ADDENDUM NO. 3

PENDER COUNTY LAW ENFORCEMENT CENTER

PENDER COUNTY
BURGAW, NORTH CAROLINA

Architect's Project Number: 611888

Prepared by

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DATE OF ISSUE – JUNE 12, 2024

GENERAL:

Planholders are requested to insert this Addendum in the front of their Project Manual. Inform all concerned that the Bidding Documents are modified by this Addendum.

The following modifications and clarifications are hereby made a part of the Bidding Documents and supersede or otherwise modify the provisions of the published *Project Manual* and *Drawings*, dated May 01, 2024.

Refer to the Drawings, Specification Sections, or other Documents, if any, attached to this Addendum, which are hereby made a part of this Addendum.

MODIFICATIONS TO THE PROJECT MANUAL:

SECTION 000110 – TABLE OF CONTENTS
REPLACE this entire section

SECTION 042000 – UNIT MASONRY
REPLACE this entire section

SECTION 078100 – APPLIED FIREPROOFING
DELTE this entire section

SECTION 064100 – ARCHITECTURAL WOODWORK & CASEWORK
REPLACE this entire section

SECTION 083313 – COILING COUNTER DOORS
REPLACE this entire section

SECTION 085653 – SECURITY WINDOWS
REPLACE this entire section

SECTION 092900 – GYPSUM BOARD
REPLACE this entire section

SECTION 096536 – STATIC-CONTROL RESILIENT FLOORING
ADD this entire section

SECTION 096700 – FLUID APPLIED FLOORING
REPLACE this entire section

SECTION 096813 – TILE CARPETING
REPLACE this entire section

SECTION 096813.13 – STATIC-CONTROL TILE CARPETING
REPLACE this entire section

MODIFICATIONS TO THE DRAWINGS:

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SHEET LS4.5
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SECTION 042000
UNIT MASONRY (*AD-01) (*AD-03)

PART 1 GENERAL

1.01 REFERENCE STANDARDS

A. ACI SP-66 - ACI Detailing Manual.

B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

C. ASTM A240/A240M - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.

D. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.

E. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.

F. ASTM A951/A951M - Standard Specification for Steel Wire for Masonry Joint Reinforcement.

G. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.

H. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.

I. ASTM C33/C33M - Standard Specification for Concrete Aggregates.

J. ASTM C55 - Standard Specification for Concrete Building Brick.

K. ASTM C62 - Standard Specification for Building Brick (Solid Masonry Units Made From Clay or Shale).

L. ASTM C67/C67M - Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.

M. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units.

N. ASTM C91/C91M - Standard Specification for Masonry Cement.

O. ASTM C140/C140M - Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units.

P. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar.

Q. ASTM C151 - Standard Test Method for Autoclave Expansion of Hydraulic Cement.

R. ASTM C216 - Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale).

S. ASTM C270 - Standard Specification for Mortar for Unit Masonry.

T. ASTM C331/C331M - Standard Specification for Lightweight Aggregates for Concrete Masonry Units.

U. ASTM C404 - Standard Specification for Aggregates for Masonry Grout.

V. ASTM C476 - Standard Specification for Grout for Masonry.

W. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete.

X. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.

Y. ASTM C641 - Standard Test Method for Iron Staining Materials in Lightweight Concrete Aggregates.

Z. ASTM C780 - Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry.

AA. ASTM C887 - Standard Specification for Packaged, Dry, Combined Materials for Surface Bonding Mortar.

BB. ASTM C1019 - Standard Test Method for Sampling and Testing Grout for Masonry.

CC. ASTM C1072 - Standard Test Methods for Measurement of Masonry Flexural Bond Strength.

DD. ASTM C1314 - Standard Test Method for Compressive Strength of Masonry Prisms.

EE. ASTM D1227/D1227M - Standard Specification for Emulsified Asphalt Used as a Protective Coating for Roofing.

FF. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

GG. ASTM E154/E154M - Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.

HH. ASTM E514/E514M - Standard Test Method for Water Penetration and Leakage Through Masonry.

II. BIA Technical Notes No. 7 - Water Penetration Resistance – Design and Detailing.

JJ. BIA Technical Notes No. 13 - Ceramic Glazed Brick Exterior Walls.

KK. BIA Technical Notes No. 20 - Cleaning Brickwork.

LL. BIA Technical Notes No. 28B - Brick Veneer/Steel Stud Walls.

MM. BIA Technical Notes No. 46 - Maintenance of Brick Masonry.

NN. NCMA TEK 08-04A - Cleaning Concrete Masonry.

OO. NCMA TEK 12-01B - Anchors and Ties for Masonry.

PP. NCMA TEK 12-02B - Joint Reinforcement for Concrete Masonry.

QQ. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene a preinstallation meeting at the Project site one week before starting work of this section; require attendance by all relevant installers.

1.03 SUBMITTALS

A. Product Data: Provide data for masonry units, fabricated wire reinforcement, mortar, and masonry accessories.

B. Shop Drawings: Indicate pertinent dimensions, materials, anchorage, size and type of fasteners, and accessories, for each type of masonry.

1. Provide elevations indicating steel reinforcing bar locations; provide details of reinforcing including bends and cross-sections, in accordance with ACI SP-66.
2. Indicate control and expansion joint locations.
3. Provide flashing details indicating corners, end dams, and other special conditions.

C. Samples: Face brick and mortar selections will be verified in mock-up panel. Provide samples of exposed accessories and trim requiring color selection.

D. Material Certificates and Test Reports: Provide manufacturer's certificates and test reports for the following:

1. Masonry Units:
   a. Brick: Size data including fabrication tolerances.

b. Brick: Efflorescence test, per ASTM C67/C67M.
c. Masonry Units: Compressive strength test data.
d. Concrete Masonry: Data indicating aggregates comply with ASTM C33/C33M (normal weight), ASTM C331/C331M (lightweight), and ASTM C618 (fly ash).

2. Mortar and Grout Mixes: Provide description and proportion of materials for each type of mortar and grout.
3. Provide material certificates for each type of metal accessory, including reinforcing bars, joint reinforcement, veneer ties and anchors, and other indicated accessories, indicating compliance with requirements.

E. Installer's Qualification Statement.

1.04 QUALITY ASSURANCE

A. Comply with provisions of ACI 530.1/ASCE 6/TMS 402/602, except where exceeded by requirements of Contract Documents.

B. Fire Rated Assemblies: Provide products that comply with fire-resistance ratings indicated as determined by testing according to ASTM E119, by equivalent testing thickness, or by means acceptable to authorities having jurisdiction.

C. **Masonry Subcontractor Qualifications: The work of this section shall be bid and performed by a firm certified as a "North Carolina Masonry Contractors Association Certified Masonry Contractor" as described in the most current version of the NCMCA's "Guide to Masonry Contractor Certification." (North Carolina Masonry Contractors Association, PO Box 3463, Hickory, NC 28603-3463, 828-324-1564, information@ncmca.com). (*AD-01)**

1. **The masonry subcontractor shall at all times when work is in progress, provide an individual from its own staff designated by the North Carolina Masonry Contractors Association Masonry Contractor Certification Program as a "CMP-Certified Masonry Professional" or "CME-Certified Masonry Executive" (as described in the most current version of the NCMCA's "Guide to Masonry Contractor Certification") on-site to supervise work in progress.**

D. Source Limitations for Masonry: Provide each type of masonry unit from a single manufacturer's plant, sourced through a single supplier. Each type of masonry unit shall maintain consistency of color and texture for all product required on the entire project. The approved mockup/sample panel shall be used to determine acceptable color and texture range.

1. Source Limitations for Decorative Concrete Masonry: Provide decorative concrete veneers from a manufacturer with a quality control agreement with water repellant manufacturer, certifying that units have been manufactured with integral water repellant to conform to performance requirements indicated. Provide current certificate from water repellant manufacturer confirming conformance.

E. Source Limitations for Mortar: Provide each mortar mix from a single manufacturer, sourced through a single supplier. Each required mortar mix shall maintain consistency of each component, including cementitious materials and aggregate, to provide consistent color and texture fr all product required on the entire project. The approved mockup/sample panel shall be used to determine acceptable color and texture range.

F. Aggregate for Concrete Masonry Units: If bottom ash is used as aggregate in the CMU, the Source for the bottom ash shall be a power station that has a minimum of ten (10) years continuous experience as a supplier of quality material as verified by independent certified laboratory testing and no defects in the marketplace.

G. Pre-Construction Testing: Owner shall engage an independent testing agency to perform field quality control tests, in accordance with Section 014000 - Quality Requirements.
   1. Clay Masonry Unit Tests: Testing agency shall test each variety of clay masonry in accordance with ASTM C67/C67M compressive strength requirements.
   2. Concrete Masonry Unit Tests: Testing agency shall test each variety of concrete unit masonry in accordance with ASTM C140/C140M compressive strength requirements.

1.05 MOCK-UPS

A. See Section 014000 - Quality Requirements for additional requirements.

B. Integrated Exterior Mockups: Attend preinstallation conference and provide masonry work for integrated exterior mockup as indicated on Drawings and as specified in Division 1 Section "Quality Requirements."

1.06 FIELD CONDITIONS

A. Wall Cavity Protection: Provide temporary waterproof sheet coverings over masonry walls at top of walls, sills, parapets, and other horizontal projections. Install coverings at end of each workday, when rain or precipitation is expected, and after masonry work is completed.
   1. Extend coverings down vertically at least 24 inches on each side of masonry wall. At multi-wythe walls where one wythe is more than 24 inches taller than other wythe(s), extend covering as required to fully cover all wythes and cavities.
      a. At roof parapets, extend covering on rear side of parapet full height down to roof deck/membrane, until vertical protection/roof membrane is installed.
   2. Secure all coverings in place with tape or adhesive that does not leave residue, or other securement method that does not penetrate or damage permanent construction.
   3. Provide protective coverings at sills and horizontal projections that can also serve as protection from mortar droppings.
   4. Provide protective coverings over tops of foundation walls containing insulation to protect from exposure to sun and from construction traffic damage.
   5. Do not remove or allow removal of temporary covers until permanent top of wall protection elements (coping, sill, roof surface, waterproof membrane, etc) are underway.

B. Cold- and Hot-Weather Requirements: Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

A. Concrete Block: Comply with referenced standards and as follows:
   1. Size: Standard units with nominal face dimensions of 16 by 8 inches and nominal depths as indicated on drawings for specific locations.
   2. Special Shapes: Provide nonstandard blocks configured for corners, lintels, headers, other detailed conditions, and as indicated below.
      a. Provide bullnose units for outside corners.
      b. Provide solid block with bullnosed top edges at free-standing CMU walls and where top of block is exposed at window sills and similar applications.

3. Concrete Masonry Units: ASTM C90, lightweight.
   a. Exposed Faces: Manufacturer's standard color and texture.
   b. Aggregates:
      1) Lightweight Aggregates: Lightweight aggregate shall strictly comply with ASTM C331/C331M, ASTM C151, and ASTM C641. Drying shrinkage of aggregate shall not exceed 0.10% at 100 days.
      2) Waste concrete, scoria, and aglite shall not be permitted.
4. Decorative Concrete Block: ASTM C90, normal weight.
   a. **Pattern: Manufacturer's standard ~~split face~~ ground-face pattern. (*AD-03)**
   b. Size: Match standard nominal dimensions per "Concrete Block" paragraph above.
   c. Color: To be selected by Architect from manufacturer's full range.
   d. Provide integral water repellent and companion mortar additive at all exterior decorative CMU.
   e. Topcoat: Where recommended by manufacturer of decorative units, provide clear acrylic top-coat, minimum 20 percent solids content.
5. Units with Integral Water Repellent: Concrete block units as specified in this section with polymeric liquid admixture added to concrete masonry units at the time of manufacture.
   a. Performance of Units with Integral Water Repellent:
      1) Water Permeance: When tested per ASTM E514/E514M and for a minimum of 72 hours.
         (a) No water visible on back of wall above flashing at the end of 24 hours.
         (b) No flow of water from flashing equal to or greater than 0.032 gallons per hour at the end of 24 hours.
         (c) No more than 25 percent of wall area above flashing visibly damp at end of test.
      2) Flexural Bond Strength: ASTM C1072; minimum 10 percent increase.
      3) Compressive Strength: ASTM C1314; maximum 5 percent decrease.
   b. Use only in combination with mortar that also has integral water repellent admixture.
   c. Use water repellent admixtures for masonry units and mortar by a single manufacturer.
   d. Available Products:
      1) ACM Chemistries; RainBloc.
      2) BASF Aktiengesellschaft; Rheopel Plus.
      3) Grace Construction Products (W.R. Grace & Co.); Dry-Block.

B. Concrete Brick:
   1. Actual Size: 3-5/8 inches wide by 2-1/4 inches high by 7-5/8 inches long.
   2. Concrete Building Brick: ASTM C55; lightweight, solid, for interior or concealed use.

2.02 BRICK UNITS

A. **Unit Cost Allowance: Face brick shall be furnished via unit cost allowance. Unit cost shall cover purchase of brick and transport to the project site. (*AD-01)**
   1. **Face Brick Unit Cost (Utility – Field Brick): $1,100 per thousand.**
   2. **Face Brick Unit Cost (Economy – Soldier Courses): $800 per thousand.**
   3. **The unit cost shall not cover installation, overhead, or profit.**
   4. **Bidders and material suppliers are responsible for determining cost to produce special shape units, such as “lipped” brick units.**

5. **The Contract Sum will be adjusted to reflect the actual cost of selected brick in accordance with the General Conditions. The Contractor shall submit receipts and initiate the Change Order process.**
6. **The Contractor is reminded that unit cost includes all required taxes, less applicable trade discounts, in accordance with the General Conditions.**

B. Facing Brick: ASTM C216, Type FBS or FBX, Grade SW.
1. **Actual Size: 3-5/8 inches wide by 3-5/8 inches high by 11-5/8 inches long (utility) – provide as field brick size throughout, except for solider courses as indicated below. (*AD-01)**
2. **Actual Size: 3-5/8 inches wide by 3-5/8 inches high by 7-5/8 inches long (economy) – provide at soldier course locations only. (*AD-01)**
3. Special Shapes: Molded units (plant-fabricated) as required by conditions indicated, unless standard units can be sawn to produce equivalent effect. Cut or sawn edges shall not be exposed in the finished work.
4. Efflorescence: Provide brick that has been tested per ASTM C67/C67M and received a rating of "not effloresced."

C. Building (Common) Brick: ASTM C62, Grade SW, except MW may be used in locations indicated acceptable in reference standard; solid units.
1. Actual size: Match face brick.
2. Locations: May be used in concealed locations in lieu of face brick.

2.03 MORTAR AND GROUT MATERIALS

A. Masonry Cement: ASTM C91/C91M.
1. Colored Mortar: Premixed cement as required to match Architect's color sample.
2. Available Products:
   a. Argos USA; Magnolia Masonry Cement.
   b. Holcim (US) Inc.; Rainbow Mortamix Custom Color Masonry Cement.
   c. Lehigh Hanson; flamingo Colored Cement.
   d. Roanoke Cement; a division of Titan America; Colored Masonry Cement.
   e. York Building Products, a Stewart Company; Workrite Colored Masonry Cement.

B. Surface Bonding Mortar (Parge Coat): ASTM C887.

C. Mortar Aggregate: ASTM C144.

D. Grout Aggregate: ASTM C404.

E. Water: Clean and potable.

F. Accelerating Admixture: ASTM C494/C494M, Type C; nonchloride, noncorrosive type for use in cold weather; approved by manufacturer for use in masonry mortar.

G. Integral Water Repellent Admixture for Mortar: Polymeric liquid admixture added to mortar at the time of manufacture.
1. Use only in combination with masonry units manufactured with integral water repellent admixture.
2. Use only water repellent admixture for mortar from the same manufacturer as water repellent admixture in masonry units.
3. Meet or exceed performance specified for water repellent admixture used in masonry units.

2.04 DAMPPROOFING

A. General: Dampproofing may be provided as a Contractor option to parge coat, applied to exterior face of below grade CMU back up wall (prior to insulation or grouting).

B. Bituminous Dampproofing: Cold-applied water-based emulsion; asphalt with mineral colloid or chemical emulsifying agent; with or without fiber reinforcement; asbestos-free; suitable for application on vertical and horizontal surfaces.

1. Emulsified Asphalt Coating (Brush or Spray Applied): ASTM D1227/D1227M, Type II, Class 1 - Mineral colloid emulsifying agents with non-asbestos fibers or Type III, Class 1 - Mineral colloid emulsifying agents without fibrous reinforcement.
2. Accessory Materials: Provide asphaltic primer, glass fiber reinforcement, and compatible patching compounds as required and as recommended by manufacturer.
3. Manufacturers:
   a. Henry Company.
   b. Karnak Corporation.
   c. Mar-Flex Systems, Inc.
   d. W. R. Meadows, Inc.
   e. Substitutions: See Section 016000 - Product Requirements.

2.05 REINFORCEMENT AND ANCHORAGE

A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi), deformed billet bars; uncoated.

B. Joint Reinforcement, Anchorage, and Ties, General: Comply with NCMA TEK 12-02B, NCMA TEK 12-01B, and requirements below.

1. Use ladder type joint reinforcement, unless otherwise indicated. Truss type reinforcement may be used only when approved by Architect, at walls indicated not to have vertical reinforcing steel and not to be grouted.
2. Provide prefabricated joint reinforcement sections for corners and for T-intersections.
3. Provide joint reinforcement in minimum 10 foot lengths.
4. At multi-wythe/cavity wall applications, size all anchors, ties, and reinforcement for depths of cavities indicated, including indicated insulation thickness as applicable. Ties shall maintain full adjustability at veneer wythe without affecting insulation.
5. At cavities with air space wider than 4-1/2 inches, provide high strength ties engineered for cavity depths indicated.

C. Single Wythe Joint Reinforcement: ASTM A951/A951M.

1. Material: Mill-galvanized steel for interior walls, hot-dip galvanized steel for exterior walls.
2. Size: 0.1483 inch side rods with 0.1483 inch cross rods; width as required to provide not less than 5/8 inch of mortar coverage on each exposure.

D. Multiple Wythe Joint Reinforcement: ASTM A951/A951M. Provide at composite walls and subgrade walls where all wythes are of the same material.

1. Material: Mill-galvanized steel for interior walls, hot-dip galvanized steel for exterior walls.
2. Size: 0.1483 inch side rods with 0.1483 inch cross rods; width as required to provide not less than 5/8 inch of mortar coverage on each exposure.
   a. Provide two side rods for each wythe that is nominal 6-inch depth or greater, and one side rod for each wythe that is nominal 4-inch depth.

E. Adjustable Multiple Wythe Joint Reinforcement: ASTM A951/A951M. Provide at cavity walls/masonry veneer walls.

1. Type: Ladder, with adjustable ties or tabs spaced at 16 in on center.

2. Material: Hot-dip galvanized steel.
3. Size: 0.1483 inch side rods with 0.1483 inch cross rods and adjustable components of 0.1875 inch wire, width of components as required to extend at least halfway through veneer wythe, but provide not less than 5/8 inch of mortar coverage from each masonry face.
4. Vertical adjustment: Not more than 1 1/4 inches.

F. Strap Anchors: Bent steel shapes, 1-1/2 inch width, 0.105 inch thick, 24 inch length, with 2 inch long, 90 degree bend at each end to form a U or Z shape or with cross pins, hot dip galvanized to ASTM A153/A153M Class B.

G. Flexible Anchors: 2-piece anchors that permit differential movement between masonry and building frame, sized to provide not less than 5/8 inch of mortar coverage from masonry face.
1. For Anchorage to Structural Steel Framing: Crimped wire anchors for welding to frame, 0.25 inch thick, with triangular/trapezoidal wire ties 0.1875 inch thick, hot dip galvanized to ASTM A 153/A 153M, Class B.

H. Masonry Veneer Anchors: 2-piece anchors that permit differential movement between masonry veneer and structural backup, hot dip galvanized to ASTM A 153/A 153M, Class B. Provide at masonry veneer walls with metal framing backup. At cavity walls with CMU backup and masonry veneer, masonry veneer anchors may be used in conjunction with standard horizontal joint reinforcing, at Contractor's option, in lieu of adjustable multiple wythe joint reinforcement.
1. Anchor Plates: Not less than 0.075 inch thick, designed for fastening to structural backup through sheathing by two fasteners; provide design with legs that penetrate sheathing and insulation to provide positive anchorage.
2. Wire Ties: Manufacturer's standard shape, 0.1875 inch thick.
a. Size wire ties to extend at least halfway through veneer wythe, but provide not less than 5/8 inch of mortar coverage from masonry face.
3. Vertical Adjustment: Not less than 3-1/2 inches.

I. Metal-to-Metal Fasteners (for Steel Studs): Self-drilling, self-tapping #10 hex screws; fabricated of either 304 stainless steel or of steel with corrosion resistant polymer coating tested to ASTM B117. Fasteners shall include integral neoprene or EPDM washer.
1. Manufacturers:
a. ELCO Construction Products; Dril-Flex with Stalgard Finish.
b. Heckmann Building Products; #668 TEK Self-Drilling Steel Stud Screw.
c. ITW Commercial Construction North America; Teks Maxiseal with Climaseal Finish, or Scots Long Life Teks (stainless steel).

2.06 FLASHINGS

A. Combination Nonasphaltic Flashing Materials - Copper:
1. Copper/Polymer Film or Fabric Flashing: 5 oz/sq ft copper sheet laminated between two sheets of polymer film. Minimum Puncture Resistance of 780 psi, when measured in accordance with ASTM E154/E154M.
a. Available Products:
1) Advanced Building Products, Inc.; Copper Sealtite 2000.
2) Hohmann & Barnard, Inc; Copper-Fabric NA.
3) STS Coatings, Inc.; Wall Guardian Copper TWF.
4) York Manufacturing, Inc; Multi-Flash 500 Series.

B. Combination Non-Asphaltic Flashing Materials - Stainless Steel:

1. Stainless Steel/Polymer Fabric Flashing: ASTM A240/A240M; 2 mil type 304 stainless steel sheet bonded on one side to one sheet of polymer fabric.
    a. Manufacturers:
        1) Hohmann & Barnard, Inc; Mighty-Flash Stainless Flashing.
        2) Prosoco; R-Guard SS ThruWall.
        3) STS Coatings; Wall Guardian Stainless Steel TWF.
        4) York Manufacturing, Inc; Multi-Flash SS.

C. Factory-Fabricated Flashing Corners and End Dams: Stainless steel.

D. Termination Bars: One-inch wide, fabricated of 0.125-inch PVC, 0.090-inch extruded aluminum, or 0.075-inch stainless steel; compatible with membrane and adhesives.

E. Drip Edge: Stainless steel; angled drip with hemmed edge; compatible with membrane and adhesives.

F. Flashing Sealant/Adhesive/Liquid Seam Tape: Polyether-based, 100% solids, moisture-curing elastomeric products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates; and that are compatible with asphalt-free flashing materials and air barrier materials. Traditional mastic is not acceptable.
    1. Available Products:
        a. Master Builders Solutions; MasterSeal NP150.
        b. STS Coatings; GreatSeal LT-100 Liquid Tape.
        c. York; UniverSeal US-100 Liquid Tape.

2.07 ACCESSORIES

A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, fused joints.
    1. Provide nominal 2.5-inch "standard" and "tee" configurations to suit application unless indicated otherwise.

B. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self expanding; in maximum lengths available.

C. Cavity Mortar Control: Semi-rigid polyethylene or polyester mesh panels, sized to thickness of wall cavity, and designed to prevent mortar droppings from clogging weeps and cavity vents and allow proper cavity drainage.
    1. Mortar Diverter: Semi-rigid mesh designed for installation at flashing locations. Provide in depth matching cavity depth without gap at front or back of mesh. Fabricate approximately 10 inches high with minimum 6 inch high dovetail shape projections.
        a. Available Products:
            1) Advanced Building Products, Inc; Mortar Break DT.
            2) Heckmann Building Products; WallDefender.
            3) Hohmann & Barnard, Inc.; Mortar Trap.
            4) Mortar Net Solutions; MortarNet.
            5) Wire-Bond; Cavity Net DT (3611D).
        b. At cavities with depth greater than 2 inches, provide companion drainage product by one of the manufacturers above; nominal 1/2-inch thickness by 20 inches wide, to be field inserted into cavity in a "U" configuration. Basis-of-Design is "Mortar Catch 352" by Advanced Building Products, Inc.

D. Bond Break: ASTM D226/D226M, Type I ("No.15") asphalt felt or polyethylene tape.

E. Weeps/Cavity Vents:
   1. Cellular Type: Extruded propylene with honeycomb design.
      a. Color(s): Clear.
      b. Available Products:
         1) Advanced Building Products, Inc.; Mortar Break weep mesh.
         2) Blok-Lok Limited; Cell-Vent.
         3) CavClear/Archovations, Inc.; CavClear Weep Vent.
         4) Heckmann Building Products Inc.; No. 85 Cell Vent.
         5) Hohmann & Barnard, Inc.; Quadro-Vent.
         6) Mortar Net Solutions; WeepVent.
         7) Wire-Bond; Cell Vent.
   2. Bed Joint Weep System: Corrugated plastic drainage system incorporating continuous drainage strip within cavity portion of wall with integral weephole extensions at 9-1/2 inches on center located above flashing in the bed joint of the veneer masonry. Provide at masonry units over 32 inches long, and as indicated.
      a. Available Products:
         1) Heckmann Building Products; Core/Cavity Vent Weep System #367.
         2) Masonry Technology Incorporated (MTI); Cavity Weep CV 5010.

F. Reinforcing Positioners: Provide wire positioners in bed joints to keep steel reinforcing bars centered in cells, fabricated of 0.1483-inch hot-dip galvanized steel wire.
   1. Available Products:
      a. Heckmann Building Products, Inc.; No. 376 Rebar Positioner.
      b. Hohmann & Barnard, Inc.; #RB or #RB-Twin Rebar Positioner.
      c. Wire-Bond; O-Ring or Double O-Ring Rebar Positioner.

G. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

2.08 LINTELS

A. Masonry Lintels: Fabricated of bond beam CMUs, with texture matching adjacent standard CMU. Provide reinforcing bars and grout in accordance with structural requirements. Provide temporary supports until cured.

B. Precast Concrete Lintels: Comply with structural requirements for concrete strength and reinforcing. Precast U-lintels fabricated in accordance with performance standards of PCI MNL-116 with 3500 psi concrete for standard lintels and 6000 psi concrete for prestressed lintels as manufactured by Cast-Crete are acceptable in lieu of rectangular section lintels.

C. Steel Lintels: Refer to Section 055000 - Metal Fabrications.

2.09 MORTAR AND GROUT MIXING

A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.
   1. Masonry below grade and in contact with earth: Type S.
   2. Reinforced masonry: Type S.
   3. Mortar parge coats: Type S.
   4. Exterior, loadbearing and non-loadbearing, and interior, loadbearing and non-loadbearing: Type N, except as indicated above.
      a. Interior, non-loadbearing masonry may use Type O at Contractor's option.

B. Colored Mortar: Proportion selected pigments and other ingredients to match Architect's sample, without exceeding manufacturer's recommended pigment-to-cement ratio.
   1. Use colored mortar for all veneer masonry. Separate colors shall be required for each type and color of veneer.

