Laminated Division's "Laminated Glass Design Guide" and GANA's "Glazing Manual."
- AAMA Publications: AAMA GDSG-1, "Glass Design for Sloped Glazing," and AAMA TIR-A7, "Sloped Glazing Guidelines."
- 3. IGMA Publication for Sloped Glazing: IGMA TB-3001, "Sloped Glazing Guidelines."
- 4. IGMA Publication for Insulating Glass: SIGMA TM-3000, "Glazing Guidelines for Sealed Insulating Glass Units."
- C. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of the **Insulating Glass Certification Council**.

## 1.6 WARRANTY

- A. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer's standard form, made out to Owner and signed by coated-glass manufacturer agreeing to replace coated-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
  - 1. Warranty Period: **10** years from date of Substantial Completion.
- B. Manufacturer's Special Warranty on Insulating Glass: Manufacturer's standard form, made out to Owner and signed by insulating-glass manufacturer agreeing to replace insulating-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
  - 1. Warranty Period: **10** years from date of Substantial Completion.

#### **PART 2 - PRODUCTS**

#### 2.1 GLASS PRODUCTS

- A. Annealed Float Glass: ASTM C 1036, Type I (transparent flat glass), Quality-Q3; of class indicated.
  - 1. Ultra-Clear (Low-Iron) Float Glass: Class I (clear); with a minimum 91 percent visible light transmission and a minimum solar heat gain coefficient of 0.87.
- B. Insulating-Glass Units, General: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, and complying with ASTM E 774 for Class CBA units and with requirements specified in this Article and in Part 2 "Insulating-Glass Units" Article.
  - 1. Provide Kind FT (fully tempered) glass in place of annealed glass where needed to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in Part 1 "Performance Requirements".
  - 2. Overall Unit Thickness and Thickness of Each Lite: Dimensions indicated for insulatingglass units are nominal and the overall thicknesses of units are measured perpendicularly from outer surfaces of glass lites at unit's edge.
  - 3. Sealing System: Dual seal.
  - 4. Spacer Specifications: Manufacturer's standard spacer material and construction.

- 5. Spacer Specifications: Manufacturer's standard spacer material and construction complying with the following requirements:
  - a. Spacer Material: Aluminum with mill 1/2" Black SS or clear anodic finish.
  - b. Corner Construction: Manufacturer's standard corner construction.

### 2.2 GLAZING GASKETS

- A. Dense Compression Gaskets: Molded or extruded gaskets of material indicated below, complying with standards referenced with name of elastomer indicated below, and of profile and hardness required to maintain watertight seal:
  - 1. Neoprene, ASTM C 864.
  - 2. EPDM, ASTM C 864.
  - 3. Silicone, ASTM C 1115.
  - 4. Thermoplastic polyolefin rubber, ASTM C 1115.
  - 5. Any material indicated above.
- B. Soft Compression Gaskets: Extruded or molded, closed-cell, integral-skinned gaskets of material indicated below; complying with ASTM C 509, Type II, black; and of profile and hardness required to maintain watertight seal:
  - 1. Neoprene.
  - 2. EPDM.
  - 3. Silicone.
  - 4. Thermoplastic polyolefin rubber.
  - Any material indicated above.

# 2.3 GLAZING SEALANTS

- A. General: Provide products of type indicated, complying with the following requirements:
  - 1. Compatibility: Select glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
  - 2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
- B. Glazing Sealants for Fire-Resistive Glazing Products: Identical to products used in test assemblies to obtain fire-protection rating.

#### 2.4 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based elastomeric tape with a solids content of 100 percent; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; packaged on rolls with a release paper backing; and complying with ASTM C 1281 and AAMA 800 for products indicated below:
  - 1. AAMA 804.3 tape, where indicated.

- 2. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
- 3. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.
- B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; packaged on rolls with release liner protecting adhesive; and complying with AAMA 800 for the following types:
  - 1. Type 1, for glazing applications in which tape acts as the primary sealant.
  - 2. Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

#### 2.5 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.
- D. Spacers: Elastomeric blocks or continuous extrusions with a Shore, Type A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).
- F. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.
- G. Perimeter Insulation for Fire-Resistive Glazing: Identical to product used in test assembly to obtain fire-resistance rating.