C. Grout: ASTM C476; consistency required to fill completely volumes indicated for grouting; fine grout for spaces with smallest horizontal dimension of 2 inches or less; coarse grout for spaces with smallest horizontal dimension greater than 2 inches.

D. Admixtures: Add to mixture at manufacturer's recommended rate and in accordance with manufacturer's instructions; mix uniformly.

E. Mixing: Use mechanical batch mixer and comply with referenced standards.

PART 3 EXECUTION

3.01 EXAMINATION

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

B. Verify that related items provided under other sections are properly sized and located.

C. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.02 PREPARATION

A. Direct and coordinate placement of metal anchors supplied for installation under other sections.

B. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

3.03 COLD AND HOT WEATHER REQUIREMENTS

A. For installation in cold or hot weather, comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.

3.04 GENERAL INSTALLATION REQUIREMENTS

A. Establish lines, levels, and coursing indicated. Protect from displacement.

B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
   1. CMU Coursing: One unit and one mortar joint equal 8 inches.
   2. Brick Coursing: Either two or three units with accompanying mortar joints shall equal 8 inches, based on basis-of-design brick size(s) indicated above.

C. Provide running bond for all masonry units unless otherwise indicated.

D. Tool all mortar joints slightly concave where they will be exposed, unless otherwise indicated.
   1. Provide flush joints where they will be concealed by surface-applied treatments or finishes other than paint; including but not limited to tile, wall coverings, fluid-applied or SPF air barriers, or membranes.

3.05 PLACING AND BONDING

A. Remove broken, cracked, chipped, or otherwise damaged masonry units from pallets and set aside. Do not use unless they may be field cut to remove damaged section, for installation where special shape is required to fit construction.

B. Create a consistent blend for each type of veneer masonry by mixing units from a minimum of three pallets.

C. Provide asphalt felt or polyethylene tape bond-breaker between clay masonry and concrete or other masonry types. Rake back joints for sealant.

D. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.

E. Lay hollow masonry units with face shell bedding on head and bed joints.

F. Remove excess mortar and mortar smears as work progresses.

G. Remove excess mortar with water repellent admixture promptly. Do not use acids, sandblasting or high pressure cleaning methods.

H. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.

I. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

1. Do not cut masonry unless it is required for certain shapes, such as rowlock sills, or unless it is unavoidable due to fitting around other construction, such as wall penetrations.
2. Cut masonry edges shall not be visible in the final work. Where special shapes are required that would expose cut edges, they shall be plant-fabricated.

3.06 WEEPS/CAVITY VENTS

A. Install weeps in veneer and cavity walls at 24 inches on center horizontally on top of through-wall flashing above shelf angles and lintels and at bottom of walls.

3.07 CAVITY MORTAR CONTROL

A. Do not permit mortar to drop or accumulate into cavity air space or to plug weep/cavity vents.

B. For cavity walls, build inner wythe ahead of outer wythe to accommodate accessories.

C. Install cavity mortar diverter at base of cavity and at other flashing locations as recommended by manufacturer to prevent mortar droppings from blocking weep/cavity vents.

3.08 REINFORCEMENT AND ANCHORAGE - GENERAL, SINGLE WYTHE MASONRY, AND CAVITY WALL MASONRY

A. Unless otherwise indicated on drawings or specified under specific wall type, install horizontal joint reinforcement 16 inches on center.

B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.

C. Place continuous joint reinforcement in first and second joint below top of walls.

D. At parapets and below-grade/foundations, provide joint reinforcement at 8 inches o.c. vertically.

E. Embed longitudinal wires of joint reinforcement in mortar joint with at least 5/8 inch mortar cover on each side.

F. Lap joint reinforcement ends minimum 6 inches.

G. Do not extend reinforcement across control, expansion, and other building movement joints.

H. Reinforce corners and intersections with prefabricated T- or L-shaped reinforcing.

I. Fasten anchors to structural framing and embed in masonry joints as masonry is laid. Unless otherwise indicated on drawings or closer spacing is indicated under specific wall type, space anchors at maximum of 36 inches horizontally and 24 inches vertically.

J. Embed ties and anchors in mortar joint and extend at least halfway through masonry veneer unit; with at least 5/8 inch mortar cover to the outside face of the anchor.

3.09 REINFORCEMENT AND ANCHORAGE - MASONRY VENEER

A. Masonry and/or Metal Framing Back-Up: Embed anchors to bond veneer at maximum 16 inches on center vertically and 24 inches on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center.

3.10 REINFORCEMENT AND ANCHORAGES - COMPOSITE UNIT MASONRY

A. Install continuous horizontal joint reinforcement at 16 inches o.c. vertically, except at below grade foundation walls install at 8 inches o.c. vertically.

B. Where concrete foundations are indicated, tie below-grade masonry to concrete with rigid anchors spaced at maximum 8 inches o.c. vertically.

C. Coordinate with parging/dampproofing and with installation of insulation, where indicated.

3.11 MASONRY FLASHINGS

A. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all locations where downward flow of water will be interrupted.
   1. Remove or cover protrusions or sharp edges that could puncture flashings.
   2. Seal lapped ends and penetrations of flashing before covering with mortar.

B. Terminate flashing up 16 inches minimum on vertical surface of backing:
   1. Anchor vertical leg of flashing into backing with a termination bar and sealant.

C. Extend metal flashings to within 1/2 inch of exterior face of masonry and adhere to top of stainless steel angled drip with hemmed edge.
   1. Notch and hem exterior corners of drip edges to eliminate sharp, exposed cut metal edges at locations below 6' - 0" above grade.

D. Support flexible flashings across gaps and openings.

E. Lap end joints of flashings at least 6 inches, minimum, and seal watertight with flashing sealant/adhesive.

3.12 LINTELS

A. Comply with requirements on Structural Drawings for type of lintel at each opening, additional lintel sizing, reinforcement, and installation requirements.

B. Install loose steel or precast lintels over openings, where indicated.

C. Install reinforced unit masonry lintels over openings where steel or precast concrete lintels are not scheduled.
   1. Allow masonry lintels to attain specified strength before removing temporary supports.

D. Maintain minimum 8 inch bearing on each side of opening, unless otherwise indicated.

3.13 GROUTED COMPONENTS

A. Comply with requirements on Structural Drawings for locations of structural grouted components and accessories, including but not limited to, grouted bond beams, reinforced unit masonry walls, (including locations and sizing of vertical steel bar reinforcing), grouted solid CMU, and composite wall collar joints.

B. Lap splices minimum 24 bar diameters.

C. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.

D. Place and consolidate grout fill without displacing reinforcing.

3.14 CONTROL AND EXPANSION JOINTS

A. Do not continue horizontal joint reinforcement through control or expansion joints.

B. Install preformed control joint device in continuous lengths. Seal butt and corner joints in accordance with manufacturer's instructions.

C. Provide control and expansion joints at locations indicated on Drawings, and as follows:

1. At changes in wall height.
2. At changes in wall thickness
3. At change in support (eg: transition from foundation support to floor slab support).
4. Adjacent to corners of walls within a distance equal to no more than half the maximum control joint spacing.
5. Wall intersections.
6. Do not place control joints closer than 16 inches to edge of wall openings (doors, windows, louvers, ducts).
7. Distance between joints shall not exceed a length to height ratio of 1.5:1.
8. Distance between joints shall not exceed 25 feet where no openings occur between joints.
9. Distance between joints shall not exceed 20 feet where openings occur between joints.

3.15 BUILT-IN WORK

A. As work progresses, install built-in metal door frames, anchor bolts, and plates and other items to be built into the work and furnished under other sections.

B. Install built-in items plumb, level, and true to line.

C. Bed anchors of metal door frames in adjacent mortar joints. Fill frame voids solid with grout.

1. Mix mortar (or grout) to a 4-inch maximum slump consistency and hand trowel into place in accordance with Steel Door Institute (SDI-100).
2. Fill adjacent masonry cores with grout minimum 12 inches from framed openings.

D. Do not build into masonry construction organic materials that are subject to deterioration.

3.16 TOLERANCES

A. Install masonry within the site tolerances found in TMS 402/602.

B. Maximum Variation from Unit to Adjacent Unit: 1/16 inch.

C. Maximum Variation from Plane of Wall: 1/4 inch in 10 ft and 1/2 inch in 20 ft or more.

D. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.

E. Maximum Variation from Level Coursing: 1/8 inch in 3 ft and 1/4 inch in 10 ft; 1/2 inch in 30 ft.

F. Maximum Variation of Mortar Joint Thickness: Head joint, minus 1/4 inch, plus 3/8 inch.

G. Maximum Variation from Cross Sectional Thickness of Walls: 1/4 inch.

3.17 CUTTING AND FITTING

A. Cut and fit for chases, pipes, conduit, and other penetrations. Coordinate with other sections of work to provide correct size, shape, and location.

B. Obtain approval prior to cutting or fitting masonry work not indicated or where appearance or strength of masonry work may be impaired.

3.18 PARGING

A. Dampen masonry walls prior to parging.

B. Parge cavity side of CMU below grade back-up wythe with a single coat of surface-bonding mortar to a total thickness of 1/4 inch.

1. In lieu of parging, Contractor may at its option apply bituminous dampproofing, at a minimum rate of 1.25 gal per 100 sq. ft. Apply primer if required by manufacturer and comply with manufacturer's installation requirements.

C. Steel trowel surface smooth and flat with a maximum surface variation of 1/8 inch per foot.

D. Strike top edge of parging at 45 degrees.

3.19 FIELD QUALITY CONTROL

A. Field Inspection: The Owner shall engage an independent inspection agency to perform field quality control inspections and prepare field reports.

1. The Contractor shall permit full access to inspectors in order to perform inspections, including use of temporary facilities and equipment such as scaffolding or lifts.
2. Do not enclose cavities or spaces to be grouted solid until inspections have approved grout and reinforcement for material properties, size, and installation locations.

B. Field Testing: The Owner shall engage an independent testing agency to perform field quality control tests, as specified in Section 014000 - Quality Requirements. For each type of masonry unit, 5 randomly chosen units shall be sampled for each 5,000 square feet of wall.

1. Clay Masonry Unit Tests: Testing agency shall test each variety of clay masonry in accordance with ASTM C67/C67M requirements.
2. Concrete Masonry Unit Tests: Testing agency shall test each variety of concrete unit masonry, of each load-bearing size indicated, in accordance with ASTM C140/C140M requirements.
3. Mortar Tests: Testing agency shall test each type of mortar in accordance with ASTM C780. Mortar shall be tested on each of the first 3 days. Alert testing agency if mortar mix is altered during construction to allow for retesting.
4. Grout Test: Testing agency shall test each type of grout in accordance with ASTM C1019. Grout shall be tested on each of the first 3 days. Alert testing agency if grout mix is altered during construction to allow for retesting.

3.20 REPAIR AND CLEANING

A. Remove masonry units that have become damaged or stained, or that do not display acceptable blend of color and texture matching mockup/sample panel. Remove as whole units, do not cut. Replace with new units with fresh mortar joints.

B. Remove excess mortar and mortar droppings.

C. Replace defective mortar and repoint. Enlarge holes or voids at defective mortar, and remove enough adjacent mortar to allow for repointing. Install fresh mortar joint and match to adjacent work.

D. Where expansion/control joints and sealant joints are indicated, clean joints and leave them clear and ready for installation of joint or sealant materials.

E. Clean concrete masonry in accordance with NCMA TEK 08-04A and clean clay masonry in accordance with BIA Technical Notes No. 20. Use hand cleaning/bucket-and-brush methods.

F. To prevent freezing of cleaners and rinse water, do not clean when masonry surface temperature will drop below 40 degrees F.

G. Test cleaning methods and materials on one half of mockup/sample panel; leave the other half uncleaned. Obtain approval of Architect before cleaning the finished work.

H. Protect adjacent non-masonry surfaces from cleaning materials and processes with temporary sheeting or masking.

I. Provide "in-progress" cleaning; clean masonry in each area as soon as possible after mortar has fully cured (approximately 7 to 28 days; coordinate with manufacturer's recommendations for each mortar type specified). Field test a small area to ensure mortar curing is complete prior to large-scale cleaning.

J. Pre-wet masonry surfaces and clean with specified cleaning solution. Rinse surfaces immediately after cleaning; do not allow cleaning solution to dry or set into the masonry.

K. Use non-metallic tools in cleaning operations.

L. Final Cleaning: As part of Project Closeout (prior to Substantial Completion), provide Final Cleaning of masonry veneer. Remove construction dust with a very low pressure rinse. Perform a visual inspection and spot clean to remove efflorescence, staining, or organic growth, in accordance with recommendations of BIA and NCMA technical notes.

3.21 PROTECTION

A. Provide temporary protective waterproof sheet coverings over tops of walls, parapets, sills, and other horizontal projections as the work progresses, in accordance with FIELD CONDITIONS article in Part 1 above.

B. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

C. Provide protective vertical boards and horizontal sheeting at grade level base of walls to prevent staining or splashing from rain, mud, or mortar droppings.

3.22 MASONRY WASTE

A. Fill Material: Clean masonry waste may be used as fill material. Break up masonry waste into small pieces no greater than 4 inches any direction. Mix with Division 31 engineered fill material so that masonry waste is no more than 33% of the fill (1 part masonry waste, 2 parts engineered fill). Fill containing masonry waste shall be at least 18 inches below grade level.

1. Excess waste shall be removed and disposed of or recycled in accordance with Division 1 waste disposal requirements.

END OF SECTION 042000

SECTION 064100
ARCHITECTURAL WOODWORK AND CASEWORK (*AD-03)

PART 1 GENERAL

1.01 DEFINITIONS

A. Exposed: Portions of casework visible when drawers and cabinet doors are closed, including end panels, bottoms of cases more than 42 inches above finished floor, tops of cases less than 72 inches above finished floor and all members visible in open cases or behind glass doors.

B. Semi-Exposed: Portions of casework and surfaces behind solid doors, tops of cases more than 72 inches above finished floor and bottoms of cabinets more than 30 inches but less than 42 inches above finished floor.

C. Concealed: Sleepers, web frames, dust panels and other surfaces not generally visible after installation and cabinets less than 30 inches above finished floor.

1.02 REFERENCE STANDARDS

A. ANSI A208.1 - American National Standard for Particleboard.

B. ANSI A208.2 - Medium Density Fiberboard (MDF) for Interior Applications.

C. ANSI A208.1 - American National Standard for Particleboard.

D. ANSI A208.2 - Medium Density Fiberboard (MDF) for Interior Applications.

E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

F. AWI (QCP) - Quality Certification Program.

G. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition.

H. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards.

I. BHMA A156.9 - Cabinet Hardware.

J. CAL (CDPH SM) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers Version 1.2.

K. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board.

L. EPA (TSCA); Title VI - Toxic Substances Control Act, Title VI: Formaldehyde Standards for Composite Wood Products.

M. ISFA 2-01 - Classification and Standards for Solid Surfacing Material.

N. NEMA LD 3 - High-Pressure Decorative Laminates.

O. SCAQMD 1113 - Architectural Coatings.

P. SCAQMD 1168 - Adhesive and Sealant Applications.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene a preinstallation meeting not less than one week before starting work of this section; require attendance by all affected installers.

1.04 SUBMITTALS

A. Product Data: Component dimensions, configurations, construction details, joint details, attachments.

1. Include product data for each type of hardware and accessory.

B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
   1. Include field measurements, and indicate where field measurements differ from documents.

C. Selection Samples: Submit manufacturer's color charts indicating full range of available colors, for each product requiring color selection.

D. Fabricator Qualifications: Include evidence of accreditation with quality control program.

E. Certificate: Submit labels and certificates required by quality assurance and quality control programs.

1.05 QUALITY ASSURANCE

A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with experience on Projects of similar size and scope.
   1. Accredited participant in the specified certification program prior to the commencement of fabrication and throughout the duration of the project.
   2. Single Source Responsibility: Provide and install this work from single fabricator.
      a. It is acceptable to subcontract portions of the work to a separate specialty subcontractor (for example, pre-fabricated plastic-laminate-faced casework); however, each fabricator shall be independently accredited; submit accreditation for each fabricator. The primary woodwork contractor shall be responsible for ensuring the work of all Division 06 sections is well coordinated and properly fabricated and installed.

B. ~~**Quality Certification:**~~
   1. ~~**Comply with AWI (QCP) woodwork association quality certification service/program in accordance with requirements for work specified in this section.**~~ **(*AD-03)**

1.06 DELIVERY, STORAGE, AND HANDLING

A. Comply with Section 2 of the Architectural Woodwork Standards: "Care & Storage."

B. Deliver woodwork after finishes are complete, including painting, and HVAC is operating at occupancy conditions in all spaces where woodwork will be installed.

C. Store in an environmentally controlled location. Protect units from moisture damage.

1.07 FIELD CONDITIONS

A. During and after installation of woodwork, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS), unless noted otherwise.

B. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84, unless otherwise indicated for specific products.

C. All countertop surfaces shall be NSF approved for food contact.

D. Accessibility Requirements: Fabricate and install woodwork and casework in compliance with ICC/ANSI A117.1 and with ADA Standards for Accessible Design.

E. Low-Emitting Materials:
   1. Composite Wood: Any composite wood materials installed inside the weatherproofing system shall meet either EPA (TSCA); Title VI for ultra-low-emitting formaldehyde or no added formaldehyde (ULEF / NAUF).
   2. Paints and Coatings: Paints and coatings field-applied inside the weatherproofing system shall be tested and determined compliant in accordance with CAL (CDPH SM) AND shall meet applicable VOC limits of CARB (SCM) or SCAQMD 1113.
   3. Adhesives and Sealants: Adhesives and sealants field-applied inside the weatherproofing system shall be tested and determined compliant in accordance with CAL (CDPH SM) AND shall meet the chemical content requirements of SCAQMD 1168.

2.02 CABINETS

A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS), unless noted otherwise.

B. Plastic-Laminate-Clad Cabinets: Custom grade, except as modified below. Solid wood and wood panel construction; each unit self-contained and not dependent on adjacent units or building structure for rigidity; in sizes necessary to avoid field cutting except for scribes and filler panels. Include adjustable levelers for base cabinets.
   1. Style: Reveal overlay. Ease doors and drawer fronts slightly at edges.
   2. Cabinet Nominal Dimensions: Unless otherwise indicated, provide cabinets of widths and heights indicated on drawings, and with following front-to-back dimensions:
      a. Base Cabinets: 24 inches.
      b. Tall Cabinets: 24 inches.
      c. Wall Cabinets: 12-1/2 inches. (Minimum clear interior depth shall be 11 inches)
   3. Drawer Construction: Provide AWI premium grade for drawer box construction.
   4. Base Construction: Provide adjustable levelers for all base cabinets to facilitate load transfer to the floor, isolate cabinet ends from the floor, and permit leveling.
      a. Provide one of the following two types of base construction:
         1) Separate Sub-Base: Cabinet sub-base shall be separate and continuous (no cabinet body sides-to-floor), exterior grade plywood with concealed fastening to cabinet bottom. Sub-base shall be ladder-type construction of individual front, back, and intermediates, to form a secure and level platform to which cabinets attach. Recess sub-base at exposed cabinet end panels 1/4 inch from face of finished end, for flush installation of finished base material by other trades.
         2) Integral Base: Provide end panels, cabinet bottoms, and horizontal toe kick members integrally joined together for structural strength. Adjustable levelers shall be provided at each corner for each cabinet.
      b. Toe Kick: Toe kick shall be nominal 4 inch height. Reduce as necessary via field modification due to construction tolerances and concrete slab levelness to maintain maximum height dimensions indicated.
   5. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline.
      a. Finish: Matte or suede, gloss rating of 5 to 20.
      b. Surface Color and Pattern: To be selected by Architect from manufacturer's full range.

c. Exposed Interior Surfaces: Thermally fused laminate (melamine) is acceptable only at drawer boxes. Provide HPDL, type VGS or CLS, at semi-exposed interiors of cabinets (cabinets with doors). Provide type VGS for exposed interior horizontal shelving surfaces and interiors of open cabinets (no doors).

d. Apply undecorated laminate backing sheet to concealed reverse side of plastic laminate finished surfaces.

e. Wood Grain Pattern: If wood grain is indicated or selected for plastic laminate color/pattern, provide sequence matched finish across each elevation. Grain shall run vertically across all doors, drawers, fronts, and false fronts; mismatched grain direction is not allowed.

C. ADA Sink Cabinets: Fabricate a panel of 3/4-inch moisture resistant core material and veneer/cladding material to match adjacent cabinets. Panel shall be removable for service access to undercounter plumbing. Provide with Z-clip attachment system for concealed fastening and with a steel cable retainer, minimum 4 feet long, so that panel can be set aside for service access. Fasten Z-clips and steel cable retainer to panel and to substrate with tamper-resistant fasteners.

1. Provide an undercounter vertical "apron" piece at front of ADA sink locations as indicated, flush to fronts of adjacent cabinets and finished to match.

D. ADA Sink Cabinets with Doors: Provide casework manufacturer's standard hinged front door panels, with matching veneer/cladding material and toe kick built into door panels, to match appearance of adjacent base cabinets. Front door panels swing open to 160 degrees minimum to allow for ADA-compliant undercounter knee space and for plumbing access to sink.

2.03 WOOD-BASED COMPONENTS

A. Low-Emitting Materials: Provide composite wood products that meet the requirements of EPA (TSCA); Title VI for formaldehyde emissions.

B. Core Material for Cabinets: ANSI A208.1, Grade M-2 particleboard.

1. At Contractor's option, cabinet backs may be fabricated of ANSI A208.2, Grade MD fiberboard.

C. Core Material for Countertops: Manufacturer's standard ANSI A208.1, Grade M-2 particleboard, or ANSI A208.2, Grade MD fiberboard.

1. At countertops containing sinks, provide core material meeting ANSI MR10 for moisture resistance. Available Products:

a. Arauco North America; Duraflake VESTA Moisture Resistant ULEF.

b. Collins Pine; FreeForm.

c. Georgia-Pacific; Ultrastock MR MDF.

d. Roseburg Forest Products; SkyBlend MR-10.

2.04 PANEL CORE MATERIALS

A. Particleboard: Composite panel composed of cellulosic particles, additives, and bonding system; comply with ANSI A208.1.

B. Medium Density Fiberboard (MDF): Composite panel composed of cellulosic fibers, additives, and bonding system; cured under heat and pressure; comply with ANSI A208.2.

2.05 THERMALLY FUSED LAMINATE PANELS

A. Thermally Fused Laminate (TFL): Melamine- or polyester-resin-saturated decorative papers; for fusion to composite wood substrates under heat and pressure.

1. Test in accordance with NEMA LD 3 Section 3.

2. Panel Core Substrate: Particleboard.
3. Color: White.

2.06 LAMINATE MATERIALS

A. Manufacturers:
1. Formica Corporation; High Pressure Laminate.
2. Panolam Industries International, Inc; Nevamar Standard HPL.
3. Panolam Industries International, Inc; Pionite Standard HPL.
4. Wilsonart LLC; High Pressure Laminate (HPL).

B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.

C. Color and Pattern: To be selected by Architect from Manufacturer's full range (standard and premium colors) in standard textured finish (textured gloss, fine textured, or suede finish). High gloss, heavy textured, metallic, or other special surface products (abrasion-resistant, chemical-resistant) will not be required for use in this project.

D. Provide specific types as follows:
1. Horizontal Countertop Surfaces: HGS, 0.048 inch (1.2 mm) nominal thickness.
2. Vertical Surfaces and Non-Countertop Horizontal Surfaces: VGS, 0.028 inch (0.7 mm) nominal thickness.
3. Cabinet Liner: CLS, 0.020 inch (0.5 mm) nominal thickness.
4. Laminate Backer: BKL, 0.020 inch nominal thickness, undecorated; for application to concealed backside of panels faced with high pressure decorative laminate.

2.07 SOLID SURFACING MATERIAL

A. Solid Surfacing Material: ISFA 2-01.
1. Products:
a. Avonite Surfaces, a Brand of Aristech Surfaces, LLC; Avonite.
b. E. I. du Pont de Nemours and Company; Corian.
c. Formica Group; Solid Surfacing.
d. Hanwha L&C; Hanex.
e. LG Hausys America; HI-MACS.
f. Lotte Advanced Materials Co. Ltd.; Staron.
g. US Surface Warehouse; LivingStone.
h. Wilsonart LLC; Solid Surface.
2. Thickness: 1/2-inch.
3. Type: Standard Type.
4. Color and Pattern: Provide colors per the following:
a. Colors and Patterns for Countertops: As selected by Architect from manufacturer's full range of colors equivalent to Dupont Corian price group 4.
b. Colors and Patterns for Window Stools: As selected by Architect from manufacturer's full range of colors equivalent to Dupont Corian price group 1.

2.08 COUNTERTOPS

A. Fabricate in accordance with AWI/AWMAC/WI (AWS), Section 11 - Countertops, Custom Grade and with manufacturer's requirements.

B. ~~**Plastic Laminate Countertops: High-pressure decorative laminate (HPDL) sheet bonded to substrate.**~~ **(*AD-03)**
   1. ~~**Laminate Sheet: NEMA LD 3, Grade HGS, 0.048 inch nominal thickness.**~~
   2. ~~**Core: Particleboard or fiberboard as specified, except provide moisture resistant type at sink locations.**~~
   3. ~~**Exposed Edge Treatment: Square, substrate built up to 1-1/2 inch thick unless otherwise indicated; covered with 3 mm edge banding with eased ends.**~~
   4. ~~**Back and End Splashes: 3/4 inch thick core material with Grade HGS face and 0.5 mm edge banding/tape at edges.**~~

C. Solid Surfacing Countertops and Window Stools: Solid surfacing sheet or plastic resin casting over structural substrate/core material.
   1. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
   2. Core: Fabricate solid surface countertop core of manufacturer's recommended moisture-resistant MDF. Provide continuous structural substrate at unsupported/overhang conditions; ladder construction acceptable over cabinets. Build up core material for total countertop thickness indicated.
   3. Fabricate in accordance with manufacturer's standard requirements, and in one piece to the greatest extent possible.
      a. Shop-fabricate cutouts and holes in solid surface for plumbing fixtures, deck-mounted soap dispensers, and other items indicated on Drawings.
   4. Provide manufacturer's standard configuration for exposed edges, back and end splashes, and per the requirements below:
      a. Edge and Corner Profiles: Eased.
      b. Provide built up edges to standard thickness indicated (1-1/2 inches unless otherwise indicated).
      c. Provide 4 inch high back and end splashes, unless otherwise indicated.
   5. Window Stools: Scribe window stools to fit jamb conditions as indicated.

2.09 ACCESSORIES & ACCESSORY MATERIALS

A. Adhesive: Type recommended by fabricator to suit application.

B. Plastic Edge Banding: Extruded PVC, flat shaped; smooth finish; of width to match component thickness.
   1. Provide 3 mm edge banding at all door and drawer front edges and laminate countertop edges.
   2. Provide 0.5 mm edge banding (tape) at cabinet body edges, shelf edges, and other semi-exposed/exposed interior edges.
   3. Color: To be selected by Architect from Manufacturer's full range to match selected laminate.

C. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.

D. Concealed Joint Fasteners: Threaded steel.

E. Grommets: Standard plastic grommets for cut-outs, color as selected by Architect from manufacturer's full range.

1. Grommet Size: To fit 2-1/2 inch diameter cut-out, nominal, unless otherwise indicated.
2. Grommets shall have removable caps and slot for wire passage.

F. Undercounter Wire Management: Provide the following, as indicated:
1. Vinyl J-shaped channel wire manager for undercounter mounting, continuous for full length of countertop.

G. Undercounter CPU Mount: Adjustable, locking CPU tower mount that can be installed to underside of workstation countertop or to adjacent side wall. Minimum load capacity of 75 lbs.
1. Products:
a. Knape & Vogt; CPU Holder 7300 Series (lockable).
b. Richelieu; Locking Slide & Swivel CPU Holder.
c. WorkRite Ergonomics; Track Mount 920 CPU Holder.
d. Substitutions: See Section 016000 - Product Requirements.

H. **~~Mailroom~~ Mailslot Casework Modules: Modular paper sorting assembly of closed-back, open-front case modules with adjustable horizontal shelves, fabricated of fire-resistant, impact-resistant, high-strength plastic or coated steel. Provide manufacturer's standard module sizes for overall unit dimensions and mail slot quantity required. Provide with metal nameplate at each mail slot. (*AD-03)**
1. Manufacturers:
a. Datum Filing Systems.
b. Hamilton Sorter Company.
c. Modular Millwork, Division of International Office Products Cooperative.

2.10 HARDWARE

A. Hardware: BHMA A156.9, types as recommended by fabricator for quality grade specified.

B. Adjustable Shelf Supports: Standard side-mounted system using recessed metal shelf standards or multiple holes for pin supports and coordinated shelf rests, polished chrome finish, for nominal 1 inch spacing adjustments.

C. Workstation Brackets: Fixed, L-shaped, corner reinforced, face-of-stud mounting. Provide at all countertop/worksurface that is unsupported by cabinetry at 16 inches o.c., unless otherwise indicated.
1. Materials: Formed steel shapes.
a. Finish: Manufacturer's standard, factory-applied, textured powder coat.
b. Color: Paint to match wall color.
2. Load Capacity: 1000 lbs minimum per pair of brackets, tested at 16 inches o.c. spacing.
3. Size: Provide nominal sizes below. Provide additional sizes as required for other countertop/workstation applications indicated on Drawings.
a. Provide 21 inches high by 28 inches deep for standard 30 inch deep countertops.
b. Provide 21 inches high by 21 inches deep for standard 25 inch deep countertops.
4. Products:
a. A&M Hardware, Inc; Standard Brackets.
b. Best Brackets; ADA Workstation Support Standard Steel Bracket.
c. FastCap; SpeedBrace.
d. Lyman Associates; Counter Top Supports.
e. Substitutions: See Section 016000 - Product Requirements.

D. Concealed Countertop Support Brackets: Fabricated of 1/4-inch flat plate steel with 1/4-inch diameter mounting holes in vertical flange, for face mounting into framing substrate. Coordinate with countertop fabrication, provide additional shimming and furring to underside of countertop as required for flush installation. Finish color to be selected by Architect from manufacturer's full range. Provide at countertops 18" deep or less.
   1. Basis-of-Design Product; Federal Brace; Freedom Hidden Countertop Bracket.

E. Drawer and Door Pulls: BHMA A156.9, B02011, back-mounted "U" shaped wire pull, steel with satin finish, 4 inch centers.

F. Cabinet and Drawer Locks: Keyed cylinder, two keys per lock, master keyed, steel with satin finish. Provide on all cabinet doors and drawers unless otherwise indicated.

G. Drawer Slides:
   1. Type: Full extension.
   2. Static Load Capacity: Heavy Duty grade.
      a. For standard box drawers under 30 inches wide, provide BHMA Grade 1HD-100 with minimum load capacity of 100 lbf.
      b. For file drawers and drawers 30 inches wide or larger, provide BHMA Grade 2HD-200 with minimum load capacity of 200 lbf.
      c. For pencil drawer slides, provide 3/4 extension with minimum load capacity of 45 lbf.
   3. Mounting: Side mounted.
   4. Stops: Integral type.
   5. Features: Provide soft close type.
   6. Manufacturers:
      a. Accuride International, Inc.
      b. Fulterer USA.
      c. Grass America Inc.
      d. Knape & Vogt Manufacturing Company.

H. Filing Cabinet Suspension System: Provide 14-gauge steel file suspension rails, epoxy powder coated. File followers, or other split bottom hardware, are not acceptable.

I. Hinges: Butt type, BHMA A156.9, Grade 1, 2-3/4 inch, 5-knuckle steel with satin finish. Provide with antifriction bearings and rounded hospital tips.
   1. Provide two hinges for doors less than 48 inches high, and three hinges for doors more than 48 inches high.

2.11 DETENTION CASEWORK

A. Fabricate casework indicated on the Drawings as "Detention Casework," or casework that is located within Detention areas, in accordance with AWI/AWMAC/WI (AWS) Premium grade. Locate equipment consoles, cabinets, and countertops in locations and configuration as indicated on Drawings.
   1. Provide plastic laminate casework utilizing particleboard core material as specified for general Division 06 casework.
   2. Provide solid surfacing countertops utilizing veneer-core plywood subtop.

B. Solid Surface Countertops: Fabricate in accordance with AWI/AWMAC/WI (AWS) Premium grade and the following additional requirements:
   1. Countertops shall be constructed of 1/2 inch thickness solid-surface material with 3/4 inch veneer-core plywood subtop.

2. Unsupported countertop spans shall not exceed 48 inches, and the shall be reinforced to prevent deflection in excess of 1/4 inch under a 100 lb per square foot load.
3. The maximum distance a solid-surface material countertop (with or without subtop) may cantilever from a support is 12 inches for 3/4 inch thick, or 6 inches for 1/2 inch thick material, whether in the front, back, or end.
4. Install solid-surface countertops with support adequately furnished to minimize stresses and maximum full perimeter and joint support on all horizontal applications with a maximum on center separation between supports of 24" and with a maximum unsupported and unloaded overhang of 6" for countertop with subtop.

C. Provide the following hardware items in addition to hinges, shelf supports, and basic items specified for general casework applications:
1. Provide grommets and wiretray required for installation of equipment items.
2. Provide locks for all drawers and doors.

D. Mount security control equipment within or on consoles as indicated on Drawings.
1. Coordinate equipment requirements with the Security Control System Contractor (SCSC) prior to submitting shop drawings. Show coordination of detention equipment on the shop drawings.
2. Locate wire management slots in countertop of size and location required to install monitors and keyboard with minimal exposure of wires from the countertop view. Finish wire management slots with vinyl grommets as specified.
3. Provide for and coordinate installation of hopper pass and package pass units specified in Division 11 detention equipment sections.

2.12 FABRICATION

A. Assembly: Shop assemble casework items for delivery to site in units easily handled and to permit passage through building openings.

B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.

C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.
1. Fittings and Fixture Locations: Cut and drill components for fittings and fixtures.
2. Scribes and Fillers: Panels of matching construction and finish, for locations where cabinets do not fit tight to adjacent construction.
3. Seal or prime paint concealed cut edges of wood and laminate casework.

D. Hardware Application: Factory-machine casework members for hardware that is not surface applied.

E. Apron Frames: Construction similar to other cabinets, with modifications.
1. Frames fabricated from panels standard with the manufacturer. Include front and back panels, with drawer suspension framing mechanically fastened to support channels spanning between them.

F. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel exposed edges.

G. Solid Surfacing: Fabricate in one piece to greatest extent possible; join pieces with adhesive sealant and finish joints smooth in accordance with manufacturer's recommendations and instructions.

1. Fabricate with butt-jointed / square edge at all solid surface corners. Mitered solid surface corners are not acceptable.

H. Countertop Fabrication: Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
   1. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall, or as indicated.
   2. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

I. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
   1. Height: 4 inches, unless otherwise indicated.
   2. Mechanically fasten back and end splashes to countertops with steel brackets at 16 inches on center.

J. Wall-Mounted Counters (not mounted over cabinets): Provide ADA compliant knee space with brackets, skirts, or aprons, as indicated on Drawings.

PART 3 EXECUTION

3.01 EXAMINATION

A. Site Verification of Environmental Conditions:
   1. Do not deliver woodwork or casework until the following conditions have been met:
      a. Building has been enclosed (windows and doors sealed and weather-tight).
      b. An operational HVAC system that maintains temperature and humidity at occupancy levels has been put in place.
      c. Ceiling, overhead ductwork, piping, and lighting have been installed.
      d. Installation areas do not require further “wet work” construction.

B. For Base Cabinets Installation: Examine floor levelness and flatness of installation space. Do not proceed with installation if encountered floor conditions required more than 1/2 inch leveling adjustment. When installation conditions are acceptable, for each space, establish the high point of the floor. Set and make level and plumb first cabinet in relation to this high point, and provide field modifications as required to not exceed maximum height dimensions.
   1. Construction tolerances shall not apply to casework maximum height dimensions; maximum indicated dimension shall be maintained at any point along the length of casework, regardless of floor levelness.
   2. Field modifications shall be made to the toe kick to account for leveling due to floor levelness.

C. For Wall Cabinets Installation: Examine wall surfaces in installation space. Do not proceed with installation if the following conditions are encountered:
   1. Maximum variation from plane of masonry wall exceeds 1/4 inch in 10 ft and 1/2 inch in 20 ft or more, and/or maximum variation from plumb exceeds 1/4 inchper story.
   2. Maximum Variation of finished gypsum board surface from true flatness: 1/8 inch in 10 feet in any direction.

D. Verify adequacy of backing and support framing.

E. Verify location and sizes of utility rough-in associated with work of this section.

3.02 INSTALLATION

A. Install work in accordance with AWI/AWMAC/WI (AWS) requirements for grade(s) indicated and in accordance with manufacturer's instructions.

B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.

C. Use fixture attachments in concealed locations for wall mounted components.

D. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.

E. Secure cabinets to floor using appropriate angles and anchorages.

F. Fasten together cabinets in continuous runs, with joints flush, uniform and tight. Misalignment of adjacent units not to exceed 1/16 inch. In addition, do not exceed the following tolerances:

1. Variation of Tops of Base Cabinets from Level: 1/16 inch in 10 feet.
2. Variation of Bottoms of Wall Cabinets from Level: 1/8 inch in 10 feet.
3. Variation of Faces of Cabinets from a True Plane: 1/8 inch in 10 feet.
4. Variation of Adjacent Surfaces from a True Plane (Lippage): 1/32 inch.
5. Variation in Alignment of Adjacent Door and Drawer Edges: 1/16 inch.

G. Secure wall cabinets at top and bottom, at each end and no more than 16 inches on center. Secure directly into metal wall framing, or into FRT wood or metal channel blocking with No. 10 wafer head screws. Wall mounted hanger strips are not acceptable.

H. Countertops: Install countertops intended and furnished for field installation in one true plane, with ends abutting at hairline joints, and no raised edges.

I. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

3.03 ADJUSTING

A. Test installed work for rigidity and ability to support loads.

B. Adjust moving or operating parts to function smoothly and correctly.

3.04 CLEANING

A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

3.05 PROTECTION

A. Do not permit finished casework to be exposed to continued construction activity.

B. Protect casework and countertops from ongoing construction activities. Prevent workmen from standing on, or storing tools and materials on casework or countertops.

C. Repair damage, including to finishes, that occurs prior to Date of Substantial Completion, using methods prescribed by manufacturer; replace units that cannot be repaired to like-new condition.

END OF SECTION 064100

SECTION 083313
COILING COUNTER DOORS (AD 03)

PART 1 GENERAL

1.01 REFERENCE STANDARDS

A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.

B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

D. NFPA 80 - Standard for Fire Doors and Other Opening Protectives.

E. UL (DIR) - Online Certifications Directory.

F. UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

1.02 SUBMITTALS

A. Product Data: Submit manufacturer's standard literature showing materials and details of construction and finish. Include electrical data for fire release mechanism.

B. Shop Drawings: Indicate rough and actual opening dimensions, anchorage methods, hardware locations, and installation details.

C. Samples: Submit manufacturer's color charts indicating standard range of powder coat finishes.

D. Operation and Maintenance Data: Indicate modes of operation, lubrication requirements and frequency, and periodic adjustments required.

E. Project Record Documents: Include as-built electrical diagrams for electrical operation and connection to fire alarm system.

F. Warranty: Provide executed warranty, completed in Owner's name.

1.03 QUALITY ASSURANCE

A. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for the purpose specified and indicated.

1.04 WARRANTY

A. Refer to Section 017800 - Closeout Submittals, for additional warranty requirements.

B. Manufacturer Warranty: Provide two-year manufacturer warranty for materials and workmanship for all components of coiling doors. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Coiling Counter Doors:
   1. Alpine Overhead Doors, Inc.
   2. Amarr.
   3. C.H.I. Overhead Doors.
   4. Clopay Building Products.

5. Cornell Iron Works, Inc.
6. Hörmann High Performance Doors.
7. McKeon Rolling Steel Door Co., Inc.
8. Overhead Door Corporation.
9. Raynor Garage Doors.
10. The Cookson Company.
11. Wayne-Dalton, a Division of Overhead Door Corporation.
12. Substitutions: See Section 016000 - Product Requirements.

2.02 COILING COUNTER DOORS (AD 03)

A. ~~**Coiling Counter Doors, Non-Fire-Rated: Galvanized steel slat curtain.**~~
   1. ~~**Mounting: Face of wall mounted (mount on non-secure/non-public side).**~~
   2. ~~**Nominal Slat Size: Manufacturer's standard.**~~
   3. ~~**Slat Profile: Flat.**~~
   4. ~~**Finish, Galvanized Steel: Factory powder coated.**~~
   5. ~~**Color: As selected by Architect from manufacturer's standard range.**~~
   6. ~~**Guides: Formed track; same material and finish unless otherwise indicated.**~~
   7. ~~**Hood Enclosure: Manufacturer's standard; galvanized steel. Finish to match slats.**~~
   8. ~~**Manual push up operation.**~~
   9. ~~**Locking Device: Slide bolt for padlock (padlocks NIC).**~~
   10. ~~**Integral Counter/Sill: Not required. Coordinate coiling door height so that doors will close to the top of indicated stainless steel detention counters.**~~

B. Coiling Counter Doors, Fire-Rated: Galvanized steel slat curtain.
   1. Location: Provide where coiling counter door is indicated in fire-rated wall or partition.
   2. Mounting: Face of wall mounted as indicated below:
      a. At windows AM104B and AM104C: Mount on Magistrate side.
      b. At window IP108C: Mount on Booking side.
   3. Fire Rating: 3/4 hour at windows AM104B and AM104C; and 1/3 hour at window IP108C. Comply with NFPA 80.
      a. Provide product listed and labeled by UL (DIR) as suitable for the purpose specified and indicated.
   4. Smoke Control: Provide doors tested to UL 1784, with maximum air-leakage rate of 3.0 cfm/sq. ft. at 0.10-inch wg. Doors shall be listed and labeled by UL (DIR) with letter "S" designating smoke-control.
   5. Nominal Slat Size: Manufacturer's standard.
   6. Slat Profile: Flat.
   7. Finish, Galvanized Steel: Factory powder coated.
   8. Color: As selected by Architect from manufacturer's standard colors.
   9. Guides: Formed track; same material and finish unless otherwise indicated.
   10. Hood Enclosure: Manufacturer's standard; galvanized steel. Finish to match slats.
   11. Fire Release Mechanism: Automatic door release device, actuated by fire alarm and smoke detection systems, with manual reset.
   12. Integral Counter/Sill: Not required. Coordinate coiling door height so that doors will close to the top of indicated counters.

2.03 MATERIALS

A. Curtain Construction: Interlocking, single thickness slats.
   1. Slat Ends: Alternate slats fitted with end locks to act as wearing surface in guides and to prevent lateral movement.
   2. Curtain Bottom: Fitted with angles to provide reinforcement and positive contact in closed position; neoprene astragal along bottom edge.
   3. Steel Slats: ASTM A653/A653M galvanized steel sheet, with minimum G90/Z275 coating; minimum thickness 16 gauge, 0.06 inch.

B. Guide Construction: Continuous, of profile to retain door in place, with mounting brackets of same metal.
   1. Guides for Galvanized Curtains: ASTM A36/A36M steel angles, size as indicated, hot-dip galvanized per ASTM A123/A123M.

C. Hood Enclosure: Internally reinforced to maintain rigidity and shape.
   1. Include automatic hood baffle on fire-rated doors to prevent smoke or fire penetration at hood.

D. Lock Hardware:
   1. For fire shutter units, additional lock or latching mechanisms are not required.
   2. Slide Bolt: Provide on single-jamb side, extending into slot in guides, with padlock on one side.

E. Roller Shaft Counterbalance: Steel pipe and torsion steel spring system, capable of producing torque sufficient to ensure smooth operation of curtain from any position and capable of holding position at mid-travel; with adjustable spring tension; requiring 25 lb nominal force to operate.
   1. Provide fire-rated doors with auxiliary counterbalance spring to allow for operation of fire release mechanism without tension release of main counterbalance spring.

F. Smoke Seals/Gasketing: Provide fire-rated doors with continuous smoke seal gaskets around perimeter of door in accordance with requirements of UL-tested and -listed assembly.

2.04 ELECTRIC OPERATION

A. Operator, Controls, Actuators, and Safeties: Listed and classified by UL (DIR) or testing agency acceptable to authorities having jurisdiction (AHJ) as suitable for purpose specified and indicated.
   1. Fire Release Mechanism: Provide fire-rated door with a constantly energized release device with governor unit and battery backup; complying with NFPA 80; 110/120V. Release device shall be designed to activate upon fire-alarm or smoke-detection system activation. Connection and wiring of release device to fire-alarm and smoke-detection system shall be by Division 26.
      a. Release device shall allow for testing and manual resetting without retensioning the counterbalance spring system.
      b. Release device shall have replaceable fusible link above the door designed to activate release at 165 degrees F, as backup in the event of fire-alarm/smoke-detection failure.
      c. Provide additional mounting hardware and accessories as required for a complete assembly.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that opening sizes, tolerances and conditions are acceptable.

3.02 INSTALLATION

A. Install units in accordance with manufacturer's instructions.

B. Install fire-rated doors in accordance with NFPA 80.

C. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.

D. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.

E. Fit and align assembly including hardware; level and plumb, to provide smooth operation.

F. Coordinate installation of electrical service with Division 26, including wiring from fire-alarm and smoke-detection systems.

G. Complete wiring from disconnect to unit components.

3.03 TOLERANCES

A. Maintain dimensional tolerances and alignment with adjacent work.

B. Maximum Variation From Plumb: 1/16 inch.

C. Maximum Variation From Level: 1/16 inch.

D. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch per 10 ft straight edge.

3.04 ADJUSTING

A. Adjust operating assemblies for smooth and noiseless operation.

3.05 CLEANING

A. Clean installed components.

B. Remove labels and visible markings.

END OF SECTION 083313

SECTION 085653
SECURITY WINDOWS (AD 03)

PART 1 GENERAL

1.01 REFERENCE STANDARDS

A. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix).

B. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable.

C. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

D. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric).

E. ASTM E283/E283M - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

F. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.

G. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.

H. SSPC-Paint 33 - Coal Tar Mastic Coating, Cold-Applied.

I. UL (DIR) - Online Certifications Directory.

J. UL 752 - Standard for Bullet-Resisting Equipment.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Furnish anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, to be embedded into concrete or masonry, with setting diagrams and installation, to applicable installer in time for installation.

B. Preinstallation Meeting: Prior to start of installation arrange a meeting on site to familiarize installer and installers of related work with requirements relating to this work.

1.03 SUBMITTALS

A. Product Data: Manufacturer's published data showing materials, construction details, dimensions of components, and finishes.

B. Shop Drawings: Drawings prepared specifically for this project, showing plans, elevations, sections, details of construction, anchorage to other work, hardware, and glazing.
   1. For existing and in-place openings show verified field dimensions.
   2. Show required opening dimensions and allowance for field deviation.

C. Test Reports: Test reports for specific window model and glazing to be furnished, showing compliance with specified requirements; window and glazing may be tested separately, provided window test sample adequately simulates the glazing to be used.
   1. Include testing agency qualifications.

2. For structural, forced entry, and ballistic tests, provide details on method of anchorage to test frame.
3. Reports for thermal requirements may be based on calculations, in accordance with the specified standard.

D. Selection Samples: Color charts for factory finishes.

E. Verification Samples:
1. Actual sections of frame members, at least 12 inch long, showing finish, weatherstripping, and fasteners.

F. Installer's Qualification Statement.

1.04 QUALITY ASSURANCE

A. Testing Agency Qualifications: Independent testing agency able to show experience in conducting tests of the type specified.

B. Installer Qualifications: Company specializing in performing work of the type specified; certified or approved in writing by security window manufacturer.

C. Welder Qualifications: Qualified in accordance with AWS procedures for type of welding required.

1.05 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

B. Provide manufacturer's warranty agreeing to repair or replace windows and window components that fail within three years after Date of Substantial Completion due to, but not limited to, the following:
1. Structural failure, failure of welds, and deterioration of metals and finishes beyond that expected under detention use and normal weathering.
2. Failure of glazing due to excessive deflection of supporting members under wind load.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Security View Windows:
1. Armortex.
2. Chicago Bullet Proof Systems.
3. C. R. Laurence Co., Inc.
4. Creative Industries, Inc.
5. Insulgard Security Products.
6. Krieger Specialty Products.
7. National Bullet Proof, Inc.
8. Norshield Security Products.
9. Overly Door Company.
10. United States Bullet Proofing.
11. Substitutions: See Section 016000 - Product Requirements.

B. Source Limitations: Provide windows from a single manufacturer.

2.02 ASSEMBLIES

A. Security and Detention Windows:

1. Dimensions, profiles, features, and performance specified and indicated on drawings are required; do not deviate unless specifically approved by Architect under substitution procedures; see Section 016000.
2. Design to fit openings indicated on drawings; design to accommodate deviation of actual construction from dimensions indicated on drawings.
3. Fabricate frames and sash with corners mitered or coped full depth with concealed welded joints.
4. Design anchorages to provide performance equivalent to that required for window unit; provide anchorages at least equivalent to those by which the tested units were anchored to the test frame.
5. Separate dissimilar metals to prevent corrosion by galvanic action by painting contact surfaces with primer or with sealant or tape recommended by manufacturer for the purpose.
6. Weld components before finishing and in concealed locations, to greatest extent possible; minimize distortion and discoloration of finish; remove residue of welding; grind exposed welds smooth and finish to match.
7. Label units to indicate which side is which, such as inside/outside or secure/non-secure; use labels that are removable after installation but durable enough not to be lost during delivery, storage, handling, and installation.

B. Exterior Window Requirements: Comply with following performance requirements as well as other specified criteria.

1. Structural Performance: Capable of withstanding wind loads as specified by code without permanent deformation or breakage of components, when tested in accordance with ASTM E330/E330M.
2. Deflection of Framing Members Supporting Glass: Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edge to less than 1/175 of their lengths under specified design load.
3. Air Leakage of Fixed Windows: 0.10 cfm/sq ft maximum leakage for fixed window units when tested at 6.27 psf pressure difference in accordance with ASTM E283/E283M.
4. Water Penetration: None, when tested in accordance with ASTM E331 at test pressure difference of 2.86 psf.
5. Thermal Performance: Whole-window U-value of 0.38 Btu/sq ft h degF at 15 mph exterior wind velocity and winter condition temperatures.
6. Provide thermally improved construction using integral, low conductance thermal barrier in frame and sash members.
7. Provide weep holes and internal water passages to conduct infiltrated water to exterior.
8. Provide water shed members where sash frames lap in wrong direction to shed water.
9. Provide factory-installed weatherstripping on operable sash.

2.03 SECURITY VIEW WINDOWS (AD 03)

A. Security View Windows: Factory-assembled fixed glazing panel reglazable from secure side without disassembly of frame, with non-removable trim and glazing stops on non-secure side (outside).

1. Glazing: Manufacturer's standard laminated type; kind as required to achieve performance criteria specified.

a. Total Thickness: 1- to 1-1/4-inches, as standard with manufacturer to meet performance requirements indicated.
b. Tint: Gray.
c. Low-E Coating: Provide with low-e coating at exterior window applications to achieve required system thermal performance indicated.

2. Factory glazed.
3. Framing and Glazing Stops: Formed aluminum-clad steel sheet; fluoropolymer finish.
   a. Framing Cross Section: 4-1/2-inches deep, with sightline either 2- or 2-1/2-inches, as standard with manufacturer.
4. Ballistic Resistance: UL 752 Level 3 (super-power handgun).
5. Communication: Standard talk-through portal; stainless steel; matching ballistic resistance of window.
6. **Deal Trays: Formed stainless steel, recessed into counter or sill for mounting under glazing frame.**
   a. **Clear Opening Height: 1-1/2 inches.**
   b. **Tray Dimensions: 12 by 8 inches, wide by deep.**
   c. **Listed and labeled by UL as bullet resisting to UL 752 Level 3.**

2.04 ASSEMBLY COMPONENTS

A. Formed Steel Framing: ASTM A1008/A1008M, Designation CS (commercial steel), cold-rolled steel sheet; 12 gauge, 0.1046 inch minimum thickness.

B. Aluminum Framing: ASTM B221 (ASTM B221M) extrusions of alloy and temper selected by manufacturer for strength, corrosion resistance, and finish required; not less that 1/8 inch thick at any location of frame and sash members.

C. Weeps: Include integral weeps for exterior window framing to drain water to the exterior along horizontal framing members.

D. Frame Anchors: Mild steel plates, shapes, or bars, concealed in completed construction; provide anchorage devices as necessary to securely fasten windows to adjacent construction; use security fasteners for exposed anchors.
   1. For Setting in Masonry: Minimum 3/16 inch thick angles or plates, minimum 4 inches long with hooked ends, welded to back of window frame.
   2. Provide minimum of two anchors per side of window plus one additional anchor for each 18 inches or fraction thereof more than 36 inches in height or width.

E. Weatherstripping: Factory installed; molded EPDM or neoprene.

F. Glazing Seals: Factory installed; molded EPDM or neoprene compressible gaskets and compression strips.

G. Security Fasteners: Operable only by tools produced by fastener manufacturer or manufacturer's licensee; head style appropriate to installation conditions, strength, and finish of materials being fastened; use countersunk heads wherever possible.

H. Package Receiver: Through-wall mounted, with hinged doors on each side with interlock device allowing door to be open on only one side at a time. Provide manufacturer's standard hinge and latch hardware, door on exterior (non-secure) side shall have automatic door closer. Provide with mounting flanges for flush appearance to both sides of wall.
   1. Material (Body): Formed 12 gauge sheet steel, prime painted.

2. Material (Doors): On secure side, formed 16 gauge sheet steel, prime painted. On non-secure side, provide stainless steel door. Both doors shall have UL 752 Level 3 bullet resistant armor.
3. Operation: Manual.
4. Dimensions: Minimum of 18 inches by 18 inches; by 18 inch total depth. Provide 4 inch maximum projection on non-secure (lobby) side.

I. Speaking Aperture Covers: Stainless steel, round, allowing passage of speech at normal volume without distortion; listed and labeled by UL (DIR) as bullet resisting to UL 752, same level as window.