## 2.6 FABRICATION OF GLAZING UNITS

- A. Fabricate glazing units in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.
- B. Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.
  - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
- C. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites to produce square edges with slight chamfers at junctions of edges and faces.
- D. Grind smooth and polish exposed glass edges and corners.

- 2.7 INSULATING-GLASS UNITS: Vision Panel V1 (See Glazing Legend on Sheet A300). Basis of Design: Guardian Glass SunGuard SNR 43 Crystal Gray.
  - A. Passive Solar Low-E Insulating-Glass Units:
    - 1. Overall Unit Thickness and Thickness of Each Lite: 25 and 6.0 mm.
    - 2. Interspace Content: 12.7mm wide, hermetically sealed, dehydrated 90% Argon space. 1/2" Black SS.
    - 3. Outdoor Lite: Sputter-coated CrystalGray® glass.
      - a. CrystalGray® Glass: ASTM C 1036, Type 1, Class 2, Quality q3.
      - b. Vacuum Deposition Sputtered Coating: ASTM C 1376.
      - c. Low-E Coating: Coating on Surface No. 2: Guardian SunGuard SNR 43.
    - 4. Additional information:
      - a. Annealed above 7'-0"
      - b. Kind FT (fully tempered) below 7'-0".
    - 5. Indoor Lite: Clear Float Glass: ASTM C 1036, Type 1, Class 1, Quality q3.
      - a. Annealed above 7'-0"
      - b. Kind FT (fully tempered) below 7'-0".
    - 6. Winter Nighttime U-Factor: 0.24 maximum.
    - 7. Summer Daytime U-Factor: 0.212 maximum.
    - 8. Solar Heat Gain Coefficient: 0.18 maximum.
    - 9. Visible Light Transmittance: 31 %
    - 10. Visible Light Reflectance Outdoors: 16 %
- 2.8 INSULATING-GLASS UNITS: Spandrel Panel S1 (See Glazing Legend on Sheet A300). Basis of Design: Spandrel Glass to replicate Vision Panel V1.
  - A. Passive Solar Low-E Insulating-Glass Units:
    - 1. Overall Unit Thickness and Thickness of Each Lite: 25 and 6.0 mm.
    - 2. Interspace Content: 12.7mm wide, hermetically sealed, dehydrated 90% Argon space. 1/2" Black SS.
    - 3. Retain reference to ceramic-coated vision glass in last option in subparagraph below only if silk-screened coating is specified for outdoor lite.
    - 4. Outdoor Lite: Sputter-coated CrystalGray® glass with Spandrel Coating.
      - a. CrystalGray® Glass: ASTM C 1036, Type 1, Class 2, Quality q3.
      - b. Vacuum Deposition Sputtered Coating: ASTM C 1376.
      - c. Low-E Coating: Coating on Surface No. 2: Guardian SunGuard SNR 43.
      - d. Annealed above 7'-0"
      - e. Kind FT (fully tempered) below 7'-0".
    - 5. Indoor Lite: Class 1 (clear) float glass.
      - a. Annealed above 7'-0"
      - b. Kind FT (fully tempered) below 7'-0".

- c. Spandrel Coating: Coating on Surface No. 4: Guardian Glass Deco HT Warm Gray.
- 6. Winter Nighttime U-Factor: 0.288 maximum.
- 7. Summer Daytime U-Factor: 0.212 maximum.
- 8. Solar Heat Gain Coefficient: 0.15 maximum.
- 9. Visible Light Transmittance: 0%
- 10. Visible Light Reflectance Outdoors: 18%

#### **PART 3 - EXECUTION**

# 3.1 GLAZING

- A. General: Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
  - 1. Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.
  - 2. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.
  - 3. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.
  - 4. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
  - 5. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
  - 6. Provide spacers for glass lites where length plus width is larger than 50 inches.
  - 7. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.
- B. Tape Glazing: Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.
  - 1. Cover vertical framing joints by applying tapes to heads and sills first and then to jambs. Cover horizontal framing joints by applying tapes to jambs and then to heads and sills.
  - 2. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
  - 3. Apply heel bead of elastomeric sealant.
  - 4. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.
  - 5. Apply cap bead of elastomeric sealant over exposed edge of tape.
- C. Gasket Glazing (Dry): Fabricate compression gaskets in lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.