J. Bituminous Paint: Cold-applied asbestos-free asphalt mastic, complying with SSPC-Paint 33; 30 mils, 0.030 inch minimum thickness per coat.

K. Sealant for Setting Sills and Sill Flashing: Non-curing butyl type.

2.05 FINISHES

A. Fluoropolymer Finish: Cleaned and pretreated; two coat thermosetting finish containing not less than 70 percent polyvinylidene fluoride resin by weight, complying with AAMA 2604; 1.5 to 2 mils thick, applied in accordance with paint manufacturer's recommendations; medium gloss.

B. Color: To be selected by Architect from manufacturer's full range.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that window openings are ready for installation of windows.

B. Verify that correct embedded anchors are in place and in proper location; repair or replace anchors as required to achieve satisfactory installation.

C. Notify Architect if conditions are not suitable for installation of windows; do not proceed until conditions are satisfactory.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions and approved shop drawings.

B. Install windows in correct orientation (inside/outside or secure/non-secure).

C. Anchor windows securely in manner so as to achieve performance specified.

D. Separate metal members from concrete and masonry using bituminous paint.

E. Separate dissimilar metals, and metal members in contact with concrete and masonry, using bituminous paint.

3.03 ADJUSTING

A. Adjust operating components for smooth operation while also providing tight fit at contact points and a secure enclosure; lubricate operating hardware.

3.04 CLEANING AND REPAIR

A. Clean exposed surfaces promptly after installation without damaging finishes.

B. Remove and replace defective work.

END OF SECTION 085653

SECTION 092900
GYPSUM BOARD (AD 03)

PART 1 GENERAL

1.01 REFERENCE STANDARDS

A. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units.

B. ANSI A118.9 - American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units.

C. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

D. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.

E. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.

F. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.

G. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.

H. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.

I. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.

J. ASTM C1280 - Standard Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing.

K. ASTM C1325 - Standard Specification for Fiber-Mat Reinforced Cementitious Backer Units.

L. ASTM C1396/C1396M - Standard Specification for Gypsum Board.

M. ASTM C1629/C1629M - Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels.

N. ASTM C1658/C1658M - Standard Specification for Glass Mat Gypsum Panels.

O. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.

P. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.

Q. GA-216 - Application and Finishing of Gypsum Panel Products.

R. UL 752 - Standard for Bullet-Resisting Equipment.

1.02 SUBMITTALS

A. Product Data:
   1. Provide data on metal framing, gypsum board, accessories, and joint finishing system.

B. Ballistic Test Reports: Indicate compliance of bullet-resistant sheathing and wallboard assemblies with specified requirements.

1.03 DELIVERY, STORAGE, HANDLING, AND FIELD CONDITIONS

A. Do not deliver or install until building is weather-tight and conditioned.

B. Store materials in dry and clean location until needed for installation. During installation, handle in a manner that will prevent damage and to prevent marring and soiling of finished surfaces.

C. Do not install gypsum products that have gotten wet or moldy, or show signs of past moisture damage.

D. Maintain uniform temperature and humidity at occupancy conditions during and after installation. Allow products to acclimatize prior to installation.

PART 2 PRODUCTS

2.01 BOARD MATERIALS

A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; with tapered edges.

1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
   a. Mold-resistant board is required whenever gypsum board is indicated in rooms subject to steam or water, including mechanical rooms, toilet rooms, custodial rooms, and kitchens.
3. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
4. Thickness:
   a. Vertical Surfaces: 5/8 inch.
   b. Ceilings: 5/8 inch.
   c. Curved Surfaces: Provide flexible 1/4 inch thickness gypsum board, installed in two layers.

B. Impact Resistant Wallboard:

1. Application: ~~High-traffic areas indicated~~**. All corridors, Interview Rooms 173,174,175, Interview Waiting 172, Public LEC Lobby 101, Fitness 128, Computer Forensics Room 179. (AD 03)**
2. Surface Abrasion: Level 3, minimum, when tested in accordance with ASTM C1629/C1629M.
3. Indentation: Level 1, minimum, when tested in accordance with ASTM C1629/C1629M.
4. Soft Body Impact: Level 3, minimum, when tested in accordance with ASTM C1629/C1629M.
5. Hard Body Impact: Level 2, minimum, when tested in accordance with ASTM C1629/C1629M.
6. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
7. Paper-Faced Type: Gypsum wallboard, as defined in ASTM C1396/C1396M.
8. Glass Mat-Faced Type: Gypsum wallboard, as defined in ASTM C1658/C1658M.
9. Type: Fire-resistance-rated Type X, UL or WH listed.
10. Thickness: 5/8 inch.
11. Edges: Tapered.
12. Paper-Faced Products:
    a. American Gypsum Company; M-Bloc IR Type X.
    b. CertainTeed Corporation; Extreme Impact Resistant Drywall with M2Tech.

c. National Gypsum Company; Gold Bond Hi-Impact XP Gypsum Board.
d. Substitutions: See Section 016000 - Product Requirements.

13. Glass Mat Faced Products:
    a. Georgia-Pacific Gypsum; DensArmor Plus Impact-Resistant.
    b. USG Corporation; USG Sheetrock Brand Glass-Mat Panels Mold Tough VHI.
    c. Substitutions: See Section 016000 - Product Requirements.

C. Tile Backing Board:
1. Application: Surfaces behind tile in wet areas including tub and shower surrounds.
2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
3. ANSI Cement-Based Board: Non-gypsum-based; cementitious panels with glass fiber mesh embedded in front and back surfaces complying with ANSI A118.9 and ASTM C 1288 or ASTM C1325.
    a. Thickness: 5/8 inch.
    b. Available Products:
        1) FinPan, Inc.; Util-A-Crete Backer Board.
        2) National Gypsum Company; PermaBase Cement Board.
        3) USG Corporation; Durock Cement Board.
        4) Substitutions: See Section 016000 - Product Requirements.

D. Bullet Resistant Sheathing and Wallboard: Woven roving, multi-ply, ballistic grade fiberglass cloth with thermoset polyester resin; comply with UL 752 Level 3. Size boards to minimize joints.
1. Thickness: Nominal 7/16 inch or 1/2 inch as standard with manufacturer.
2. Available Products:
    a. ArmorCore by Waco Composites; Bullet Resistant Fiberglass Panels.
    b. Armortex, Div. of Safeguard Security System, Inc.; OF 300.
    c. Chicago Bullet Proof Systems; Fibre-Tex.
    d. C.R. Laurence of North America; BRF300.
    e. Insulgard Corporation; FG-300.

E. Exterior Sheathing Board for Ceilings and Soffits: Sizes to minimize joints in place; ends square cut.
1. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
2. Fungal Resistance: No fungal growth when tested in accordance with ASTM G21.
3. Glass Mat Faced Sheathing: Glass mat faced gypsum substrate as defined in ASTM C1177/C1177M.
4. Edges: Square.
5. Available Glass Mat Faced Products:
    a. American Gypsum Company; M-Glass Exterior Sheathing.
    b. CertainTeed Corporation; GlasRoc Exterior Sheathing.
    c. Georgia-Pacific Gypsum; DensGlass Sheathing.
    d. National Gypsum Company; Gold Bond eXP Sheathing.
    e. USG Corporation; USG Securock Brand Ultralight Glass-Mat Sheathing.

F. Shaftwall Liner Panels: Type X; 1 inch thick, square long edges, ends square cut.
1. Glass Mat Faced Type: Glass mat shaftliner gypsum panel or glass mat coreboard gypsum panel as defined in ASTM C1658/C1658M.

2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.

2.02 GYPSUM BOARD ACCESSORIES

A. Sound Attenuation Batts: ASTM C665; preformed glass fiber, friction fit type, unfaced. Thickness sized to fit metal stud cavity.

B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant. Refer to sealant AS-1 in Division 07 Section "Joint Sealants."

C. Putty Pads: Non-hardening endothermic material, in pad form, faced on both sides with poly liner, designed to seal around penetrations and wiring devices, enhancing acoustic performance.
   1. Nominal Size: 7-1/4 x 7-1/4 x 3/16 inches.
   2. Available Products:
      a. 3M; Fire Barrier Moldable Putty Pads MPP+.
      b. Hilti; Firestop Putty Pad, CFS-P PA.
      c. Specified Technologies, Inc.; SpecSeal Putty Pad.

D. Beads, Joint Accessories, and Other Trim: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.
   1. Corner Beads: Low profile, for 90 degree outside corners.
   2. L-Bead, LC-Bead, and U-Bead: Sized to fit gypsum wallboard size(s) indicated.
      a. Provide LC-bead at exposed panel edges and U-bead at concealed panel edges, unless otherwise indicated. Provide L-bead at locations indicated.

E. Decorative Metal Trim:
   1. Material: Extruded aluminum alloy 6063-T5 temper.
   2. Finish: Anodized, clear.
   3. Type: Profile(s) as indicated on Drawings; selected from manufacturer's standard range.
   4. Reveal Trim: Provide 1/2-inch wide by either 1/2-inch or 5/8-inch deep, as standard with manufacturer.
      a. Products:
         1) Fry Reglet; Model DRM-625-50.
         2) Flannery, Inc; Model DWR 625-50.
         3) Gordon, Inc; Part # 512-5/8.
         4) Pittcon Industries; Model SWR-050-063.
         5) Tamlyn; Model RV5-12.
   5. "F" Reveal Molding: 1/2-inch wide by 5/8-inch deep with 7/8-inch flange on one side only for reveals where drywall terminates against jamb, ceiling, or other finish material.
      a. Products:
         1) Fry Reglet; Model DRMF-625-50.
         2) Flannery, Inc; Model DWRF 625-50.
         3) Gordon, Inc; Part # 412-5/8.
         4) Pittcon Industries; Model SWR-050U-063.
         5) Tamlyn; Model MCR5-12
   6. L-Trim Molding: "L" angle molding where drywall raised panel terminates at other substrates.
      a. Products:

1) Fry Reglet: Model DRML-625.
2) Flannery, Inc; Model DWL 625.
3) Gordon, Inc; Part # 258.
4) Pittcon Industries; Model ST-063.
5) Tamlyn; Model MLR-58.

7. Stepped Outside Corner: Exposed metal reveal profile for 90 degree outside corners.
   a. Products:
      1) Fry Reglet: Model DRMW 625-625.
      2) Flannery, Inc; Model DWRW 625-625.
      3) Gordon, Inc; Part # 945-2X-58.
      4) Pittcon Industries; Model SCS-2X 063-063.
      5) Tamlyn; (no product - provide custom to match profiles above).

F. Metal Edge Trim for "Cloud" Suspended Ceilings: Steel or extruded aluminum; provide attachment clips, splice plates, and preformed corner pieces for a complete trim system.
   1. Trim Height: 4 inches.
   2. Finish: Baked enamel; white.
   3. Available Products:
      a. Armstrong World Industries, Inc.; Axiom Classic.
      b. Certainteed; Terminus Perimeter Trim.
      c. Chicago Metallic Corp.; Infinity System.
      d. USG Corporation; Compasso Suspension Trim.

G. Acoustic Partition Closure at Storefront or Curtain Wall: Multi-piece rectangular-section assembly of nested U-shape aluminum extrusions for finished closure between aluminum storefront or curtainwall system vertical mullion (and glass where indicated), and partition assembly. Closure shall allow for movements of framing and glass it attaches to, and shall not allow direct metal to glass contact. Fill cavity of partition closure with acoustic batt insulation.
   1. Thickness: Aluminum closure plates not less than 0.125-inch thick.
   2. Acoustic Rating: Provide product with a minimum tested STC rating of 55.
      a. Acoustic Material: Fungi- and microbe-resistant foam, Class A rated when tester per ASTM E 84.
   3. Acoustical Sealant: Seal both ends of partition closure with acoustical sealant.
   4. Finish: Powder coat; color selected by Architect from manufacturer's full range.
   5. Available Products:
      a. Gordon, Inc; Mullion Mate.
      b. Mull-It-Over Products; Mull-It-Over.

H. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.

I. Exterior Soffit Vents: One piece, perforated, ASTM B221 6063 T5 alloy aluminum, with edge suitable for direct application to gypsum board and manufactured especially for soffit application. Provide continuous vent.
   1. Available Manufacturers:
      a. Fry Reglet.
      b. Gordon, Inc.
      c. Pittcon Industries.
      d. Stockton Products.

2. Flat, horizontal-to-horizontal application: 2-inch wide with three rows of vent slots for a minimum of 3 square inches of opening per linear foot.
3. Finish: High performance organic coating; color selected by Architect from manufacturer's full range.

J. Security Barrier Mesh: ASTM F 1267, Type II, Class 1; expanded and flattened diamond mesh security barrier. Fabricate of uncoated, minimum 18 gage carbon steel, weight 0.66 lbs/sq. ft. Provide with lath mesh size approximately 1/2-inch by 1-1/4-inch.
1. Mesh Fasteners: Provide fasteners that are non-corrosive to both mesh and framing substrate; as recommended by manufacturer for mesh-to-mesh and mesh-to-framing fastening.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.02 SHAFT WALL INSTALLATION

A. Shaft Wall Framing: Install in accordance with manufacturer's installation instructions.

B. Shaft Wall Liner: Cut panels to accurate dimensions and install sequentially between special friction studs.

3.03 ACOUSTIC ACCESSORIES INSTALLATION

A. Sound Attenuation Batts: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.

B. Acoustic Sealant: Install in accordance with manufacturer's instructions.

3.04 BOARD INSTALLATION

A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

C. Double-Layer, Nonrated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Use glass mat faced gypsum board at exterior walls and at other locations as indicated. Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer.

D. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.

E. Security Gypsum Partitions and Ceilings: At security gypsum assemblies indicated, install expanded/flattened metal security barrier mesh followed by impact resistant gypsum board.

F. Install gypsum board with an open horizontal joint (gap) not to exceed 5/8-inch above finished floor slab, and tape and finish vertical joints to bottom edge of board to afford a smooth substrate for applied wall base.

G. Exterior Sheathing: Comply with ASTM C1280. Install sheathing vertically, with edges butted tight and ends occurring over firm bearing.

H. Cementitious Backing Board: Install over steel framing members where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.

I. Bullet Resistant Sheathing and Wallboard:
   1. Install bullet-resistant sheathing according to manufacturer's written recommendations and with manufacturer-approved fasteners.
   2. Cover all joints between boards with a 4-inch strip of the same thickness material as the boards, centered on the joint.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints in compliance with ASTM C 840, consistent with lines of building spaces, and as indicated.
   1. Not more than 30 feet apart on walls and ceilings over 50 feet long.
   2. At exterior soffits, not more than 30 feet apart in both directions.

B. Corner Beads: Install at external corners, using longest practical lengths.

C. Decorative Trim: Install at locations shown on drawings and in accordance with manufacturer's instructions.

D. Exterior Soffit Vents: Install according to manufacturer's written instructions and in locations indicated on drawings. Provide vent area specified.

E. Putty Pads: Install putty pads on the backside of items penetrating gypsum board on STC-rated walls/partitions. Items include, but are not limited to, wiring devices, cable, conduit, and pipe. Completely cover and seal around each penetration.

3.06 JOINT TREATMENT

A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
   1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
   2. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.
   3. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.

B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   1. Feather coats of joint compound so that camber is maximum 1/32 inch.

C. Fill and finish joints and corners of cementitious backing board as recommended by manufacturer.

3.07 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION 092900

SECTION 096536
STATIC-CONTROL RESILIENT FLOORING (*AD-03)

PART 1 GENERAL

1.01 REFERENCE STANDARDS

A. AATCC Test Method 134 - Test Method for Electrostatic Propensity of Carpets.

B. ANSI/ESD STM7.1 - The Protection of Electrostatic Discharge Susceptible Items Flooring Systems Resistive Characterization.

C. ANSI/ESD STM97.1 - ESD Association Standard Test Method for the Protection of Electrostatic Discharge Items - Floor Materials And Footwear - Resistance Measurement in Combination with a Person.

D. ANSI/ESD STM97.2 - Floor Materials and Footwear - Voltage Measurement in Combination with a Person.

E. ASTM F150 - Standard Test Method for Electrical Resistance of Conductive and Static Dissipative Resilient Flooring.

F. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

G. ASTM F1344 - Standard Specification for Rubber Floor Tile.

H. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.

I. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.

1.02 SUBMITTALS

A. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

B. Shop Drawings: Indicate seaming plans, floor patterns, and dye lot.

C. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.

D. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.

E. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.

B. Store all materials off of the floor in an acclimatized, weather-tight space.

C. Maintain temperature in storage area between 55 degrees F and 90 degrees F.

1.04 FIELD CONDITIONS

A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

1.05 WARRANTY

A. See Section 017800 - Closeout Submittals, for additional warranty requirements.

B. Manufacturer's Warranty: Provide a ten (10) year manufacturer warranty, covering defective material and installation.

C. Installer's Warranty: Installer shall warrant that the products have been installed in accordance with manufacturer's instructions.
   1. The installer shall provide a ten (10) year warranty against product failure due to excessive moisture vapor transmission through the slab.

PART 2 PRODUCTS

2.01 STATIC FLOORING

A. Static Control Tile - Type RFT: Homogeneous; color and pattern throughout thickness.
   1. Manufacturers:
      a. Nora; norament grano ed.
      b. Roppe Corporation; ESD Rubber Static Control Tile.
      c. StaticWorx; SD Architectural Rubber.
   2. Minimum Requirements: Rubber tile complying with ASTM F1344, Class 1, Type B.
   3. Electrical Resistance:
      a. Dissipative Tile (Material): Resistance between 1.0 megohms and 1000 megohms as tested in accordance with ASTM F150 or ANSI/ESD STM7.1.
      b. Dissipative Tile (System - Flooring and Footwear in combination with a person): Resistance between 1.0 megohms and 35 megohms as tested in accordance with ANSI/ESD STM97.1.
   4. Static Generation (System - Flooring and Footwear in combination with a person): Less than 100 V when tested per AATCC Test Method 134 or ANSI/ESD STM97.2.
   5. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
   6. Tile Size: Tile size shall match size of raised access floor panel. Coordinate with access flooring manufacturer.
   7. Total Thickness: 2 mm, minimum.
   8. Texture: Hammered.
   9. Color: To be selected by Architect from manufacturer's full range.

2.02 ACCESSORIES

A. Subfloor Filler: Type recommended by adhesive material manufacturer.

B. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
   1. For static-control flooring, provide types as required by manufacturer to maintain static dissipative properties of flooring system and grounded connection.
   2. VOC Content Limits: As specified in Section 016116.

C. Copper Grounding Strips: Type and size as recommended by static control flooring manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

B. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
   1. Test as Follows: Perform one of each test per 1,000 sf of installation area.
      a. Alkalinity (pH): ASTM F710.
      b. Internal Relative Humidity: ASTM F2170.
      c. Moisture Vapor Emission: ASTM F1869.
   2. If test results are not within limits recommended by flooring manufacturer, apply moisture vapor treatment (MVT) in accordance with manufacturer's requirements. MVT shall be provided per unit price and quantity allowance requirements.

3.02 PREPARATION

A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

B. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.

C. Prohibit traffic until filler is fully cured.

D. Clean substrate.

3.03 INSTALLATION - GENERAL

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install in accordance with manufacturer's written instructions.

C. Adhesive-Applied Installation:
   1. Place copper grounding strip in conductive adhesive and apply additional adhesive to top side of strip before installing static control flooring. Allow strip to extend beyond flooring in accordance with static control flooring manufacturer's instructions.
   2. Fit joints and butt seams tightly.
   3. Set flooring in place, press with heavy roller to attain full adhesion.

D. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.

E. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.

F. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

G. Install flooring in recessed floor access covers, maintaining floor pattern.

3.04 INSTALLATION - TILE FLOORING

A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.

B. Lay flooring with joints and seams aligned with access floor panel joints. Access flooring panels shall be removable without needing removal of floor finish.

3.05 CLEANING

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

B. Clean in accordance with manufacturer's written instructions.

3.06 PROTECTION

A. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION 096536

SECTION 096700
FLUID-APPLIED FLOORING (*AD-03)

PART 1 GENERAL

1.01 REFERENCE STANDARDS

A. ASTM D4060 - Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.

B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

C. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.

D. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.

E. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair.

1.02 ADMINSTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene at project site seven calendar days prior to scheduled beginning of construction activities of this section to review section requirements.

1. Require attendance by representatives of installer and other entities directly affecting, or affected by, construction activities of this section.
2. Notify Architect four calendar days in advance of scheduled meeting date.

1.03 SUBMITTALS

A. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns and colors available.

B. Selection Samples: Provide manufacturer's color charts illustrating full range of patterns and colors for each flooring material.

C. Verification Samples: Manufacturer's standard size physical samples, on rigid backing, illustrating each selected pattern and color.

D. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.

E. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention, and application rate for each coat.

F. Applicator's Qualification Statement.

G. Field Quality Control Reports: Submit inspection reports of manufacturer's technical representative.

H. Maintenance Data: Include maintenance procedures, recommended maintenance materials, procedures for stain removal, repairing surface, and suggested schedule for cleaning.

1.04 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section; certified and approved by manufacturer in writing.

1. Approved by manufacturer.

1.05 MOCK-UPS

A. Construct mock-up(s) of each type of fluid applied flooring and wall coating to serve as basis for evaluation of texture and workmanship.
   1. Number of Mock-Ups to be Prepared: One.
   2. Use same materials and methods for use in the work.
   3. Use approved design samples as basis for mock-ups.
   4. Locate where directed by Architect.
   5. Minimum Size: 48 inches by 48 inches.

B. See Section 014000 - Quality Requirements for additional requirements.

C. Obtain approval of mock-up by Architect before proceeding with work.

D. Approved mock-up may remain as part of the work.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store resin materials in a dry, secure area.

B. Store materials for three days prior to installation in area of installation to achieve temperature stability.

1.07 FIELD CONDITIONS

A. Maintain minimum temperature in storage area of 55 degrees F.

B. Store materials in area of installation for minimum period of 24 hours prior to installation.

C. Maintain ambient temperature required by manufacturer 72 hours prior to, during, and 24 hours after installation of materials.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Fluid-Applied Flooring:
   1. Crossfield Products Corp.
   2. Dur-A-Flex, Inc.
   3. Elite Crete Systems.
   4. Key Resin Company.
   5. Master Builders Solutions.
   6. Sherwin-Williams Company.
   7. Sika Corporation.
   8. Stonhard, Inc.
   9. Substitutions: See Section 016000 - Product Requirements.

B. Source Quality Control: Complete fluid-applied flooring system shall be supplied by a single manufacturer.
   1. Accessory and floor preparation products shall be provided by fluid-applied manufacturer or by a manufacturer approved for compatibility by the primary fluid-applied manufacturer.

2.02 PERFORMANCE REQUIREMENTS

A. Performance Requirements: Specific requirements for each system are indicated in the article below. Where a specific Basis-of-Design value is indicated, minor variations in test numbers shall be permitted for comparable/substitute products at Architect's discretion.

B. Critical Radiant Flux: Minimum of 0.45 watts/sq cm, when tested in accordance with ASTM E648.

C. Slip Resistance: Minimum dynamic coefficient of friction (DCOF) of 0.6, when tested in accordance with NFSI / ANSI B101 Standard.

2.03 FLUID-APPLIED FLOORING SYSTEMS

A. ~~Fluid-Applied Flooring (RES-A1): Hybrid system consisting of urethane base coat, epoxy bonding coat, quartz broadcast aggregate, and aliphatic polyaspartic polyurethane top coat.~~ (*AD-03)

1. ~~Basis-of-Design System: Stonhard; Stonetec TRF.~~
2. ~~Compressive Strength: 5,000 psi, minimum, when tested in accordance with ASTM C579.~~
3. ~~Abrasion Resistance: Maximum weight loss of 70-90 mg, when tested in accordance with ASTM D4060 (Basis-of-Design).~~
4. ~~Impact Resistance: No cracking, chipping or delamination, when tested with Gardner Impact Tester at 16 ft lbs.~~
5. ~~Adhesion: Minimum 300 psi at concrete substrate failure, per ASTM D4541.~~
6. ~~System Thickness: 1/4 inch, nominal, dry film thickness (DFT).~~
7. ~~Aggregate: Quartz granules.~~
8. ~~Texture: Slip resistant.~~
9. ~~Sheen: Semi-gloss.~~
10. ~~Color: To be selected by Architect from manufacturer's full range.~~
11. ~~Provide cove base matching floor system, as indicated on Drawings.~~

B. Fluid-Applied Flooring (RES-A1 and RES-A2): Urethane system consisting of urethane base coat, quartz broadcast aggregate, and urethane top coat. (*AD-03)

1. Basis-of-Design System: Stonhard; Stonshield URT.
2. Abrasion Resistance: Maximum weight loss of 100 mg, when tested in accordance with ASTM D4060 (Basis-of-Design).
3. Impact Resistance: No cracking, chipping or delamination, when tested with Gardner Impact Tester at 16 ft lbs.
4. Adhesion: Minimum 300 psi at concrete substrate failure, per ASTM D4541.
5. System Thickness: 1/8 inch, nominal, dry film thickness (DFT).
6. Aggregate: Quartz granules.
7. Texture: Slip resistant.
8. Sheen: Semi-gloss.
9. Color: Two colors shall be required, one for RES-A1 and one for RES-A2. Each color shall be selected by Architect from manufacturer's full range.
10. Provide cove base matching floor system, as indicated on Drawings.

C. Fluid-Applied Flooring (RES-C): Hybrid system consisting of two epoxy base coats, vinyl flake aggregate, and urethane top coat. (*AD-03)

1. Basis-of-Design System: Stonhard; Stontec TRF (with urethane top coat).
2. Abrasion Resistance: Maximum weight loss of 30 mg, when tested in accordance with ASTM D4060. (Basis-of-Design)
3. Impact Resistance: No cracking, chipping or delamination, when tested with Gardner Impact Tester at 16 ft lbs.
4. Adhesion: Minimum 300 psi at concrete substrate failure, per ASTM D4541.

5. **System Thickness: 1/4 inch, nominal, dry film thickness (DFT).**
6. **Aggregate: 1/4-inch vinyl flakes.**
7. **Texture: Slip resistant.**
8. **Sheen: Semi-gloss.**
9. **Color: To be selected by Architect from manufacturer's full range.**
10. **Provide cove base matching floor system, as indicated on Drawings.**

2.04 FLUID APPLIED WALL SYSTEMS

A. Urethane Coating (RES-B):
   1. Basis-of-Design System: Stonhard, Inc; Stoneglaze VSE.
   2. Number of Coats: Two.
   3. Product Characteristics:
      a. Dry film thickness, per coat: 6-7 mils, minimum. Total DFT 12-15 mil.
   4. Top Coat(s): Polyurethane, Two-Component.
      a. Sheen: Eggshell.