- 1. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.
- 2. Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- 3. Install gaskets so they protrude past face of glazing stops.
- D. Sealant Glazing (Wet): Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
  - 1. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
  - 2. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

### 3.2 CLEANING AND PROTECTION

- A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended by glass manufacturer.
- B. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

END OF SECTION 088000

# SECTION 114000 FOOD SERVICE EQUIPMENT ADDENDUM 5

# **PART 1 - GENERAL**

#### 1.1 WORK INCLUDED

#### A. Base Bid Kitchen

- 1. Food Service equipment and accessories
  - a. Utility rough-ins and facility preparation
  - b. Equipment
  - c. Installation
  - d. Start-up and training
  - e. Two (2) year service / extended warranty
- 2. All equipment provide power and electrical rough-in data to respective trade contactors for proper service.

### 1.2 REFERENCE STANDARDS

- A. ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- B. ASTM A666 Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2023.
- C. ASTM C1036 Standard Specification for Flat Glass; 2021.
- D. ASTM C1048 Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.
- E. FM (AG) FM Approval Guide; current edition.
- F. ITS (DIR) Directory of Listed Products; Current Edition.
- G. NEMA MG 1 Motors and Generators; 2018.
- H. NFPA 70 National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- NFPA 96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations; 2021.
- J. NSF 2 Food Equipment; 2022.
- K. UL (DIR) Online Certifications Directory; Current Edition.

#### 1.3 RELATED WORK

- A. This work shall be coordinated with the General Construction, Electrical, Plumbing, Mechanical, Ventilating, and trades, and Fire Protection work. This Contractor shall review Mechanical, Plumbing, and Electrical Drawings and include the cost of additional utility extension and installation needed to complete the installation and make properly operable.
  - 1. When coordinating utilities provide accurate dimensional and utility requirements and power requirements.
  - 2. Inaccurate or untimely coordination information is the responsibility of the General Contractor.

# B. Specified Elsewhere

- 1. DIVISION 22 Plumbing
- 2. DIVISION 23 HVAC Ventilation
- 3. DIVISION 26 Electrical

### C. Intent

- 1. Operable, properly install equipment.
- 2. Comply with manufacturer's standards.
- 3. Comply with health codes.
- 4. Cooperate with Edgar County Health Department Environmental Division.
- 5. Provide a functional serving kitchen.

## 1.4 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene one week before starting work of this section.

### 1.5 QUALITY ASSURANCE

- A. Whenever the term "Food Service Equipment Supplier" or "Kitchen Subcontactor" is used, it shall mean the General Contractor and / or his assigned subcontractor.
- B. Any questions concerning these Specifications or Drawings shall be directed to the Architect.
- C. All equipment of brand name manufacturer shall be of the latest model or succeeding model at the date of the bidding documents.
  - 1. Equivalent equipment of alternative manufacturers may be submitted for consideration a minimum of ten (10) days before bidding.
    - a. Same features
    - b. Fit conditions and dimensions
    - c. Include any modifications of rough-ins needed.
    - d. Service vendors to allow same day service.

#### 1.6 REGULATORY AGENCIES

- A. All equipment and equipment manufacturers shall comply with the following:
  - 1. National Sanitation Foundation (NSF) Standards
  - 2. Federal and State and Local Health Codes
  - 3. USDA, Illinois Dept. of Public Health
  - 4. Edgar County Health Department, Environmental Health
  - 5. NFPA 51, NFPA 96, NFPA / NEC
  - 6. IBC 2006 / IMC 2006
  - 7. Illinois Department of Public Health
  - 8. Illinois Plumbing Code
  - 9. All gas equipment to be UL and AGA approved
  - 10. All electrical equipment shall bear Underwriter's label.

#### 1.7 SUBMITTALS

- A. Submit the following in accordance with Section 013219;
  - 1. Manufacturer's literature: Description of each piece of equipment, including installation and operating instruction
  - 2. Shop Drawings:
    - a. Within on hundred twenty (120) calendar days after award of contract, the Food Service Equipment Supplier shall furnish submittal data fully describing the proposed equipment, option dimensions and all information needed for utility requirements and locations.
    - b. Drawings / Schedule describing all rough-in and utility connection requirements.
      - 1) Dimensional locations of utilities
      - 2) Connection sizes
      - 3) Power requirements
      - 4) Sanitary connections or drain locations
  - 3. At conclusion of work provide:
    - a. Operating and Maintenance Manuals.
    - b. Training, operating, cleaning, maintenance.
    - c. Service manuals and parts lists
    - d. Equipment Warranties.
    - e. Provide Certification of materials.

#### 1.8 JOB CONDITION

- A. Food service equipment supplier / installer shall visit the job site or coordinate with the General Contractor prior to installation of utility rough-ins.
  - 1. Verify all hookups and locations of service.
  - 2. Verify all capacities, i.e., amps, voltage, connection size, etc.
  - 3. Provide sketch as needed for use by Mechanical/Electrical trade Contractors.

- B. The Food Service Equipment Supplier or as coordinated with the General Contractor shall visit the job site to check mechanical rough ins, prior to the pouring of the floor slabs and adjust as necessary of any discrepancies.
- C. Cost to relocate or add utility lines or services due to the failure of the Food Service Equipment Supplier or the assigned coordinator to verify their proper location prior to the pouring of the floor slabs will be assumed by by the General Contractor and assigned as deemed appropriate.

### 1.9 PRODUCT DELIVERY, STORAGE & HANDLING

A. Deliver, store and handle equipment so as to prevent damage, or disfigurement. Protect all surfaces with covering during transit. Provide temporary skids under units weighing more than 150 lbs. All damaged, or otherwise unsuitable, equipment when so ascertained shall be immediately removed from the job site and replaced with new.

#### 1.10 SPECIAL WARRANTY

- A. All manufactured equipment shall carry equipment manufacturer's extended two (2) year guarantee dated from Substantial Completion acceptance of the Kitchen.
  - 1. Five (5) year refrigeration system extended warranty on refrigeration equipment including compressors, condenser coils and all internal refrigeration piping.
- B. The Contractor shall warrant the food service equipment work to be free of faults and defects in accordance with the General Conditions, except that the warranty shall include start up and periodic adjustments to get equipment functioning correctly. General maintenance and clean up per manufacturer's instruction is to be by Owner.

#### **PART 2 - PRODUCTS**

# 2.1 CUSTOM FABRICATED EQUIPMENT

- A. The following are basic specifications for items of custom fabricated equipment covering the type and quality of materials, the method of fabrication, assembly and design and will be referred to in the itemized specifications by the term, "As Specified".
- B. All items of custom fabrication shall be the product of the single manufacturer of such equipment so as to ensure uniformity throughout.
- C. All metal gauges shall be United States Standards.
- All workmanship shall be of the finest and all materials shall be new, of best quality and without flaws.
- E. All metal work stainless steel, unless specified otherwise:
  - 1. Type 302/304 18 8 analysis, chrome nickel bearing steel.
  - 2. All exposed surfaces shall be standard No. 4 finish.
  - 3. All fasteners non-magnetic stainless steel.

- F. All piecing of stainless steel, shop or field, whether on cabinet surfaces or bases, shall be continuous welded joints. All welded joints shall be smooth and polished to the original finish, cove inside corners.
- G. 1. Welds shall be without warping adjacent sheets, grind, fill, regrind and polish.
- H. 2. Flat areas shall be backside supported with stainless steel angle or channels to brace against warping or bowing with use.
  - a. Concealed from view reinforcing may be hot dip galvanized.
- J. b. Provide as need to back up welded joints.
- K. Pipe Stands and Open Base Tables:
- L. All pipe stands shall be constructed of 1 5/8 inch O.D., 14 gauge stainless steel tubing, unless noted otherwise, with all pipe joints welded, ground smooth and polished. Assembly of pipe stands by use of threaded or slip joint fittings will not be accepted. Tables over 6 feet in length shall have legs spaced not over 5 feet apart. Legs to be fitted at top with stainless steel full closed gussets, welded to the channel underbracing, or the table tops, and shall be fitted with approved, polished, stainless steel Bullet type adjustable feet, with the adaptation being internal.
- M. a. Bullet feet for moveable (semi-stationary) equipment.
- N. b. Swivel castors for moveable equipment, two (2) locking.
- O. c. Use flanged feet for equipment bolted to floor.
- P. Field Joints:

I.