2.05 ACCESSORIES

A. Subfloor Filler: Type recommended by fluid-applied flooring manufacturer.

B. Primer: Type recommended by fluid-applied flooring manufacturer.

C. Moisture Vapor Treatment: Where fluid-applied flooring and accessories are installed over concrete slabs, provide alkaline-resistant product designed to control excessive moisture vapor transmission through concrete slab, per the following:
   1. Products: Provide product approved by flooring manufacturer and complying with performance requirements below, equivalent to one of the following:
      a. Duraamen Engineered Products, Inc.; Perdure MVT.
      b. Maxxon Corporation; Maxxon MVP.
      c. Tnemec Company Inc.; Epoxoprime MVT, Series 208.
   2. Performance Requirements:
      a. Verify with flooring manufacturer that submitted product maintains compliance with all provisions of flooring manufacturer’s warranty.
      b. Low-VOC: Provide product with VOC content less than 15 g/L.
      c. Bond Strength to Concrete: Minimum 400 psi per ASTM D 4541 (100% concrete failure).
      d. Permeance: Maximum 0.1 perm per ASTM E 96, and 0.10 grains/hr/ft^2/in-Hg, per ASTM F3010.
      e. Applications: Provide MVT for all concrete slabs on-grade and lightweight concrete elevated slabs.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that subfloor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive flooring.

B. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of materials to subfloor surfaces.

C. Cementitious Subfloor Surfaces: Verify that substrates are ready for fluid-applied flooring installation by testing for moisture and alkalinity (pH).
   1. Test as Follows: Perform one test in each installation area.
      a. Alkalinity (pH): ASTM F710.
      b. Internal Relative Humidity: ASTM F2170.
      c. Moisture Vapor Emission: ASTM F1869.
   2. If test results are not within limits recommended by fluid-applied flooring manufacturer, apply moisture vapor treatment (MVT) in accordance with manufacturer's requirements. MVT.shall be provided per unit price and quantity allowance requirements.

D. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Remove subfloor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with subfloor filler.

B. Prepare concrete surfaces according to ICRI 310.2R, CSP 4, minimum, unless otherwise required by manufacturer's installation requirements..

C. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Grind irregularities above the surface level. Prohibit traffic until filler is cured.

D. Vacuum clean substrate.

E. Apply primer to surfaces required by flooring manufacturer.

3.03 INSTALLATION - FLOORING

A. Apply in accordance with manufacturer's instructions.

B. Apply each coat to minimum thickness required by manufacturer.

C. Finish to smooth level surface.

D. Install flooring to the center of cased openings, and into door openings such that the transition to other floor material will occur under the center of the door leaf. Where transitions occur to another flooring material, extend resinous flooring to suit transition.

E. Cove at vertical surfaces.

3.04 FIELD QUALITY CONTROL

A. See Section 014000 - Quality Requirements, for additional requirements.

B. Provide services of manufacturer's technical representative to inspect for proper installation of fluid-applied flooring system and submit inspection report.

3.05 PROTECTION

A. Prohibit traffic on floor finish for minimum 48 hours after installation.

B. Barricade area to protect flooring until fully cured.

END OF SECTION 096700

SECTION 096813
TILE CARPETING (*AD-03)

PART 1 GENERAL

1.01 REFERENCE STANDARDS

A. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Substitutions/Prequalification: Manufacturers seeking consideration to bid their product as an acceptable alternative shall provide full product data and full range of selection samples during the bid period. Products that do not meet the technical and aesthetic criteria will not be accepted. No substitutions shall be permitted for carpet tile after receipt of bids.

1.03 SUBMITTALS

A. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.

B. Shop Drawings: Indicate layout of joints, direction of carpet pile, dye lot, and location of edge moldings and transition strips.

1. Where multiple carpet tile products are specified (including multiple products in a single space installed in an indicated pattern), indicate on the shop drawings the locations where each product is being installed.

C. Selection Samples: Submit manufacturer's binder indicating full range of colors for carpet tiles and for accessories.

D. Operation and Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

1. Include specific procedures and materials that are not recommended, including those that may be harmful to carpet tile or that would void warranty.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1. See Section 016000 - Product Requirements, for additional provisions.
2. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed.

1.04 QUALITY ASSURANCE

A. Critical Radiant Flux: All carpet tiles shall be Class I rated, with a minimum CRF of 0.45 watts/sq cm, when tested by an independent testing agency in accordance with ASTM E648 or NFPA 253.

1.05 FIELD CONDITIONS, STORAGE AND HANDLING

A. Comply with the Carpet and Rug Institute (CRI) Publication "CRI 104 - Standard for Installation of Commercial Carpet." Comply with Section 4.0 for storage and handling, Section 7.0 for ambient temperature and ventilation, and Section 9.0 for Product Acclimation.

1.06 WARRANTY

A. See Section 017800 - Closeout Submittals, for additional warranty requirements.

B. Carpet Tile Warranty: Provide a ten (10) year manufacturer warranty, covering defective material and faulty installation.
   1. Warranty shall cover excessive surface wear (defined as more than 10% loss by weight of face fiber), edge raveling, backing separation, shrinking, stretching, cupping, doming, static electricity, or color loss or fading.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Tile Carpeting: Provide the basis-of-design carpet tiles or a prequalified alternate tile. No substitutions will be considered after the award of Contract.
   1. Bentley Mills; Redux Deux. (basis of design)
   2. Interface, Inc.
   3. Mannington Commercial.
   4. Milliken & Company.

2.02 MATERIALS

A. Tile Carpeting, Type C-TILE-A: Tufted textured loop, manufactured in one color dye lot.
   1. Product: Redux Deux manufactured by Bentley Mills.
   2. Tile Size: 24 by 24 inch, nominal.
   3. Color: As selected by Architect from manufacturer's full range.
   4. Critical Radiant Flux: Minimum of 0.45 watts/sq cm, when tested in accordance with ASTM E648 or NFPA 253.
   5. Primary Backing Material: AFIRMA II Hardback Tile.
   6. **Fiber: Type 6 cationic nylon. (*AD-03)**
   7. **TARR Rating: Minimum 3.0. (*AD-03)**

B. **Tile Carpeting, Type C-TILE-B: ~~Tufted tip-sheared, manufactured in one color dye lot.~~ Refer to specification 096813.13 "Static-Control Tile Carpeting". (*AD-03)**
   1. ~~**Product: Rough Idea manufactured by Bentley Mills..**~~
   2. ~~**Tile Size: 24 by 24 inch, nominal.**~~
   3. ~~**Color: As selected by Architect from manufacturer's full range..**~~
   4. ~~**Critical Radiant Flux: Minimum of 0.45 watts/sq cm, when tested in accordance with ASTM E648 or NFPA 253.**~~
   5. ~~**Primary Backing Material: AFIRMA II Hardback Tile.**~~

2.03 ACCESSORIES

A. Subfloor Filler: Type recommended by flooring material manufacturer.

B. Edge Strips: Rubber, color as selected by Architect.

C. Moisture Vapor Treatment: Where carpeting and accessories are installed over concrete slabs, provide alkaline-resistant product designed to control excessive moisture vapor transmission through concrete slab, per the following:
   1. Products: Provide product approved by flooring manufacturer and complying with performance requirements below, equivalent to one of the following:
      a. Duraamen Engineered Products, Inc.; Perdure MVT.
      b. Maxxon Corporation; Maxxon MVP.
      c. Tnemec Company Inc.; Epoxoprime MVT, Series 208.

2. Performance Requirements:
   a. Verify with flooring manufacturer that submitted product maintains compliance with all provisions of flooring manufacturer's warranty.
   b. Low-VOC: Provide product with VOC content less than 15 g/L.
   c. Bond Strength to Concrete: Minimum 400 psi per ASTM D 4541 (100% concrete failure).
   d. Permeance: Maximum 0.1 perm per ASTM E 96, and 0.10 grains/hr/ft^2/in-Hg, per ASTM F3010.
   e. Applications: Provide MVT for all concrete slabs on-grade and lightweight concrete elevated slabs.

D. Carpet Tile Adhesive: Recommended by carpet tile manufacturer; releasable type.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that subfloor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.

B. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to subfloor surfaces.

C. Cementitious Subfloor Surfaces: Verify that substrates are ready for flooring installation by testing for moisture and alkalinity (pH).

D. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

B. Remove subfloor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with subfloor filler.

C. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.

3.03 INSTALLATION

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install carpet tile in accordance with manufacturer's instructions and CRI 104 (Commercial).

C. Blend carpet from different cartons to ensure minimal variation in color match.

D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.

E. Lay carpet tile in _____ pattern selected by Architect, with pile direction parallel to next unit, set parallel to building lines, unless otherwise indicated. **(*AD-03)**

F. Locate change of color or pattern between rooms or at transitions to other finish flooring material directly under the door leaf centerlines, or at the center of cased openings.

G. Fully adhere carpet tile to substrate.

H. Install carpet tile into wall recesses, knee spaces under cabinets or countertops, closets, and other similar spaces.

I. Trim carpet tile neatly at walls and around interruptions.

J. Complete installation of edge strips, concealing exposed edges.

3.04 CLEANING AND PROTECTION

A. Remove excess adhesive without damage, from floor, base, and wall surfaces.

B. Clean and vacuum carpet surfaces.

C. Protect installed carpet in accordance with CRI 104, Section 13.7 "Post Installation."

END OF SECTION 096813

SECTION 096813.13
STATIC-CONTROL TILE CARPETING

PART 1 GENERAL

1.01 REFERENCE STANDARDS

A. AATCC Test Method 134 - Test Method for Electrostatic Propensity of Carpets.

B. ANSI/ESD STM7.1 - The Protection of Electrostatic Discharge Susceptible Items Flooring Systems Resistive Characterization.

C. ANSI/ESD STM97.1 - ESD Association Standard Test Method for the Protection of Electrostatic Discharge Items - Floor Materials And Footwear - Resistance Measurement in Combination with a Person.

D. ANSI/ESD STM97.2 - Floor Materials and Footwear - Voltage Measurement in Combination with a Person.

E. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.

F. CRI 104 - Standard for Installation of Commercial Carpet.

G. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Substitutions/Prequalification: Manufacturers seeking consideration to bid their product as an acceptable alternative shall provide full product data, test data indicating static-dissipative properties, and full range of selection samples during the bid period. Products that do not meet the technical and aesthetic criteria will not be accepted. No substitutions shall be permitted for carpet tile after receipt of bids.

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

1.03 SUBMITTALS

A. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.

B. Shop Drawings: Indicate layout of joints, direction of carpet pile, dye lot, and location of edge moldings and transition strips.

1. Where multiple carpet tile products are specified (including multiple products in a single space installed in an indicated pattern), indicate on the shop drawings the locations where each product is being installed.
2. Include grounding layout.

C. Selection Samples: Submit manufacturer's color charts indicating full range of colors for carpet tiles and for accessories.

D. ~~**Verification Sample: Submit full size sample for each required color, pattern, and texture.**~~

1. ~~**Submit samples in manufacturer's standard size for each accessory product.**~~ **(*AD-03)**

E. Manufacturer's Qualification Statement.

F. Installer's Qualification Statement.

G. Operation and Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.
   1. Include specific procedures and materials that are not recommended, including those that may be harmful to carpet tile or that would void warranty.

H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements, for additional provisions.
   2. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing static-control flooring.

B. Installer Qualifications: Company specializing in installing carpet tile with minimum three years documented experience and approved by carpet tile manufacturer.

C. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

1.05 FIELD CONDITIONS, STORAGE AND HANDLING

A. Comply with the Carpet and Rug Institute (CRI) Publication "CRI 104 - Standard for Installation of Commercial Carpet." Comply with Section 4.0 for storage and handling, Section 7.0 for ambient temperature and ventilation, and Section 9.0 for Product Acclimation.

1.06 WARRANTY

A. See Section 017800 - Closeout Submittals, for additional warranty requirements.

B. Carpet Tile Warranty: Provide a ten (10) year manufacturer warranty, covering defective material and faulty installation.
   1. Warranty shall cover excessive surface wear (defined as more than 10% loss by weight of face fiber), edge raveling, backing separation, shrinking, stretching, cupping, doming, static electricity, or color loss or fading.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Electrostatic-Dissipative (ESD) Tile Carpeting: Provide the basis-of-design carpet tiles or a prequalified alternate tile. No substitutions will be considered after the award of Contract.

2.02 PERFORMANCE REQUIREMENTS

A. Static-Dissipative Properties: Carpeting shall be manufactured in accordance with industry-specific static-control standards Motorola R56 or ATIS-0600321, for mission critical/telecommunications facilities.
   1. Carpeting shall prevent the accumulation of static without requiring use of specialty ESD footwear.
   2. Electrical Resistance: Carpeting material shall measure greater than 10 megohms (1.0 x 10E6 ohms) and less than 1000 megohms (1.0 x 10E8 ohms) when tested per ANSI/ESD STM7.1.
   3. Static Generation: Less than 100 V when tested per AATCC Test Method 134 or ANSI/ESD STM97.2 at 20 percent relative humidity with conductive footwear.
   4. Static Decay: 5000 to zero V in less than 0.25 seconds when tested per MIL STD 3010, Method 4046.

B. Critical Radiant Flux: All carpet tiles shall be Class I rated, with a minimum CRF of 0.45 watts/sq cm, when tested by an independent testing agency in accordance with ASTM E648 or NFPA 253.

2.03 MATERIALS

A. Electrostatic Dissipative Tile Carpeting, Type C-TILE-B: Tufted, type 6,6 nylon, wrapped with electrically conductive fibers.
   1. Product: ShadowFX Static-Dissipative ESD Carpet Tile manufactured by StaticWorx.
   2. Tile Size: 24 by 24 inch, nominal. Verify size with submitted access flooring panel size.
   3. Color and Pattern: As selected by Architect from manufacturer's full range.
   4. Surface Flammability Ignition: Pass ASTM D2859 (the "pill test").
   5. Gauge: 1/12 inch.
   6. Stitches: 9 per inch.
   7. Backing Material: Manufacturer's standard layered backing; conductive primary backing, with conductive carbon-loaded fiberglass, and static-dissipative PVC bottom backing.

2.04 ACCESSORIES

A. Grounding: Provide grounding path in accordance with manufacturer's requirements. Coordinate with access flooring manufacturer to ensure grounding system connects to a designated building or electrical ground.
   1. Grounding Connectors: 5 mm, 26 gauge copper strip. Provide a minimum of 1 ground connector per 1000 square feet of ESD flooring, and not less than one per room, unless otherwise required by manfacturer.

B. Edge Strips: Rubber, color as selected by Architect.

C. Carpet Tile Adhesive: Recommended by carpet tile manufacturer for substrate indicated; static-control type.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that subfloor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.

B. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to subfloor surfaces.

C. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

B. Access Flooring: Remove protective films, oils, and other coatings that may impair adhesion of carpet tile to access flooring panels in accordance with manufacturer's recommendations.

C. Remove subfloor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with subfloor filler.

D. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.

3.03 INSTALLATION

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install carpet tile in accordance with manufacturer's instructions and CRI 104 (Commercial).

C. **At raised access floor locations, install grounding strips in static-control adhesive in accordance with manufacturer's standards and per approved shop drawings. Install to acceptable ground connections. (*AD-03)**

D. Blend carpet from different cartons to ensure minimal variation in color match.

E. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.

F. Lay carpet tile in square pattern, with pile direction parallel to next unit, set parallel to building lines, unless otherwise indicated.

G. Locate change of color or pattern between rooms or at transitions to other finish flooring material directly under the door leaf centerlines, or at the center of cased openings.

H. Fully adhere carpet tile to substrate.

I. Install carpet tile into wall recesses, knee spaces under cabinets or countertops, closets, and other similar spaces.

J. Trim carpet tile neatly at walls and around interruptions.

K. Complete installation of edge strips, concealing exposed edges.

3.04 FIELD QUALITY CONTROL

A. Field Testing: Contractor shall engage a third-party testing agency to test the electrical resistance of installed static-dissipative flooring.

1. Electrical Resistance: Flooring shall average greater than 10 megohms (1.0 x 10E6 ohms) and less than 1000 megohms (1.0 x 10E8 ohms) when tested as a floor covering system (including flooring materials and standard non-specialty footwear) in combination; in accordance with ANSI/ESD STM97.2.

3.05 CLEANING AND PROTECTION

A. Remove excess adhesive without damage, from floor, base, and wall surfaces.

B. Clean and vacuum carpet surfaces.

C. Protect installed carpet in accordance with CRI 104, Section 13.7 "Post Installation."

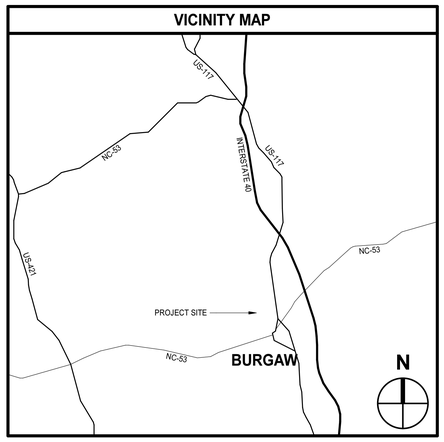
END OF SECTION 096813.13

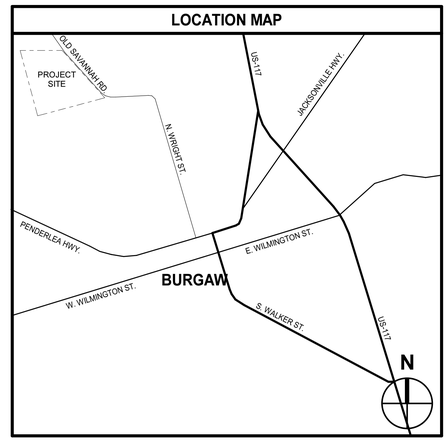
CONSTRUCTION DOCUMENTS

PENDER COUNTY LEC

PENDER COUNTY, NORTH CAROLINA
BURGAW, NORTH CAROLINA

DHSR# J-368 / FID# 220537





MOSELEYARCHITECTS

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PHONE (704) 540-3755 FAX (704) 540-3754

MOSELEYARCHITECTS.COM

WithersRavenel	Civil Engineering
219 Station Road, Suite 101	Wilmington, North Carolina
Foodesign Associates	FOOD & LAUNDRY SERVICE DESIGN
615 South College Street	Charlotte, North Carolina

DRAWING INDEX

AD-03

*AD 01

THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL.
IN CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.

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PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: 05/01/2024

REVISIONS

DATE	DESCRIPTION
05/24/24	*AD 01
06/12/24	AD-03

COVER

G0.1

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(BUILDING B)
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: Pender County Law Enforcement Center
Address Old Savannah Road, Burgaw, North Carolina Zip Code 28425
Owner/Authorized Agent: Pender County/ Allen Vann Phone # (910) 259-1200 E-Mail avann@pendercountync.gov
Owned By: County
Code Enforcement Jurisdiction: County

CONTACT: Moseley Architects Design Team

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	Moseley Architects	Steven J. Hopkins	11547	(704) 540-3755	shopkins@moseleyarchitects.com
Civil	Withers Ravenel	Joe Boyd	039113	(910) 256-9277	jboyd@withersravenel.com
Electrical	Moseley Architects	William Cary	024242	(704) 540-3755	wcary@moseleyarchitects.com
Fire Alarm	Moseley Architects	William Cary	024242	(704) 540-3755	wcary@moseleyarchitects.com
Plumbing	Moseley Architects	Justin P. Carlson	033520	(704) 540-3755	jcarlson@moseleyarchitects.com
Mechanical	Moseley Architects	Justin P. Carlson	033520	(704) 540-3755	jcarlson@moseleyarchitects.com
Sprinkler-Standpipe	Moseley Architects	Justin P. Carlson	033520	(704) 540-3755	jcarlson@moseleyarchitects.com
Structural	Moseley Architects	Paul J. Gagnon	045706	(704) 540-3755	pgagnon@moseleyarchitects.com
Other					

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: New Building

2018 NC EXISTING BUILDING CODE: N/A N/A N/A
CONSTRUCTED: (date) _____ **CURRENT OCCUPANCY(S)** (Ch. 3): _____
RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S)** (Ch. 3): _____

RISK CATEGORY (Table 1604.5): **Current:** N/A **Proposed:** III

BASIC BUILDING DATA
Construction Type: II-B
Sprinklers: Yes NFPA 13
Standpipes: No
AD-03
Primary Fire District: No **Flood Hazard Area:** No
Special Inspections Required: Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
2nd Floor		1,816 sf	
Tier Level		9,486 sf	
1st Floor		31,607 sf	
TOTAL		42,909 sf	

ALLOWABLE AREA

Primary Occupancy Classification(s): Institutional - I-3 Condition 3 and 4
Accessory Occupancy Classification(s):
Incidental Uses (Table 509):
Special Uses (Chapter 4 – List Code Sections): N/A
Special Provisions: (Chapter 5 – List Code Sections): N/A
Mixed Occupancy: No Separation: Select one Exception: N/A

AD-03

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY, OR UNLIMITED[2,5]
2	I-3	1,816	30,000	N/A	
Tier	I-3	9,486	30,000	N/A	
1	I-3	31,607	30,000	4,000	34,000

[1] Frontage area increases from Section 506.3 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = _786.5'_____ (F)
b. Total Building Perimeter = ____985____ (P)
c. Ratio (F/P) = _____.8_____ (F/P)
d. W = Minimum width of public way = ____22_____ (W)
e. Percent of frontage increase $I_f = 100[F/P - 0.25] \times W/30$ = ___40_____ (%)
[2] Unlimited area applicable under conditions of Section 507.
[3] Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
[4] The maximum area of open parking garages must comply with Table 406.5.4.
[5] Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE (ABOVE GRADE)	SHOWN ON PLANS	CODE REFERENCE[1]
Building Height in Feet (Table 504.3)[2]	75	26	N/A
Building Height in Stories (Table 504.4)[3]	2	2	N/A

[1] Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
[2] The maximum height of air traffic control towers must comply with Table 412.3.1.
[3] The maximum height of open parking garages must comply with Table 406.5.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ _____ * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Primary Structural Frame, including columns, girders, trusses	GREATER THAN 30'	0 HR	0 HR				
Bearing Walls		0 HR	0 HR	--	--	--	--
Exterior		--	--	--	--	--	--
North		--	--	--	--	--	--
East		--	--	--	--	--	--
West		--	--	--	--	--	--
South		--	--	--	--	--	--
Interior		0 HR	0 HR	--	--	--	--
Nonbearing Walls and Partitions Exterior walls	GREATER THAN 30'	0 HR	0HR	--	--	--	--
North		--	--	--	--	--	--
East		--	--	--	--	--	--
West		--	--	--	--	--	--
South		--	--	--	--	--	--
Interior walls and partitions		0 HR	0 HR	--	--	--	--
Floor Construction Including supporting beams and joists		0 HR	0 HR	--	--		
Roof Construction, including supporting beams and joists		0 HR	0 HR	--	--		
Shaft Enclosures - Exit		1 HR	1 HR	X1/ LS4.1	U905	C-AJ-5069	HW-D-0030
Shaft Enclosures - Other		N/A	N/A	N/A	N/A	N/A	N/A
Corridor Separation		1 HR	1 HR	X1/ LS4.1	U905	C-AJ-5069	HW-D-0030
Occupancy/Fire Barrier Separation		1 HR	1 HR	X1/ LS4.1	U905	C-AJ-5069	HW-D-0030
Party/Fire Wall Separation		2 HR	2 HR	X1/ LS4.1	U905	C-AJ-5069	HW-D-0030
Smoke Barrier Separation		1 HR	1 HR	X1/ LS4.1	U905	C-AJ-5069	HW-D-0030
Smoke Partition		N/A	N/A	N/A	N/A	N/A	N/A
Tenant/Dwelling Unit/ Sleeping Unit Separation		N/A	N/A	N/A	N/A	N/A	N/A
Incidental Use Separation		1 HR	1 HR	X1/ LS4.1	U905	C-AJ-5069	HW-D-0030

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
Greater than 30'	UP,S	No limit	N/A

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: Yes – Sheets E2.1.1, E2.2.1, E2.3.1, E2.4.1, E2.5.1, E2.6.1, E2.7.1
Exit Signs: Yes – Sheets E2.3.1, E2.4.1, E2.5.1, E2.6.1, E2.7.1
Fire Alarm: Yes – Sheets E2.1.3, E2.2.3, E2.3.3, E2.4.3, E2.5.3, E2.6.3, E2.7.3
Smoke Detection Systems: Yes – Sheet E4.2
Carbon Monoxide Detection: No

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: LS2.1, LS2.2,LS2.3

- ☒ Fire and/or smoke rated wall locations (Chapter 7)
- ☐ Assumed and real property line locations (if not on the site plan)
- ☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
- ☒ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
- ☒ Occupant loads for each area
- ☒ Exit access travel distances (1017)
- ☒ Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
- ☒ Dead end lengths (1020.4)
- ☒ Clear exit widths for each exit door.
- ☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- ☒ Actual occupant load for each exit door
- ☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- ☒ Location of doors with panic hardware (1010.1.10)
- ☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- ☒ Location of doors with electromagnetic egress locks (1010.1.9.9)
- ☒ Location of doors equipped with hold-open devices
- ☐ Location of emergency escape windows (1030)
- ☐ The square footage of each fire area (202)
- ☒ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- ☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
N/A							

ACCESSIBLE PARKING
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED: REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
Public		82				4
Staff		163				9
TOTAL		245				13

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATER CLOSETS MALE	WATER CLOSETS FEMALE	WATER CLOSETS UNISEX	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	SHOWERS / TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE:											
	Required										
	Provided										

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

Pender County; NC DHSR; NC DOI

BUILDING B PLUMBING FIXTURE REQUIRMENTS FOR I-3 OCCUPNACY
INMATE PLUMBING COUNTS PROVIDED TO MEET NC DHSR JAIL STANDARDS (HOLDING & BOOKING AREAS)

TOTALS (NON-INMATE STAFF)
MALE WATER CLOSETS: 0
FEMALE WATER CLOSETS:0
UNISEX WATER CLOSETS:3
MALE LAVATORIES:0
FEMALE LAVATORIES:0
UNISEX LAVATORIES:3
DRINKING FOUNTAINS:0

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: Select one

Exempt Building: No Provide code or statutory reference:

Climate Zone: 3A *Warm-humid location*

Method of Compliance: Energy Code - Prescriptive
(If "Other" specify source here)_____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: RA1 on drawing A10.1.
U-Value of total assembly: 0.04
R-Value of insulation: R-25ci
Skylights in each assembly: n/a
U-Value of skylight: n/a
total square footage of skylights in each assembly: n/a

Exterior Walls (each assembly)
Description of assembly: WA assemblies on A5.1.1
U-Value of total assembly: 0.132 Mass; 0.064 Metal Framed
R-Value of insulation: R-7.6ci Mass; R-13 + R-7.5ci Metal Framed
Openings (windows or doors with glazing)
U-Value of assembly: 0.50
Solar heat gain coefficient: 0.25
projection factor: 0
Door R-Values: R-2

Walls below grade (each assembly)
Description of assembly: WA assemblies on A5.1.1
U-Value of total assembly: 0.133
R-Value of insulation: R-7.5ci

Floors over unconditioned space (each assembly)
Description of assembly: N/A
U-Value of total assembly: -
R-Value of insulation: .

Floors slab on grade
Description of assembly: Concrete slab on grade
U-Value of total assembly: 0.067
R-Value of insulation: R-15
Horizontal/vertical requirement: 24"
slab heated: NA

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Snow (I_S) 1.1
Seismic (I_E) 1.25/ 1.5 REFER TO SHEET S0.0.1

Live Loads: Roof 20 psf
Tier 40 psf
Floor 100 psf

Ground Snow Load: 10 psf

Wind Load: Ultimate Wind Speed 147 mph (ASCE-7)
Exposure Category C

SEISMIC DESIGN CATEGORY: C
Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5) III
Spectral Response Acceleration S_S 19.7%g S_1 08.6%g
Site Classification (ASCE 7) D
Data Source: Field Test
Basic structural system Bearing Wall
Analysis Procedure: Equivalent Lateral Force
Architectural, Mechanical, Components anchored? No

LATERAL DESIGN CONTROL: Earthquake

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) 1500 psf
Shallow Foundation, no piles.