- All field joints in both tops and cabinet bases shall be completely welded on the job and ground smooth and polished to match original finish. Tack welding will not be accepted.
- R. 2. Employ stainless steel welding rods of approximate temperature and chemical make up for parent material being welded.
- S. 3. Welds to be continuous and free of pits or unsatisfactory roughness not in compliance with NSF standards.
- T. Service Pipe Chases:
  - Cabinet bases are to be so constructed with adequate pipe chases provided in the
    equipment prior to delivery to the job site. If necessary to the job site, they are to be
    provided by the Food Service Equipment Supplier and are to be adequately finished to the
    complete satisfaction of the Owner.
- U. Sinks, Drain boards and Counter tops:
- V. 1. To be constructed of 16-gauge stainless steel minimum, and are to be welded integral with sink compartments.
- W. 2. Have all vertical and horizontal corners coved.
- X. 3. Underside treated with sound deadened material and painted aluminum.

- Y. 4. Exposed edges to be as constructed for sinks and where adjacent to walls, or adjoining equipment, to be turned up eight inches (8") and back two inches (2") on a 45-degree angle.
- Drain boards less than three feet (3') long to be supported on pipe stands as previously specified.
- AA. 6. Unless otherwise noted the drain boards will be 1½" inches deep, pitched to drain into sink, disposer or dishwasher if supplied.
- BB. 7. Counter tops shall support a minimum of 50 lbs. per square foot and a 300 lb. concentrated load, (not concurrently applied) without noticeable deflection.

# CC. Elevated Shelving:

1. All elevated shelving shall be of length and width specified and constructed of 16-gauge stainless steel minimum, unless noted otherwise. All exposed edges shall be rolled down 1 3/4 inches. Where butting wall or other equipment, the edges shall be coved up two inches (2"). Shelving shall be spaced and mounted as specified in itemized specifications. See Drawing for special rim conditions.

#### DD. Closure Plates:

 All equipment bodies, where resting on bases, or against walls or columns shall have 20 gauge stainless steel closure plates, where any gaps may occur due to interferences or wall irregularities.

### EE. Switches and Controls:

- FF. 1. All switches and control boxes to be NEMA 4 SS stainless steel.
- GG. 2. All start stop switches to have 2" diameter mushroom head, red stop switch.

## HH. Tray Slide:

- 1. Tray slide to be die-formed 18-gauge stainless steel with three (3) raised slide rails, raised guide rail edges, approximately 3/4" above slide rails. Joints between sections aligned with underside plate and welded and ground smooth to fit over low wall.
- Material may be manufactured by Duke Manufacturing Co., St. Louis, MO, shop fabricated, or other manufacturer.
- JJ. 3. In the event a manufactured tray slide is selected it may have standard slide and side rails, not intended to require custom tray slide.

## 2.2 EQUIPMENT

A. Equipment listed on the drawings is by manufacturer and model number to indicate acceptable material and equipment. It is the intention of the architect to consider products other than those listed, however the architect must have substitute equipment name, model number, and catalog cut, ten (10) days before bidding so that the equipment can be reviewed for acceptability and an addendum issued.

- B. Without exception, regardless of specification, all equipment to comply with NSF, NFPA, UL, FDA requirements and the Illinois Dept. of Public Health as interpreted by local county inspectors unless specifically exempted. upgrade specified items as needed to comply.
- C. Base Bid Equipment (Item number corresponds to Drawings). All equipment is stainless steel with #4 finish.

D.

- 2.3 Equipment List (the term 'provided' means delivered, supplied assembled, installed, adjusted, and made operable.)
  - A. See drawings for kitchen equipment schedule.
    - 1. Any existing equipment from the owner shall be transported and installed by the contractor from the existing jail located in Paris, Illinois.tr

#### **PART 3 - GENERAL**

#### 3.1 INSTALLATION

- A. The Food Service Equipment Supplier shall deliver and set in place, ready for related trade contractors to make required plumbing, electrical and ventilation connections, all equipment at locations where shown on Drawings.
  - 1. Install all equipment provided in this subcontract ready for plumbing and electrical hook ups.
    - a. Special equipment, re-circulating water system, fittings on kitchen equipment and all work except power and water hook up.
    - b. Pre rinse pumps and control switches.
    - c. All equipment provided except items described herein to be given to the plumbing and electrical subcontractors.
  - 2. All internal wiring, control wiring, switches, switch boxes and switch supports shall be installed by the supplier.
  - 3. All internal plumbing and plumbing accessories shall be factory installed or field installed by this contractor.
  - 4. Provide to the on site plumbing and electrical trade contractors or subcontractors ALL necessary accessory pieces required for proper operation.
    - a. Quick open valves, tailpieces and strainers.
    - b. Flow switches.
    - c. Pressure switches.
    - d. Temperature switches.
    - e. Water cut off switches or electrical sensors necessary to proper operation.
    - f. Faucets, valves, sprayers, nozzles, strainers and mounting cones.
    - g. Vacuum breakers per Illinois State plumbing code.
    - h. Support hardware and brackets.
    - i. NEMA 4, NEMA 4X SS housing for all electrical switches and controls.
    - j. Control switches, safety switches and starters.

- k. Cords and plugs.
- I. Quick fit heavy-duty gas line and quick fit adaptor for gas lines.
- B. All valves, traps, tail pieces, fittings, cut off switches or other materials necessary for connections shall be installed by related trade contractors, except where otherwise specified in itemized specifications. The Food Service Equipment Supplier is to furnish all necessary faucets and sink drains. Loose switches or controls furnished with brand name equipment shall be installed by the Electrical trade Contractor or Subcontractor. Valves, tailpieces, nozzle vacuum breakers, etc., shall be piped and installed by the Plumbing trade Contractor or Subcontractor.
- C. The kitchen equipment contractor shall coordinate all installations, arrange for installation of control system, final utility hook ups, and start up, including inspection of work by other subcontractors.
- D. All electrical equipment shall be correct for type of electric current available.
- E. All items of equipment specified with cord and plug shall match receptacle at job site.
- F. Kitchen equipment Contractor shall coordinate with other trade contractors to provide brackets, anchors, and hang supports for piping, conduit and switches. All such items to be stainless steel. (Hot dip galvanized allowed when concealed from view).
- G. All equipment abutting walls or other fixed equipment shall be sealed with NSF approved silicone rubber sealant.
- H. Food Service Equipment Supplier shall remove all debris accumulated during the delivery and installation of his equipment daily and immediately upon completion of said installation. He will provide a representative, when necessary, to correlate final hook up by related trade contractors, so as not to impede job progress. After final hook up, he shall lubricate, start up and check out all equipment requiring this attention, and shall clean equipment and turn over to the Owner, for his acceptance, in first class condition, all items in his contract.
- I. The Food Service Equipment Supplier shall provide a capable representative or representatives, to demonstrate the proper use of the equipment, at each location, at the time selected by the Owner. The Contractor shall notify the Owner a minimum of seven (7) calendar days notice prior to the demonstration dates.
  - 1. Instructional presentation for maintenance.
  - 2. Start up demonstration.
  - Operational start up after occupancy, equipment supplier and fabricator shall have on site a representative to be available for full start up day, first day of scheduled Owner use. They shall remain one day minimum or until equipment works properly.
- J. This representative shall be available for an additional job site visit following equipment start up to further instruct the kitchen personnel if needed. This visit will be per Owner request.
- K. All joints between fixed equipment and surrounds shall receive continuous silicone rubber USDA Food Service approved sealant. Joints between adjacent fixed equipment shall receive stainless welded and polished joint or factory built NSF approved connection.
  - 1. Silicone sealant if moveable for service access.

#### 3.2 SCHEDULE FOR INSTALLATION

- A. Provide line item schedule for each kitchen appliance for onsite rough in work.
  - 1. Optimum utility locations
    - a. floor trough or drains
    - b. water connections
    - c. electrical connection or cords
    - d. ventilation connections
  - 2. Schedule work in the following sequence:
    - a. Do not schedule equipment installation until:
      - 1) Wall, floor and ceiling finishes are equipment ready
      - 2) Utilities and connection roughins are completed
      - 3) Kitchen area is substantially complete except for equipment.
  - 3. Proceed with equipment installation and Substantial Completion at the earliest convenient date for Owner take over.

## 3.3 EXISTING EQUIPMENT

- A. Obtain, move, store, and re-install equipment, ready for utility connection.
- B. Do work in cooperation with Owner so that normal function of services is minimally interrupted.
- C. Clean and re-furbish ing equipment to be re-used to original condition.
- D. Where required, remove existing equipment from site for repairs or alterations; handle carefully and return in "like new" condition.
- E. Re-used Equipment: Refer to schedule on drawings for re-used equipment.

**END OF SECTION 114000** 