SCHEDULE OF SPECIAL INSPECTIONS:
SHEET S0.0.3

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone 3A
winter dry bulb: 23 F
summer dry bulb: 93 F
summer wet bulb: 79 F

Interior design conditions
winter dry bulb: 70 F
summer dry bulb: 75 F
relative humidity: 50%

Building heating load: 3,887,000 Btuh

Building cooling load: 2,619,000 Btuh

Mechanical Spacing Conditioning System
Unitary
description of unit: Unitary
heating efficiency: See schedules on M0.2 & M0.3
cooling efficiency: See schedules on M0.2 & M0.3
size category of unit: See schedules on M0.2 & M0.3
Boiler
Size category. If oversized, state reason.: N/A
Chiller
Size category. If oversized, state reason.: N/A

List equipment efficiencies: Listed above

Life Safety Equipment Schedules: Sheets M0.2 & M0.3

Fire Dampers: Sheets M0.2 & M0.3

Smoke Dampers/Fire/smoke combination dampers: Sheets M2.1, M2.2, M2.3, M2.4, M2.5

Smoke Exhaust Fans/Systems: Sheets M2.1, M2.2, M2.3, M2.4, M2.5

Smoke Supply Fans/Systems: Sheets M2.1, M2.2, M2.3, M2.4, M2.5

Duct Smoke Detectors: Sheets M2.1, M2.2, M2.3, M2.4, M2.5

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: ASHRAE 90.1 - Prescriptive

Lighting schedule (each fixture type)
lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
REFER TO FIXTURE SCHEDULE ON PLANS
total interior wattage specified vs. allowed (whole building) .56 w/ft²(specified) .96 w/ft² (allowed)

total exterior wattage specified vs. allowed. (Parking) .04 w/ft² (specified) .06 w/ft² (allowed) (ZONE 3)

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)
- ☐ C406.2 More Efficient HVAC Equipment Performance
- ☒ C406.3 Reduced Lighting Power Density
- ☐ C406.4 Enhanced Digital Lighting Controls
- ☐ C406.5 On-Site Renewable Energy
- ☐ C406.6 Dedicated Outdoor Air System
- ☐ C406.7 Reduced Energy Use in Service Water Heating

Emergency Lighting Drawings:
E2.1.1, E2.2.1, E2.3.1, E2.4.1, E2.5.1, E2.6.1, E2.7.1
Fire Alarm Drawings:
E2.1.3, E2.2.3, E2.3.3, E2.4.3, E2.5.3, E2.6.3, E2.7.3

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STEVEN J HOPKINS REGISTERED ARCHITECT 11547 NORTH CAROLINA CHARLOTTE, NC 05/01/2024

MOSELEY ARCHITECTS P.C. REGISTERED ARCHITECTS CORPORATION 50149 NORTH CAROLINA CHARLOTTE, NC

PENDER COUNTY LEC
DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: 05/01/2024
REVISIONS

DATE	DESCRIPTION
06/12/24	AD-03

CODE SUMMARY
BUILDING B

LS1.1

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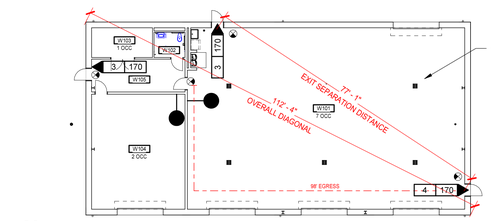

GROUP S-2

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LIFE SAFETY PLAN - WAREHOUSE

1/16" = 1'-0"

0' 4' 8' 16' 32'

1/16" = 1'-0"

AD-03

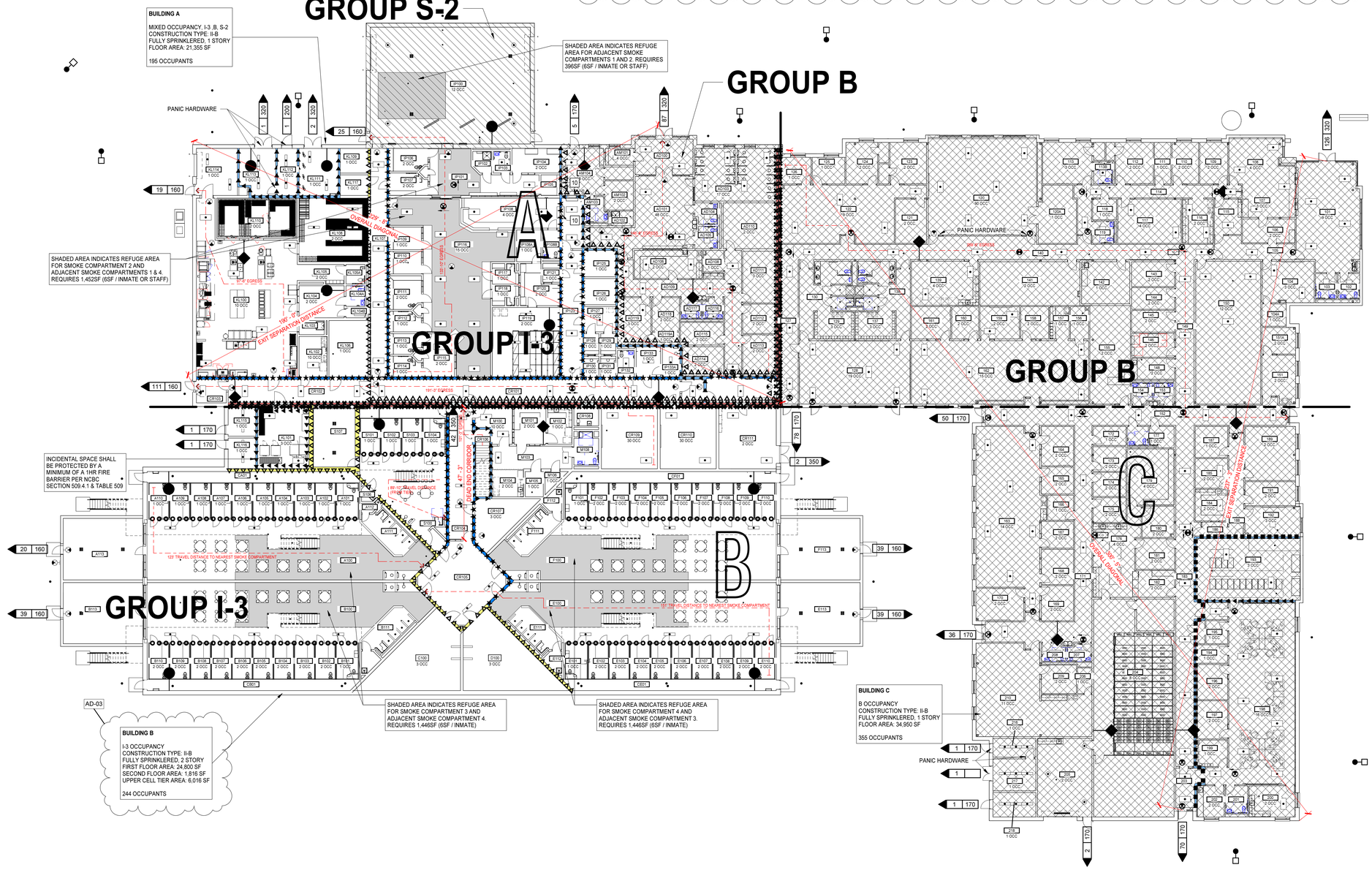
LIFE SAFETY GENERAL NOTES

1. SEE SHEET LS2.3 FOR LIFE SAFETY SYMBOL LEGEND AND FIRE RATED ASSEMBLIES LEGEND.
2. SEE SHEET LS2.3 FOR SMOKE COMPARTMENT KEY PLANS

LIFE SAFETY PLAN KEYNOTES

APPLIES TO DRAWINGS LS2.1 - LS2.n
REPRESENTED BY n

10 AUTOMATIC FIRE SHUTTER



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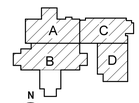
LIFE SAFETY PLAN - BASE BID

1/16" = 1'-0"

0' 4' 8' 16' 32'

1/16" = 1'-0"



KEY PLAN

MOSELEYARCHITECTS
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CORPORATION
50149
NORTH CAROLINA
CHARLOTTE, NC

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
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DATE: 05/01/2024

REVISIONS

DATE	DESCRIPTION
06/12/24	AD-03

LIFE SAFETY INFORMATION - BASE BID

LS2.1

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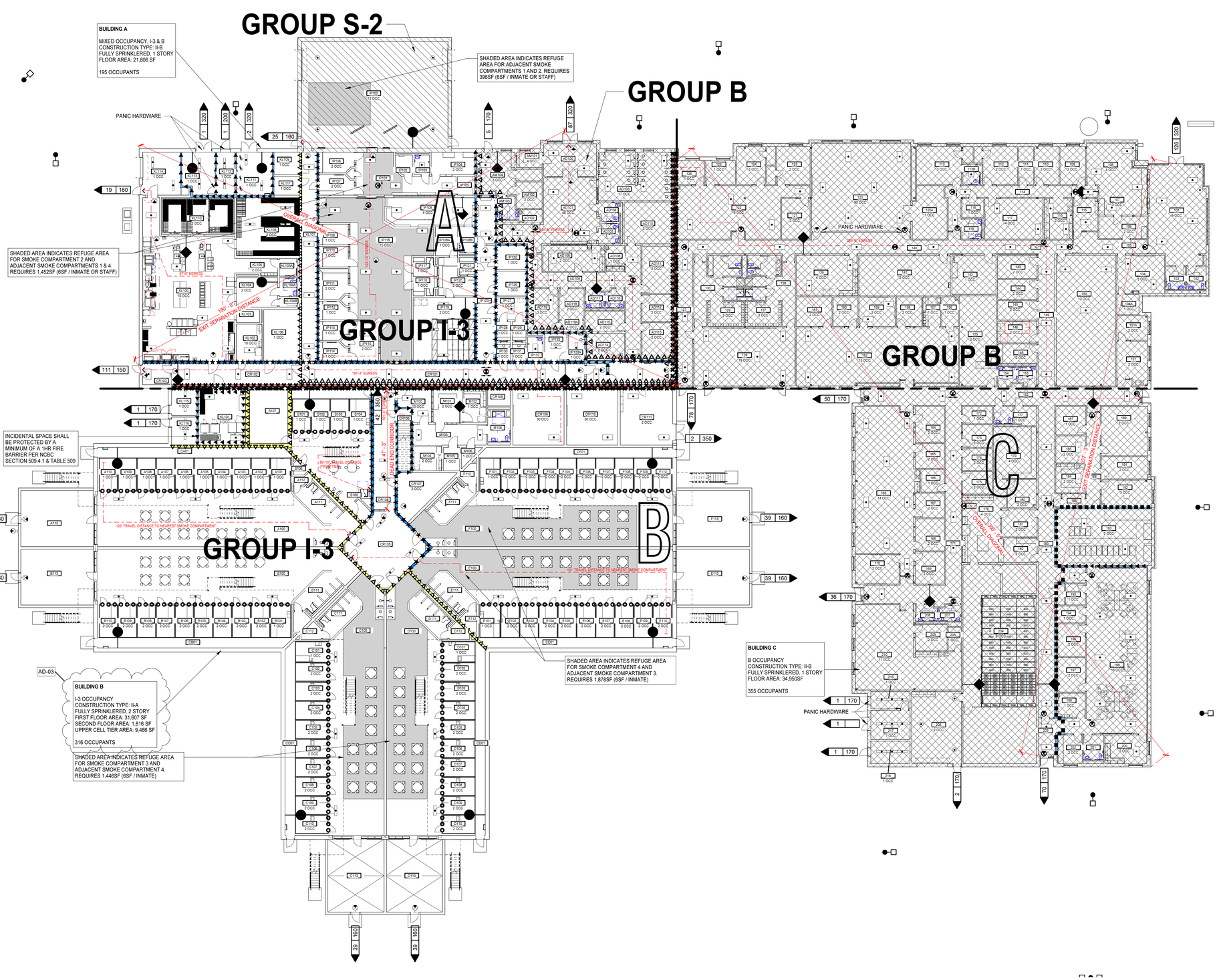
LIFE SAFETY GENERAL NOTES

1. SEE SHEET LS2.3 FOR LIFE SAFETY SYMBOL LEGEND AND FIRE RATED ASSEMBLIES LEGEND
2. SEE SHEET LS2.3 FOR SMOKE COMPARTMENT KEY PLANS



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LIFE SAFETY PLAN
1/16" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"

N
KEY PLAN

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REVISIONS	
DATE	DESCRIPTION
06/12/24	AD-03

LIFE SAFETY INFORMATION - ADD ALTERNATE

LS2.2

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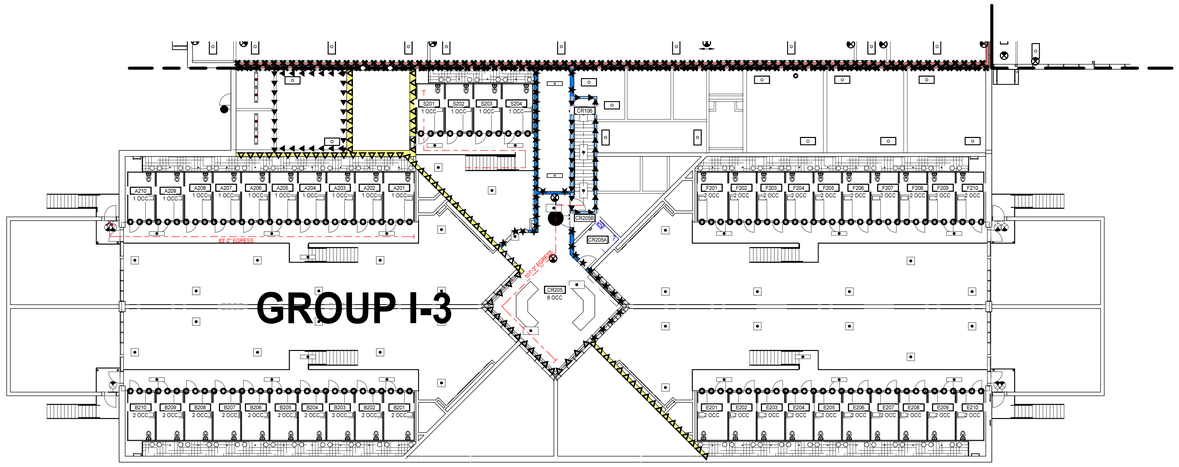

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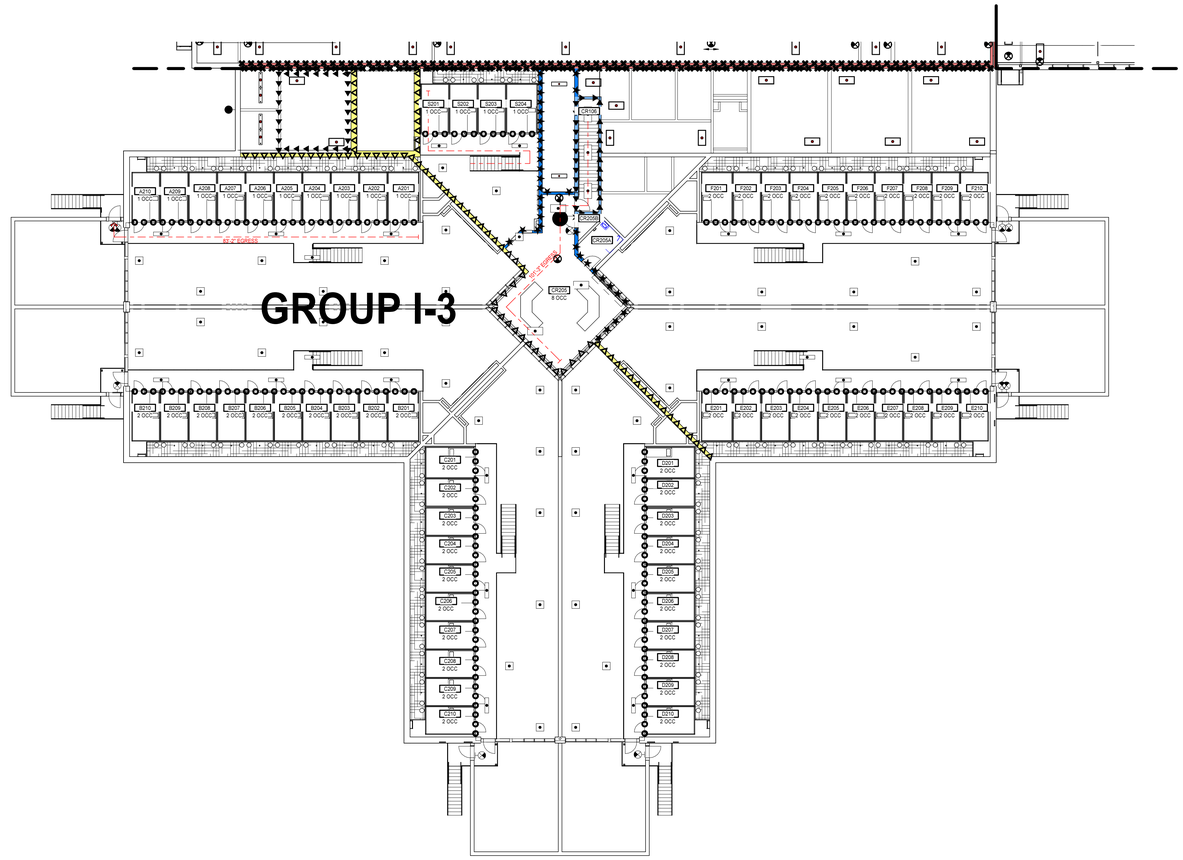
LIFE SAFETY FLOOR PLAN - TIER LEVEL - BASE BID

1/16" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"



N

LIFE SAFETY FLOOR PLAN - TIER LEVEL - ADD ALTERNATE

1/16" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"

LIFE SAFETY SYMBOL LEGEND

APPLIES TO LS SERIES OF DRAWINGS ONLY

DESIGNATOR MATRIX

	WALL	BARRIER	PARTITION	RATED EXT WALL
2 HR FIRE	✖✖✖✖✖	■■■■■		
1 HR FIRE		▶▶▶▶▶	★★★★★	
SMOKE		△△△△△		
SMOKE TIGHT			○○○○○	
INCIDENTAL			◆◆◆◆◆	

RATED WALL COLOR KEY

- SMOKE BARRIER
- FIRE PARTITION
- FIRE BARRIER
- FIRE WALL

NOTE:
WALL DESIGNATIONS ON THE LS SERIES OF DRAWINGS ARE FOR GRAPHICAL PURPOSES ONLY AND MAY NOT REPRESENT THE ACTUAL WALL/PARTITION CONSTRUCTION. REFER TO THE CONTRACT DOCUMENTS, INCLUDING THE LIFE SAFETY SYMBOLS LEGEND AND A0, A1 AND, A2 SERIES OF DRAWINGS, FOR ACTUAL WALL/PARTITION TYPES AND CONSTRUCTION REQUIREMENTS.

DOUBLE FIRE WALL

'n' = RATING IN HOURS — nDFW — DFW = DOUBLE FIRE WALL

NOTE: RATINGS MAY VARY. REFER TO A0.2 FOR ACTUAL RATINGS OF FIRE WALLS COMPOSING THE DOUBLE FIRE WALLS

SYMBOLS

- 1205 — ROOM NUMBER
- 798 / 1280 — DIRECTION OF EGRESS, EGRESS LOAD CAPACITY, NUMBER OF OCCUPANTS
- DIRECTION OF EGRESS, NUMBER OF OCCUPANTS, EGRESS LOAD CAPACITY — 798 / 1280
- XXX-X' — MAXIMUM TRAVEL DISTANCE
- XXX-X' CPOT — COMMON PATH OF TRAVEL
- FIRE EXTINGUISHER CABINET
- FIRE EXTINGUISHER BRACKET
- EXTENT OF SMOKE COMPARTMENT
- LIGHT FIXTURE ON EMERGENCY POWER, CEILING MOUNT
- LIGHT FIXTURE ON EMERGENCY POWER, SUSPENDED
- PENDANT LIGHT FIXTURE ON EMERGENCY POWER, SUSPENDED
- EXIT SIGNS, REFER TO ELECTRICAL LIGHTING DRAWINGS

AD-03

FIRE RATED ASSEMBLIES

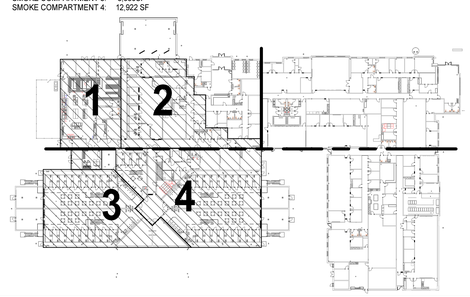
REPRESENTED BY Xn

THE ASSEMBLIES REFERENCED ARE BASIS OF DESIGN; EQUIVALENT COMPATIBLE TESTED ASSEMBLIES WILL BE ACCEPTABLE IF APPROVED BY THE LAHJ

MARK	FIRE RATING	APPLIES TO	REFERENCE	REMARKS
X1	1HR, 2HR	8" & 12" CMU WALLS	U905	--
X2	1HR, 2HR	CMU HEAD OF WALL TERMINATION	HW-D-0030	--
X3	1HR	RATED METAL STUD WALLS	U419	ABOVE CENTRAL CONTROL

SMOKE COMPARTMENT KEY PLAN - BASE BID

SMOKE COMPARTMENT 1: 6,589 SF
SMOKE COMPARTMENT 2: 8,495 SF
SMOKE COMPARTMENT 3: 8,950SF
SMOKE COMPARTMENT 4: 12,922 SF



SMOKE COMPARTMENT KEY PLAN - ADD ALTERNATE

SMOKE COMPARTMENT 1: 6,589 SF
SMOKE COMPARTMENT 2: 8,495 SF
SMOKE COMPARTMENT 3: 14,900 SF
SMOKE COMPARTMENT 4: 12,922 SF

MOSELEYARCHITECTS
6210 ARDREY KELL ROAD • THE HUB AT WAVERLY, SUITE 425 • CHARLOTTE, NC 28277
PHONE (704) 540-3755 FAX (704) 540-3754
MOSELEYARCHITECTS.COM

STEVEN J HOPKINS — REGISTERED ARCHITECT — 11547 — NORTH CAROLINA — CHARLOTTE, NC — 05/01/2024

MOSELEY ARCHITECTS P.C. — REGISTERED ARCHITECTURAL CORPORATION — 50149 — NORTH CAROLINA — CHARLOTTE, NC

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: 05/01/2024

REVISIONS

DATE	DESCRIPTION
06/12/24	AD-03

LIFE SAFETY INFORMATION - TIER LEVEL - BASE BID & ADD ALT.

LS2.3

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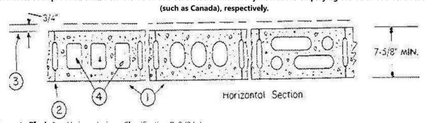
Design No. **U905**

April 14, 2023

Bearing Wall Rating — 2 HR.
Nonbearing Wall Rating — 2 HR
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Concrete Blocks* —** Various designs. Classification D-2 (2 hr).

See **Concrete Blocks** category for list of eligible manufacturers.

2. **Mortar —** Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. **Portland Cement Stucco or Gypsum Plaster —** Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. **Loose Masonry Fill —** If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

5. **Foamed Plastic* —** (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).
ATLAS ROOFING CORP — EnergyShield Pro Wall Insulation, EnergyShield Pro 2 Wall Insulation, EnergyShield CGF Pro, EnergyShield Ply Pro, EnergyShield® CGF, EnergyShield® PanelCast, EnergyShield® and "EnergyShield® XR

DUPONT DE NEMOURS, INC. — Types Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP), TUFF-R™ ci Insulation, Thermax Builder Sidwall Insulation Board and Thermax Morton Heavy Duty Insulation Board

FIRESTONE BUILDING PRODUCTS CO L L C — "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation"

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Types "Xci-Class A", "Xci Foil (Class A)", "Xci 286"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — Types "TSX-8500", "ECOMAXci FR", "TSX-8510", "ECOMAX xi FR White", "ECOMAXci", "ECOMAXci FR Air Barrier", "Thermasheath-XP", "Thermasheath", "Durasheath"

JOHNS MANVILLE — Type "AP Foil-Faced Foam Sheathing"

5A. **Building Units* —** As an alternate to Items 5, min. 1-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in.

ATLAS ROOFING CORP — EnergyShield® Ply

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "Xci NB", "Xci Ply"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — "Thermasheath-SI", "ECOBASEci", "ThermaBase-CI", "ECOMAXci FR Ply", "ECOMAXci Ply".

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2023-04-14

ONLINE CERTIFICATIONS DIRECTORY

System No. HW-D-0030
XHBN.HW-D-0030
Joint Systems

Page Bottom

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

XHBN - Joint Systems

See General Information for Joint Systems

System No. HW-D-0030

April 22, 2011

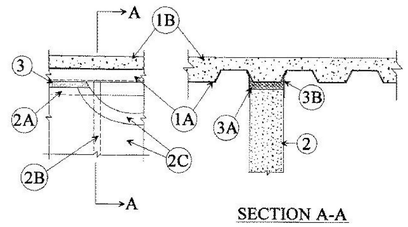
Assembly Rating — 2 Hr

L Rating at Ambient — Less than 1 CFM/Lin Ft

L Rating at 400 F — Less than 1 CFM/Lin Ft

Nominal Joint Width — 1 In.

Class II Movement Capabilities — 19% Compression or Extension



SECTION A-A

1. **Floor Assembly —** The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor And Form Units* —** Max 3 in. (76 mm) deep galv steel fluted floor deck .

A1. **Spray Applied Fire Resistive Material* —** (Optional, not shown) — Prior to the installation of the Forming Material and Fill, Void or Cavity Materials (Items 3A and 3B), the steel floor units may be sprayed with a min 5/16 in. (8 mm) to max 11/16 in (17 mm) thickness of fire resistive material.

GCP APPLIED TECHNOLOGIES INC — Type MK-6/HY.

B. **Concrete —** Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

1A. **Roof Assembly —** (Not Shown)—As an alternate to the floor assembly, a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 or P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. **The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly.** The roof assembly shall include the following construction features:

A. **Steel Roof Deck —** Max 3 in. (76 mm) deep galv steel fluted roof deck.

B. **Roof Insulation —** (P 900 Series) - Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the floor units.

C. **Roof Insulation — Mineral and Fiber Board* —** (P 700 Series) — Min 3/4 in. (19 mm) thick boards applied in one or more layers directly over steel or over gypsum board sheathing laid atop steel roof deck.

D. **Spray Applied Fire Resistive Material* —** (P700 Series, not shown)—Prior to the installation of the Deflective Channel, Forming Material and Fill, Void or Cavity Material (Items 3A, 3B, 3C), the steel floor units may be sprayed with a min 5/16 in. (8 mm) to max 11/16 in. (17 mm) thickness of fire resistive material.

GCP APPLIED TECHNOLOGIES INC — Type MK-6/HY

2. **Wall Assembly —** Min 6-1/8 in. (156 mm) thick steel-reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks*.**

See **Concrete Blocks** (CAZT) category in Fire Resistance Directory for names of manufacturers.

3. **Joint System — Max separation between bottom of floor or roof and top of wall is 1 in. (25 mm). The joint system is designed to accommodate a max 19 percent compression or extension from its installed width.**
The joint system consists of a forming material and a fill material, as follows:

A. **Forming Material* —** Min 6-1/2 in. (165 mm) thickness of min 4 pcf (64 kg/m^3) density mineral wool batt insulation cut a min of 20 percent wider than the gap between the top of the wall and bottom of the steel floor or roof deck . Mineral wool to be compressed and firmly packed into the gap between the top of the wall and bottom of the steel floor or roof deck.

INDUSTRIAL INSULATION GROUP L L C — MinWool-1200 Safing

ROCK WOOL MANUFACTURING CO — Delta Board or Delta-8

ROCKWOOL MALAYSIA SDN BHD — Type Safe

ROXUL INC — Type Safe

THERMAFIBER INC — Type SAF

B. **Fill, Void or Cavity Material* —** Min 1/16 in. (1.6 mm) dry thickness (min 1/8 in. or 3.2 mm wet thickness) of fill material sprayed or brushed on each side of the wall between the top of the wall and the bottom of the steel floor or roof deck to completely cover mineral wool and overlap a min of 1/2 in. (13 mm) onto wall and steel floor or roof deck on both sides of wall. When the steel floor or roof deck is coated with spray applied material, the fill material shall overlap min 2 in. (51 mm) onto the spray applied material.

3M COMPANY — FireDam™ Spray 200

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2011-04-22

Questions? Print this page Terms of Use Page Top

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

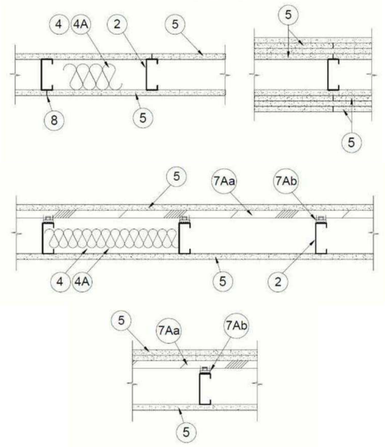
See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. **U419**

February 16, 2024

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 4 & 5 through 5J)
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Floor and Ceiling Runners —** (Not Shown) — For use with Item 2 — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

1A. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.
CEMCO, LLC — Viper25™ Track

CRACO MFG INC — SmartTrack25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™ Track

IMPERIAL MANUFACTURING GROUP INC — Viper25™ Track

1B. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
CEMCO, LLC — Viper20™ Track

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track

IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track

1C. **Framing Members* — Floor and Ceiling Runners —** (Not Shown) — In lieu of Item 1 — Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20

TELLING INDUSTRIES L L C — Type SUPREME D24/30EQD and Type SUPREME D20

UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

1D. **Floor and Ceiling Runners —** (Not Shown) — For use with Item 2A — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC.

1E. **Framing Members* — Floor and Ceiling Runners —** (Not Shown, As an alternate to Item 1) — For use with Items 2E, 5F or 5G or 5I only, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.
CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK

DMFCWBS L L C — ProTRAK

MBA METAL FRAMING — ProTRAK

RAM SALES L L C — Ram ProTRAK

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProTRAK

1F. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2F, proprietary channel shaped runners, minimum width to accommodate stud size, with 1- 1/8 in. long legs fabricated from min 0.015 in. (min bare metal thickness) galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
SUPER STUD BUILDING PRODUCTS — The Edge

1G. **Framing Members* — Floor and Ceiling Runner —** For use with Item 2G, proprietary channel shaped runners, minimum width to accommodate stud size attached to floor and ceiling with fasteners 24 in. OC max.
STUDCO BUILDING SYSTEMS — CROCSTUD Track

1H. **Floor and Ceiling Runners —** (Not Shown) — Channel shaped, fabricated from min 0.02 in. galv steel, min width to accommodate stud size, with min 1 in. long legs, for use with studs specified below and fabricated from min 0.018 in. galv steel or thicker, attached to floor and ceiling with fasteners spaced max 24 in. OC.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track VT100

IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track VT100

1I. **Framing Members* — Floor and Ceiling Runners —** (Not Shown, As an alternate to Item 1) — For use with Items 2H, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.
TELLING INDUSTRIES L L C — TRUE-TRACK™

1J. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2I, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.

1K. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2J, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

1L. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2N, proprietary channel shaped runners, 1-1/4 in. wide by min. 3-1/2 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
RESCUE METAL FRAMING, L L C — AlphaTRAK

1M. **Framing Members* — Floor and Ceiling Runners —** Not Shown — As an alternate to Item 1 — For use with Item 2O, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
RONDO BUILDING SERVICES PTY LTD — Rondo Wall Track

1N. **Framing Members* — Floor and Ceiling Runners —** Not Shown — As an alternate to Item 1 — For use with Item 2P, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
OEG BUILDING MATERIALS — OEG Track

1O. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2Q, proprietary channel shaped runners, min width to accommodate stud size, fabricated from min. 25 MSG (0.018 in. min. bare metal thickness), attached to floor and ceiling with fasteners spaced 24 in. OC max.
CEMCO, LLC — Viper X Track

1P. **Framing Members* — Floor and Ceiling Runner —** (Not Shown — Alternate to Item 1) — For use with Item 2R, channel shaped runners pre-equipped with proprietary attachment clips. Min. 3-5/8 in. wide. Legs of top runners minimum 3-1/4 in. wide. Legs of bottom runners minimum 1-1/2 in. wide. Runners attached to floor and ceiling with fasteners 24 in. OC max.
HYPERFRAME INC - Hypertrack

1Q. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2S , proprietary channel shaped runners, min width to accommodate stud size, fabricated from min. 20 EQ/22 mils. (min. 0.0221 in. thick) galvanized steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
JJC INTERNATIONAL DISTRIBUTORS — Non-structural Tracks 3-5/8" and 6".

2. **Steel Studs —** Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

2A. **Steel Studs —** (As an alternate to Item 2, For use with Items 5B, 5E, 5H, 5J or Type ULIX) **—** Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

2B. **Framing Members* - Steel Studs —** (As an alternate to Item 2, For use with Items 5C, 5I or Type ULIX) **—** Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a 1/2 in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.
CEMCO, LLC — Viper25™

CRACO MFG INC — SmartStud25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™

IMPERIAL MANUFACTURING GROUP INC — Viper25™

2C. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.
CEMCO, LLC — Viper20™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™

IMPERIAL MANUFACTURING GROUP INC — Viper20™

2D. **Framing Members* — Steel Studs —** In lieu of Item 2 — Channel shaped studs, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20

TELLING INDUSTRIES L L C — Type SUPREME D24/30EQD and Type SUPREME D20

UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

2E. **Framing Members* — Steel Studs —** (Not Shown, As an alternate to Item 2) **—** For use with Items 5F or 5G or 5I or Type ULIX only, channel shaped studs, min depth as indicated under Item 5F, 5G or 5I, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD

DMFCWBS L L C — ProSTUD

MBA METAL FRAMING — ProSTUD

RAM SALES L L C — Ram ProSTUD

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProSTUD

2F. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 **—** proprietary channel shaped steel studs, minimum width indicated under Item 5, 1-1/4 in. deep fabricated from min 0.015 in. (min bare metal thickness) galvanized steel. Studs 3/8 in. to 3/4 in. less in lengths than assembly heights.
SUPER STUD BUILDING PRODUCTS — The Edge

2G. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 **—** proprietary channel shaped studs, minimum width indicated under Item 5, Studs to be cut 3/8 to 3/4 in less than the assembly height.
STUDCO BUILDING SYSTEMS — CROCSTUD

2H. **Framing Members* — Steel Studs —** (Not Shown, As an alternate to Item 2) **—** Fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
TELLING INDUSTRIES L L C — TRUE-STUD™

MOSELEYARCHITECTS
6210 ARDREY KELL ROAD • THE HUB AT WAVERLY, SUITE 425 • CHARLOTTE, NC 28277
PHONE (704) 540-3755 FAX (704) 540-3754
MOSELEYARCHITECTS.COM

STEVEN J HOPKINS — REGISTERED ARCHITECT — 11547 — NORTH CAROLINA — CHARLOTTE, NC — 05/01/2024

MOSELEY ARCHITECTS — REGISTERED ARCHITECTURAL CORPORATION — 50149 — NORTH CAROLINA — CHARLOTTE, NC

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: 05/01/2024

REVISIONS	
DATE	DESCRIPTION

FIRE RESISTIVE ASSEMBLIES

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2I. **Framing Members* — Steel Studs —**

2J. **Framing Members* — Metal Studs —** Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights

2K. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
EB METAL INC — NITROSTUD

2L. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
OLMAR SUPPLY INC — PRIMESTUD

2M. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — StudRite™

2N. **Framing Members*— Steel Studs —** As an alternate to Item 2 — proprietary channel shaped steel studs, min depth 3-1/2 in. and as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in length than assembly height.
RESCUE METAL FRAMING, L L C — AlphaSTUD

2O. **Framing Members* — Steel Studs —** As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max.
RONDO BUILDING SERVICES PTY LTD — Rondo Lipped Wall Stud

2P. **Framing Members* — Steel Studs —** As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, min 25 MSG galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max.
OEG BUILDING MATERIALS — OEG Stud

2Q. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — For use with Item 1O, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 25 MSG (0.018 in. min. bare metal thickness). Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.
CEMCO, LLC — Viper X

2R. **Framing Members* — Steel Studs —** (Not Shown — Alternate to Item 2, For use with Item 1P) — Channel shaped steel studs with attachment clips at top and bottom, min 3-5/8 in. depth, spaced a max of 24 in. OC. Studs clipped into floor and ceiling runners (Item 1P). Max 2-3/8 in. extension reveal from top of stud to inside of ceiling runner.
HYPERFRAME INC— Hyperstud

3	2	NW	1-1/8	1-3/16	3/4	13/16	—	3-1/4
3	3	NW	1-3/4	1-7/8	1-3/16	1-5/16	—	3-1/4
1	1	LW	9/16,15/16*	5/8, 1*	3/8,5/8*	7/16,11/16*	1-1/8+	—
1-1/2	1	LW	9/16,15/16*	5/8, 1*	3/8,5/8*	7/16,11/16*	1-3/4	—
2	1	LW	9/16,15/16*	5/8, 1*	3/8,5/8*	7/16,11/16*	2-1/4	—
2	2	LW	1-7/16	1-7/16	1	1	2-1/4	—
2	3	LW	2-1/4	2-5/16	1-9/16	1-5/8	—	3-1/4
3	1-1/2	LW	15/16	1	5/8	11/16	—	3-1/4
3	2	LW	1-7/16	1-7/16	1	1	—	3-1/4
3	3	LW	2-1/4	2-5/16	1-9/16	1-5/8	—	3-1/4

* This thickness applies when optional Item 12 or 13 are used over 3-1/4 in. light weight concrete topping.

** This thickness applies when optional Item 12 or 13 are used over 3-1/4 in. light weight concrete topping.

+ When bottom chords consist of 1 by 1 by 0.125 in. thick steel angles, the thickness of spray-applied fire resistive material shall be increased by 1/4 in. on the bottom chord only.

ISOLATEK INTERNATIONAL — Type D-C/F, HP, II or Type II HS. Investigated for exterior use. Type EBS or Type X adhesive/surface sealer optional.

6A. **Spray-Applied Fire Resistive Materials* —** Alternate to Item 6. See table below for appropriate thicknesses. When fluted steel deck is used and the fire protection thickness selected is based on all fluted deck, the area between the steel deck and the top flange of the steel beam shall be filled. When fluted steel deck is used and the steel beam is sprayed with the thicknesses applicable to cellular or blended units, the area between the steel deck and the top flange of the steel beam shall be plugged. Prepared by mixing with water and spray-applied in one or more coats to beam surfaces which must be clean and free of dirt, loose scale and oil. Min average density of 17.5 pcf with min individual value of 17.0 pcf. For method of density determination, see Design Information Section, Sprayed Material.

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Min Thkns Applied Resistive Mtl, In W6x9 When Deck Is All Fluted	W6x9 When Deck Is Blend or All Cellular	W8x28 When Deck Is All Fluted	W8x28 When Deck Is Blend or All Cellular
1, 1-1/2, 2	1	1/2, 5/8*	1/2, 5/8*	5/16, 7/16*	5/16, 7/16*
2	2	1	1-3/16	11/16	13/16
2	3	1-9/16	1-7/8	1-1/16	1-5/16
3	1-1/2	3/4	13/16	1/2	9/16
3	2	1	1-3/16	11/16	13/16
3	3	1-9/16	1-7/8	1-1/16	1-5/16

* This thickness applies when optional Items 12, 13 are used over 3-1/4 in. light weight concrete topping.

ISOLATEK INTERNATIONAL — Type 280

6B. **Spray-Applied Fire Resistive Materials* —** Alternate to Items 6 and 6A. Prepared by mixing with water. Spray-applied in one or more coats to beam surfaces to a min final thickness as shown in the tables below. Beam surfaces must be clean and free of dirt, loose

1	2-1/2	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
2	3-1/2	1 layer, 3/4 in. thick	3 in.
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	2 layers, 3/4 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional
4	2-1/2	2 layers, 3/4 in. thick	2 in.

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — 1/2 in. thick Type C and 5/8 in. thick Type SCX

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SGX, SHX, ULIX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR; 3/4 in. thick Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP-X3 or ULTRACODE

When Item 7B, **Steel Framing Members***, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.

5A. **Gypsum Board* —** (As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6.
CGC INC — Type SHX.

UNITED STATES GYPSUM CO — Type FRX-G, SHX.

USG MEXICO S A DE C V — Type SHX.

5B. **Gypsum Board* —** (Not Shown) — As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or 3/4 in. thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) — Nom 5/8 in. or 3/4 in. may be used as alternate to all 5/8 in. or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2A with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11) or Lead Discs or Tabs (see Item 12).
RAY-BAR ENGINEERING CORP — Type RB-LBG

5C. **Gypsum Board* —** (For Use With Item 2B) — Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire Resistive Directory.
CGC INC — Type SCX, ULIX.

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type SCX

UNITED STATES GYPSUM CO — Type SCX, SGX, ULIX.

USG BORAL DRYWALL SFZ LLC — Type SCX

USG MEXICO S A DE C V — Type SCX

5D. **Gypsum Board* —** (As an alternate to Item 5) — 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only.
CGC INC — Type USGX

UNITED STATES GYPSUM CO — Type USGX

USG BORAL DRYWALL SFZ LLC — Type USGX

USG MEXICO S A DE C V — Type USGX

5E. **Gypsum Board* —** (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or No. 6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco

5F. **Gypsum Board* —** (As an alternate to Item 5) — For use with Items 1E and 2E and limited to 1 Hour Rating only. Gypsum panels with beveled, square or tapered edges, applied vertically, and fastened to the steel studs with 1 in. long Type S screws spaced 8 in. OC along vertical and bottom edges and 12 in. OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud depth shall be a minimum 3-5/8 in.
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type SCX

UNITED STATES GYPSUM CO — 5/8 in. thick Type SCX, SGX, ULIX

USG BORAL DRYWALL SFZ LLC — 5/8 in. thick Type SCX, SGX

5G. **Gypsum Board* —** (As an alternate to Item 5) — For use with Items 1E and 2E only, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Item 2E	No. of Layers & Thickness of Panel	Min Thkns of Insulation (Item 4)
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX or 3/4 in. thick Types IP-X3 or ULTRACODE

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — 1/2 in. thick Types C and 5/8 in. thick SCX

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type SCX, SGX, SHX, IP-X1, AR, C, , FRX-G, IP-AR, IP-X2, IPC-AR, ULIX; 3/4 in. thick Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE

5H. **Gypsum Board* —** (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only to steel studs Item 2A; (not to be used with Item 3) - Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A).
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

5I. **Gypsum Board* —** (As an alternate to Item 5) — Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item 5.
CGC INC — Type ULIX, ULX

UNITED STATES GYPSUM CO — Type ULIX, ULX

USG MEXICO S A DE C V — Type ULX

5J. **Gypsum Board* —** (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in.

thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5K. **Gypsum Board* —** (As an alternate to Item 5 when Foam Plastic insulation (Items 4C or 4D) is used) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 5 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-1/4 in. long Type S steel screws spaced 8 in. OC at perimeter and in the field. For 2 layer assemblies outer layer will be attached to studs over inner layer with the 1-7/8 in. long steel screws spaced 8 in. OC.

6. **Fasteners —** (Not Shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). **Single layer systems:** 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. **Single layer system with Type ULIX:** 1 in. long, spaced 12 in. OC in the field and perimeter, when panels are applied horizontally or vertically.**Two layer systems:** First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer.**Three-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. **Four-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

7. **Furring Channels —** (Optional, Not Shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A.

7A. **Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

7B. **Framing Members* —** (Optional, Not Shown) — As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only one side of studs as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 5. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.
KINETICS NOISE CONTROL INC — Type Isomax

7C. **Framing Members* —** (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ca) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
PLITEQ INC — Type GENIECLIP

7D. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Da) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

7E. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 7Eb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire., Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

7F. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Resilient channels and Steel Framing Members as described below:
a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 5. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 7Fa) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

7G. **Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ga) to studs (Item 2). Clips spaced max. 48 in. OC. Clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

8. **Joint Tape and Compound —** Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

9. **Siding, Brick or Stucco —** (Optional, Not Shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

10. **Caulking and Sealants* —** (Optional, Not Shown) — A bead of acoustical sealant applied around the partition perimeter for sound control.
UNITED STATES GYPSUM CO — Type AS

11. **Lead Batten Strips —** (Not Shown, For Use With Item 5B) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.

11A. **Lead Batten Strips —** (Not Shown, For Use With Item 5H) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations.

12. **Lead Discs or Tabs —** (Not Shown, For Use With Item 5B) — Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

12A. **Lead Discs —** (Not Shown, for use with Item 5H) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

13. **Lead Batten Strips —** (Not Shown, For Use With Item 5E) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations.

14. **Lead Tabs —** (Not Shown, For Use With Item 5E) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

15. **Barrier Mesh —** (Optional, Not Shown) - Attached to steel studs on one or both sides of the wall using Barrier Mesh Clips spaced at maximum 12 inches on center vertically, using a flat head type screw penetrating through the steel at least 3/8 of an inch. For Steel Studs less than 0.033 inches in thickness, use self-piercing screws. For Steel Studs equal to or greater than 0.033 inches in thickness, use steel drill screws (self-tapping). Gypsum Board (Item 5) to be installed directly over the Barrier Mesh using prescribed screw patterns with lengths increased by a minimum 1/8 in. Barrier Mesh may be installed with the long dimension of the diamond pattern positioned vertically or horizontally. Barrier Mesh joints may occur as butt joints at the framing members and secured using the Barrier Mesh Clips or occur in between framing members as overlapping joints secured using 18 SWG wire ties spaced a maximum 12 in. on center.
CLARKDIETRICH BUILDING SYSTEMS — Barrier Mesh, Barrier Mesh Clips

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2024-02-16

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05/01/2024

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REGISTERED ARCHITECT
50149
NORTH CAROLINA
CHARLOTTE, NC

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: 05/01/2024

REVISIONS	
DATE	DESCRIPTION

FIRE RESISTIVE ASSEMBLIES

LS4.2

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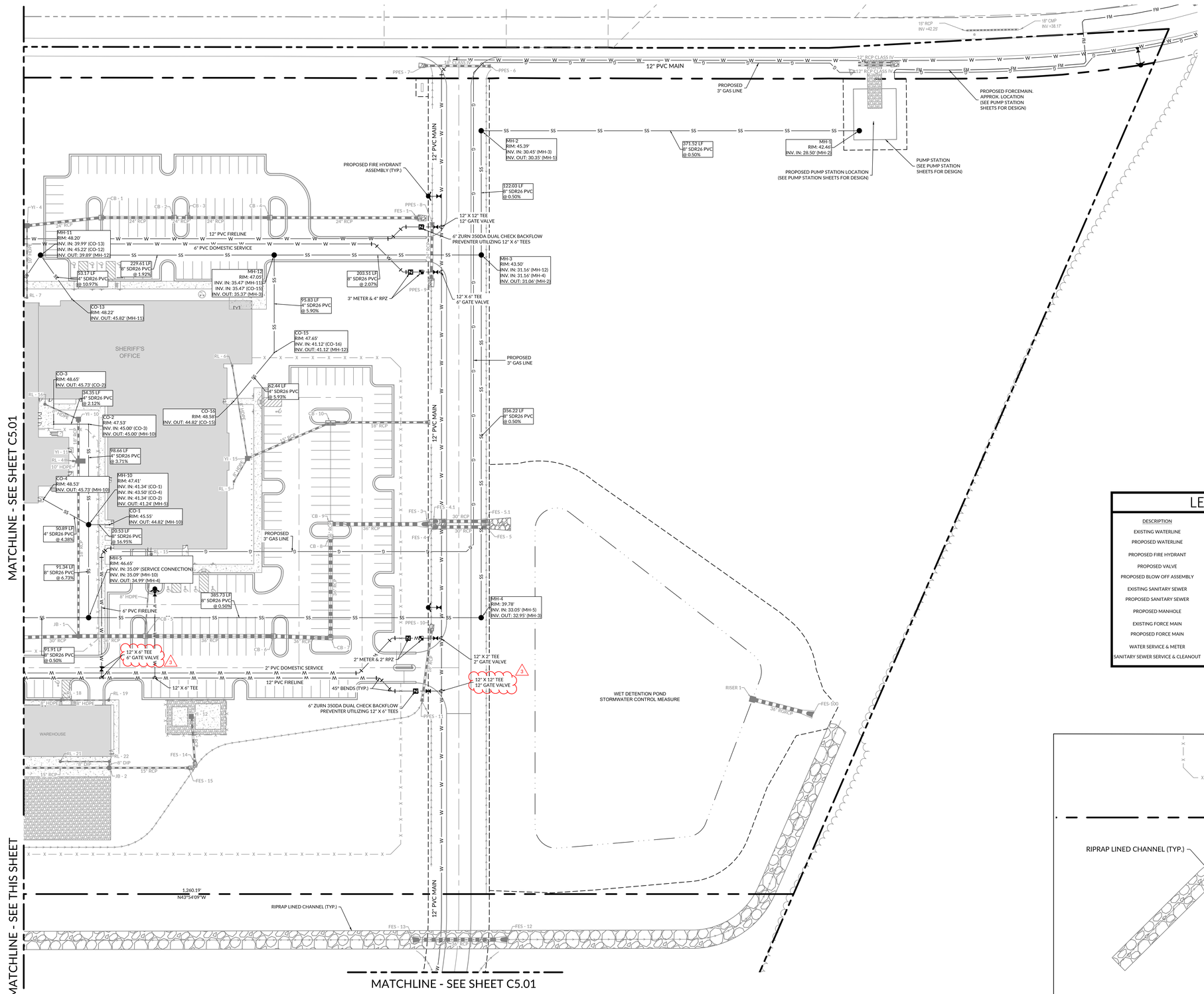

LEGEND

DESCRIPTION	
EXISTING WATERLINE	W
PROPOSED WATERLINE	W W W
PROPOSED FIRE HYDRANT	
PROPOSED VALVE	
PROPOSED BLOW OFF ASSEMBLY	
EXISTING SANITARY SEWER	SS
PROPOSED SANITARY SEWER	SS
PROPOSED MANHOLE	
EXISTING FORCE MAIN	FM
PROPOSED FORCE MAIN	FM
WATER SERVICE & METER	
SANITARY SEWER SERVICE & CLEANOUT	

SCALE: 1 inch = 40 ft

WithersRavenel
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t: 910.256.9277 | license # F-1479 | www.withersravenel.com

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NORTH CAROLINA PROFESSIONAL SEAL 39113 ENGINEER JOSEPH S. BOYD
DocuSigned by: Joseph Boyd 6/12/2024

WITHERSRAVENEL
NC CORPORATE
LICENSE #: F-1479

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: 06/11/24

REVISIONS	
DATE:	DESCRIPTION
5/24/24	AD 01
6/11/24	AD 03

DETAILED UTILITY PLAN

C5.03

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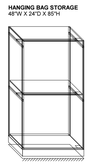
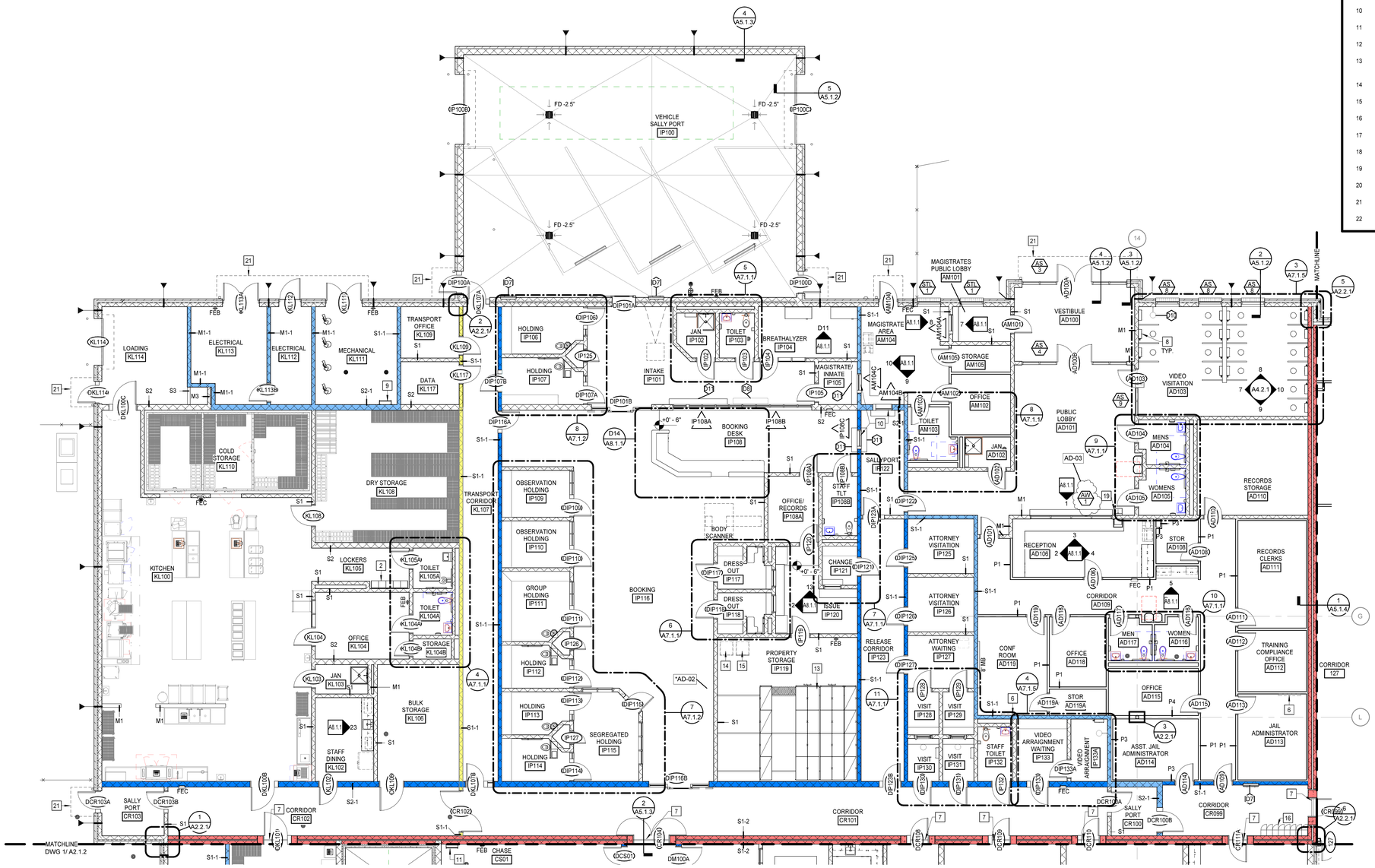
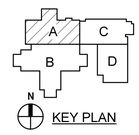


SHELVING SYSTEM - PROPERTY STORAGE
1/4" = 1'-0"



FLOOR PLAN - PART A
1/8" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"



FLOOR PLAN GENERAL NOTES

A. PROVIDE CONT. SILICONE CAULK AT ALL DOOR FRAMES WHERE GYP. BOARD AND FRAMES MEET BEFORE PAINTING OCCURS.

B. PROVIDE PAINTED METAL FINISH ON ALL CEILING AND WALL ACCESS PANELS FOR ACCESS TO MECHANICAL, ELECTRICAL, AND PLUMBING SPACES.

C. "MIN." FOR DIMENSIONS INDICATED MINIMUM ACCEPTABLE DIMENSION. IF "MIN" DIMENSIONS FALL SHORT OF WHAT IS SHOWN ON DRAWINGS, GC IS TO NOTIFY THE ARCHITECT IMMEDIATELY SO AS TO NOT DELAY THE PROJECT.

FLOOR PLAN KEYNOTES

APPLIES TO DRAWINGS A2.1.1 - A2.1.7
REPRESENTED BY: n

1	CMU LOW WALL PER DETAIL 1/A5.2.1
2	DOUBLE TIER METAL LOCKERS 15"x15"x72"
3	INMATE PHONE (NIC)
4	KIOSK (NIC)
5	MIRROR - 48"W X 72"H
6	50" MONITOR (NIC) - MOUNT AT 66" AFF TO CENTER OF SCREEN
7	FLOOR EXPANSION JOINT
8	VIDEO VISITATION STATION
9	WALL MOUNTED, STEEL ROOF ACCESS LADDER
10	AUTOMATIC FIRE SHUTTER @ THIS LOCATION
11	WALL MOUNTED CHASE LADDER
12	CHAIN LINK FENCE - EXTEND TO UNDERSIDE OF CEILING
13	MECHANICALLY ASSISTED MOBILE STORAGE SHELVING SYSTEM - REFER TO ELEVATION ON A2 DRAWINGS.
14	WASHER (NIC)
15	DRYER (NIC)
16	FOUR-TIER METAL LOCKERS 12"x12"x72"
17	DOUBLE-TIER PHENOLIC Z-CONFIGURATION LOCKERS 12"x12"x72"
18	DOUBLE TIER METAL LOCKERS 12"x12"x72"
19	PACKAGE PASS - REFER TO DETAIL ON A7.2.1.
20	PASS-THRU EVIDENCE LOCKERS
21	DASHED LINE INDICATES A PRE-MANUFACTURED PROTECTIVE COVER ABOVE
22	REFRIGERATED PASS-THRU LOCKER COMPARTMENT

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STEVEN J HOPKINS — REGISTERED ARCHITECT — 11547 — NORTH CAROLINA — CHARLOTTE, NC — 01/15/24

MOSELEY ARCHITECTS P.C. — REGISTERED ARCHITECTURAL CORPORATION — 50149 — NORTH CAROLINA — CHARLOTTE, NC

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888	
DATE:	05/01/2024
REVISIONS	
DATE	DESCRIPTION
06/04/24	*AD-02
06/12/24	AD-03

FLOOR PLAN - PART A

A2.1.1

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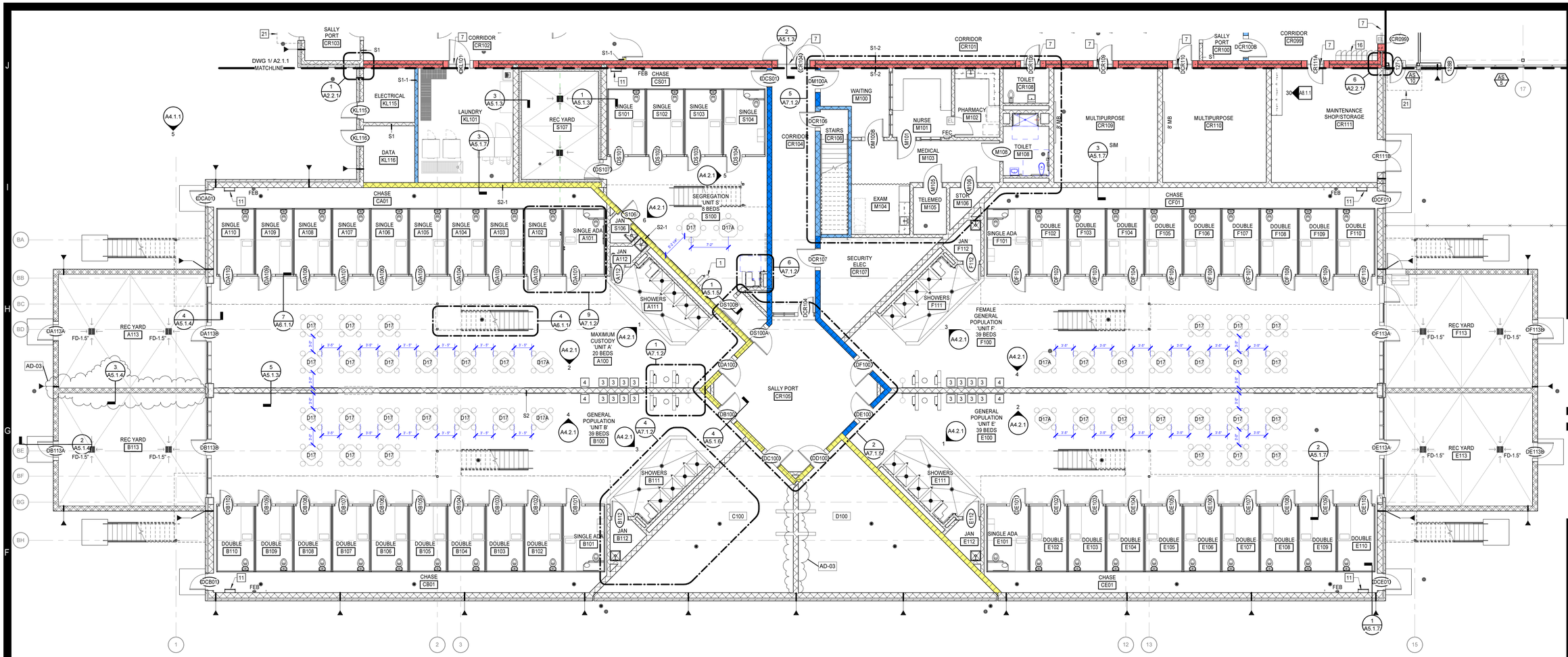

N

FLOOR PLAN - PART B

1/8" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

A. PROVIDE CONT. SILICONE CAULK AT ALL DOOR FRAMES WHERE GYP. BOARD AND FRAMES MEET BEFORE PAINTING OCCURS.

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FLOOR PLAN KEYNOTES

APPLIES TO DRAWINGS A2.1.1 - A2.1.7
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1	CMU LOW WALL PER DETAIL 1/A5.2.1
2	DOUBLE TIER METAL LOCKERS 15"x15"x72"
3	INMATE PHONE (NIC)
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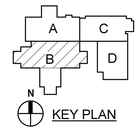

KEY PLAN

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STEVEN J HOPKINS REGISTERED ARCHITECT 11547 NORTH CAROLINA CHARLOTTE, NC 05/01/2024

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PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
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1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: 05/01/2024

REVISIONS

DATE	DESCRIPTION
06/12/24	AD-03

FLOOR PLAN - PART B

A2.1.2

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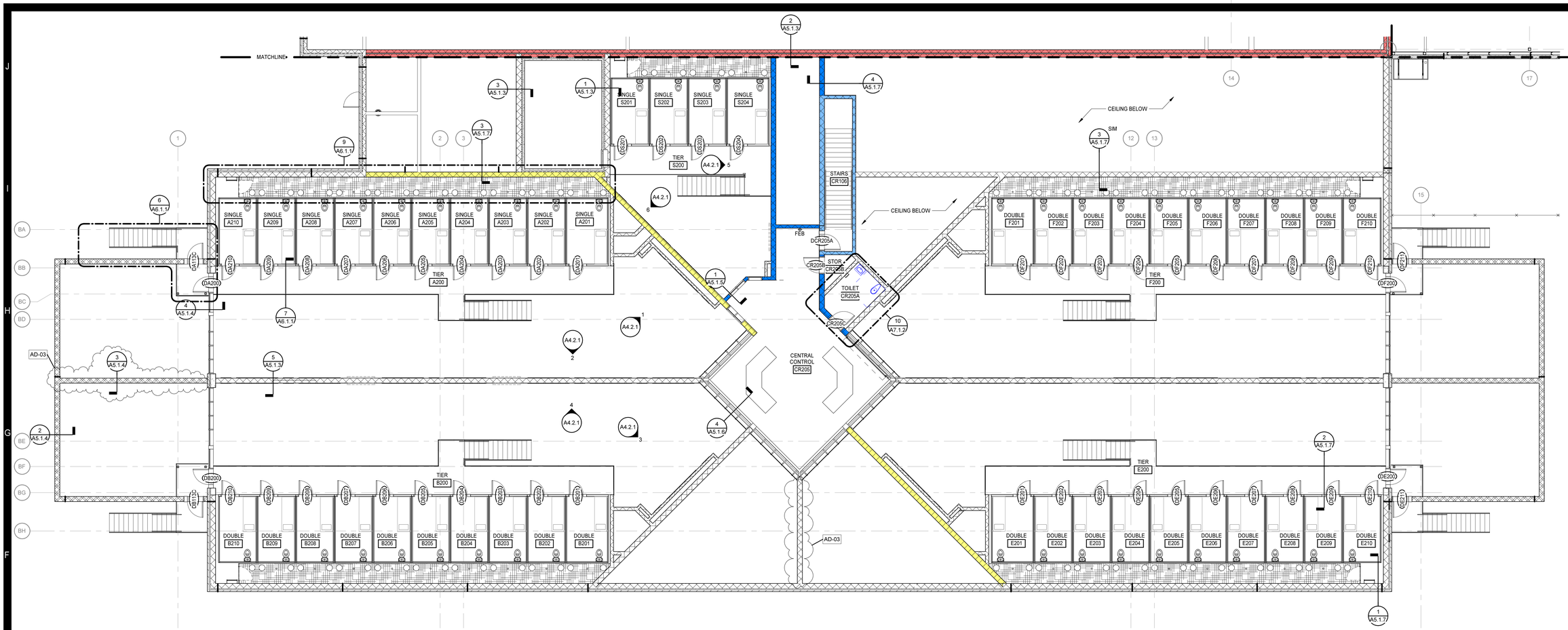

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FLOOR PLAN KEYNOTES

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REPRESENTED BY n

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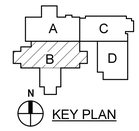
21	DASHED LINE INDICATES A PRE-MANUFACTURED PROTECTIVE COVER ABOVE
22	REFRIGERATED PASS-THRU LOCKER COMPARTMENT

N

FLOOR PLAN - PART B - TIER LEVEL
1/8" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"



KEY PLAN

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REVISIONS	
DATE	DESCRIPTION
06/12/24	AD-03

FLOOR PLAN - PART B - TIER LEVEL

A2.1.3

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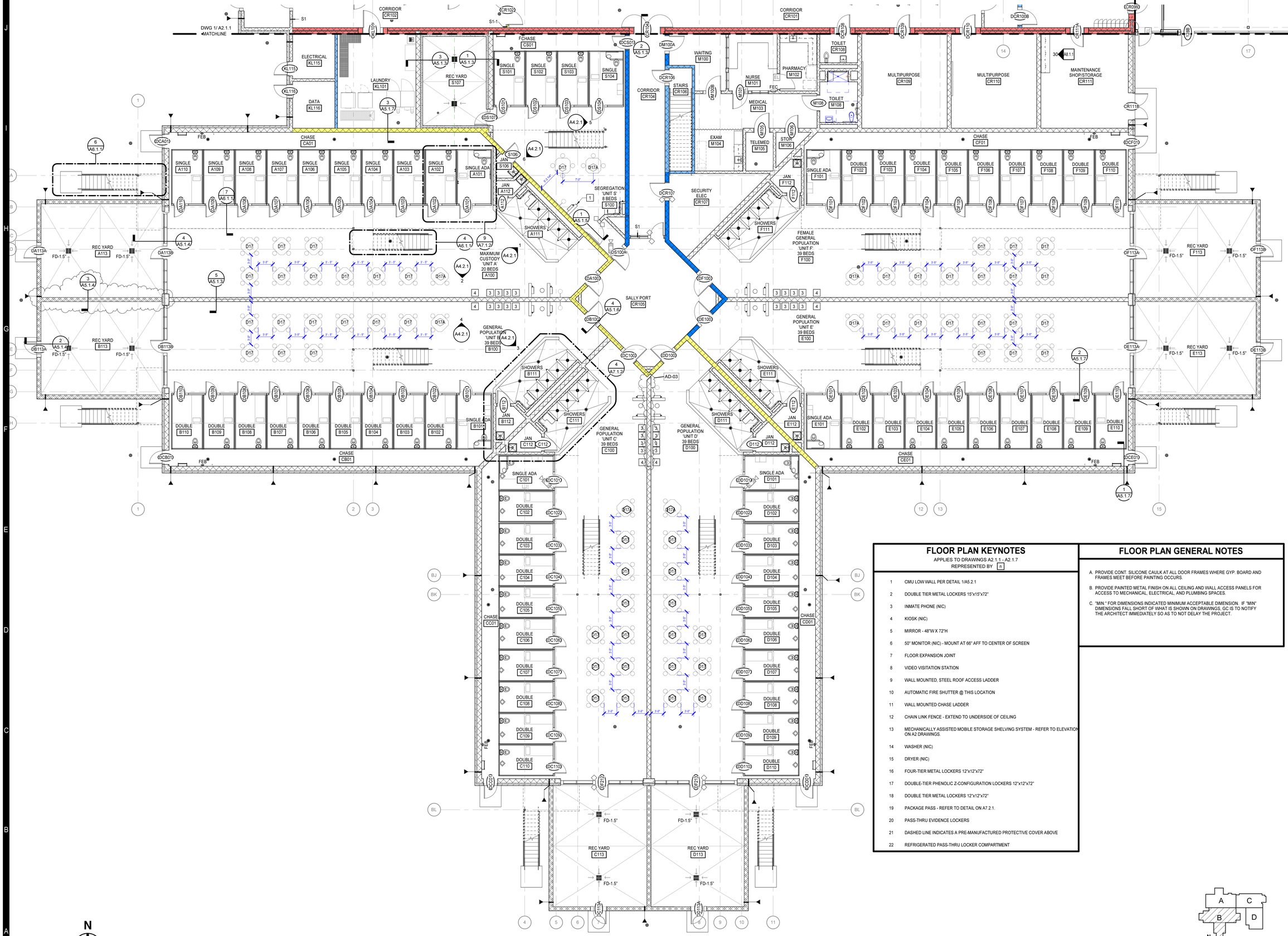

FLOOR PLAN KEYNOTES

APPLIES TO DRAWINGS A2.1.1 - A2.1.7
REPRESENTED BY n

1	CMU LOW WALL PER DETAIL 1/A5.2.1
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22	REFRIGERATED PASS-THRU LOCKER COMPARTMENT

FLOOR PLAN GENERAL NOTES

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N

FLOOR PLAN - PART B - ALTERNATE
1/8" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"

KEY PLAN

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1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
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REVISIONS

DATE	DESCRIPTION
06/12/24	AD-03

FLOOR PLAN - PART B - ALTERNATE

A2.1.4

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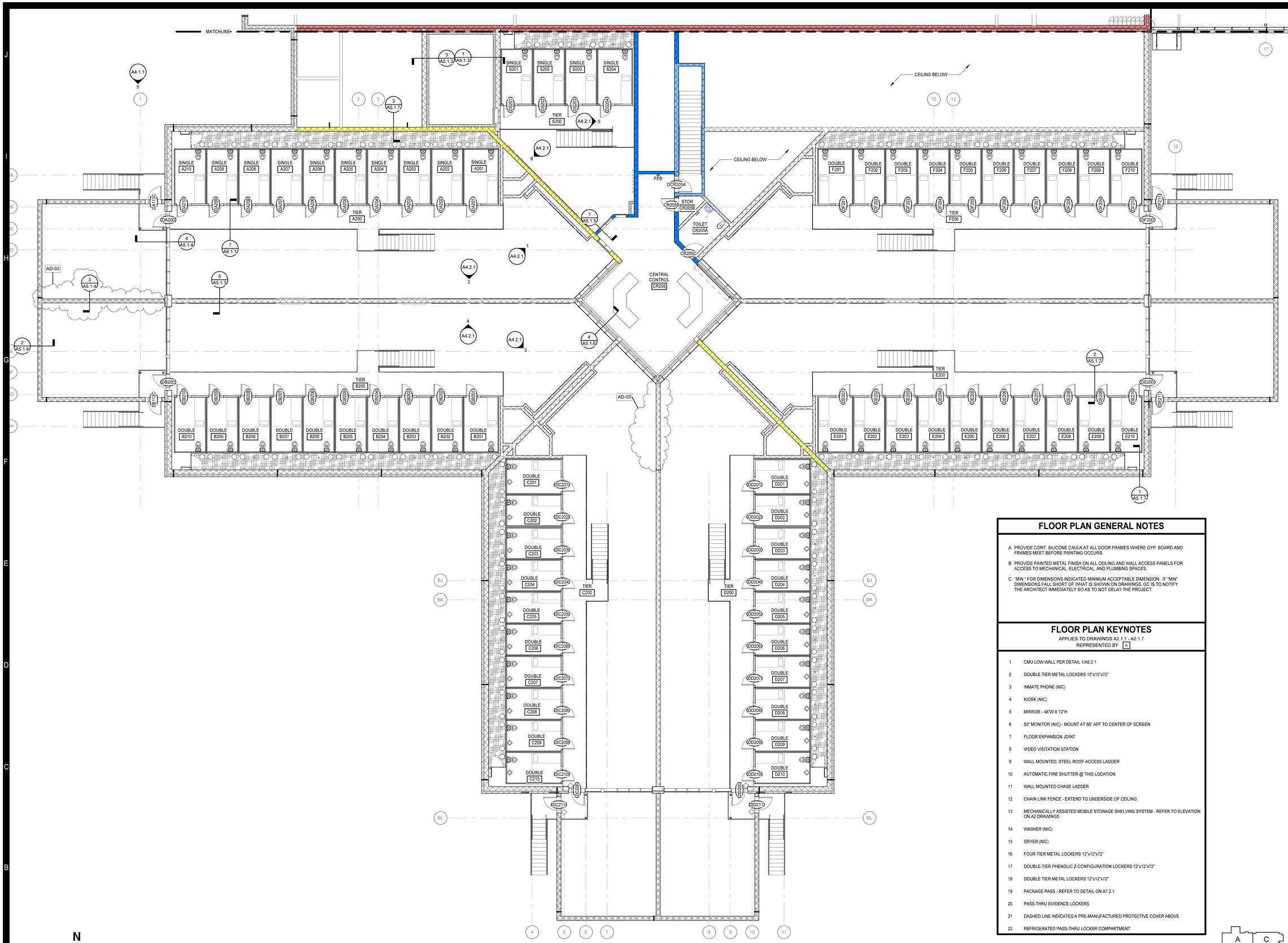

FLOOR PLAN - PART B - TIER LEVEL

1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

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0' 2' 4' 8' 16'
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KEY PLAN

MOSELEYARCHITECTS
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STEVEN J HOPKINS
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CHARLOTTE, NC
05/01/2024

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REGISTERED ARCHITECTURAL CORPORATION
50149
NORTH CAROLINA
CHARLOTTE, NC

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

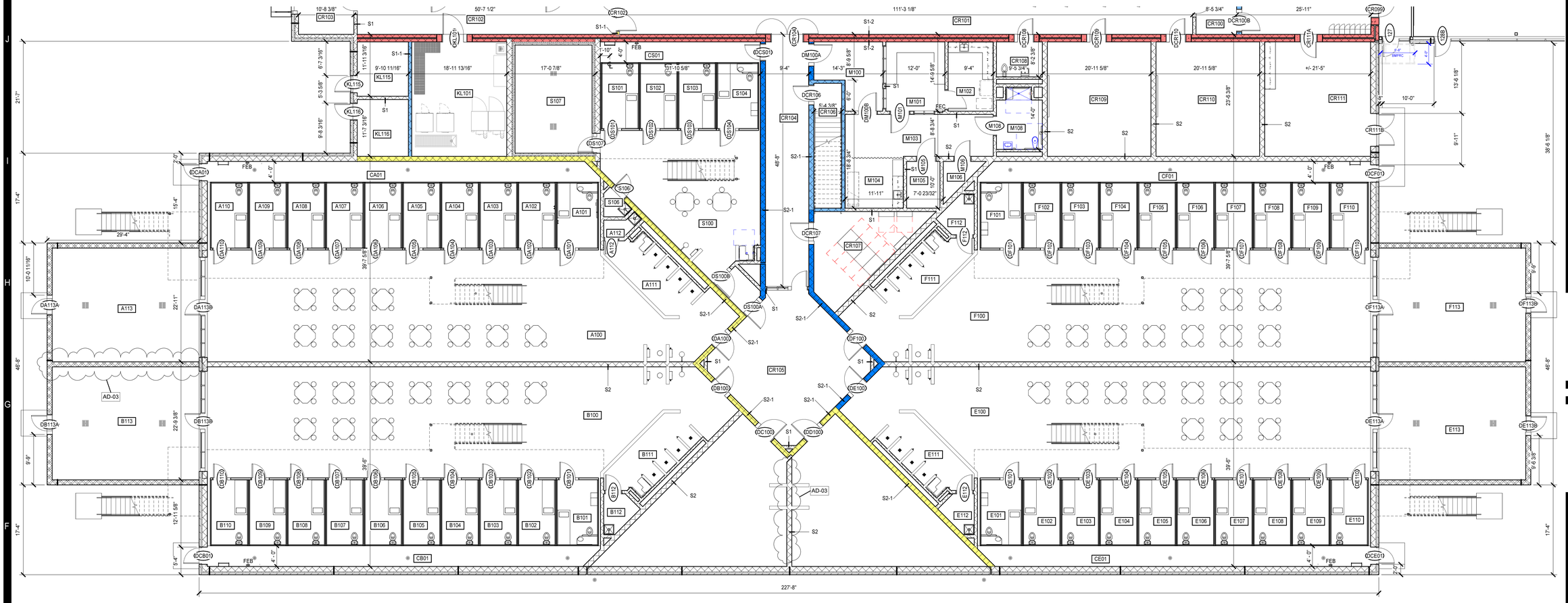
PROJECT NO: 611888
DATE: 05/01/2024

REVISIONS	
DATE	DESCRIPTION
06/12/24	AD-03

FLOOR PLAN - PART B - TIER LEVEL - ALTERNATE

A2.1.5

6/7/2024 2:28:38 PM



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DIMENSION PLAN - PART B

1/8" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"

A C B D

N

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DIMENSION PLAN - PART B

A2.1.12

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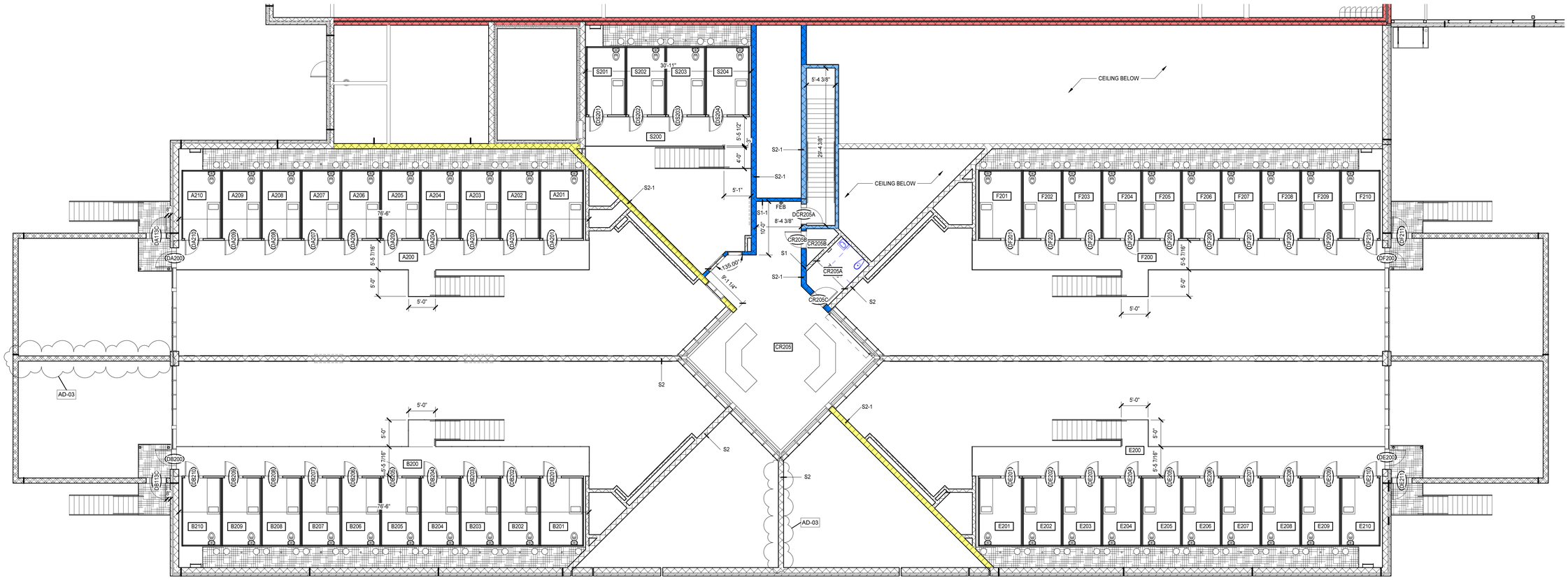

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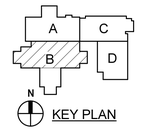
DIMENSION PLAN - PART B - TIER LEVEL

1/8" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"



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DIMENSION PLAN - PART B - TIER LEVEL

A2.1.13

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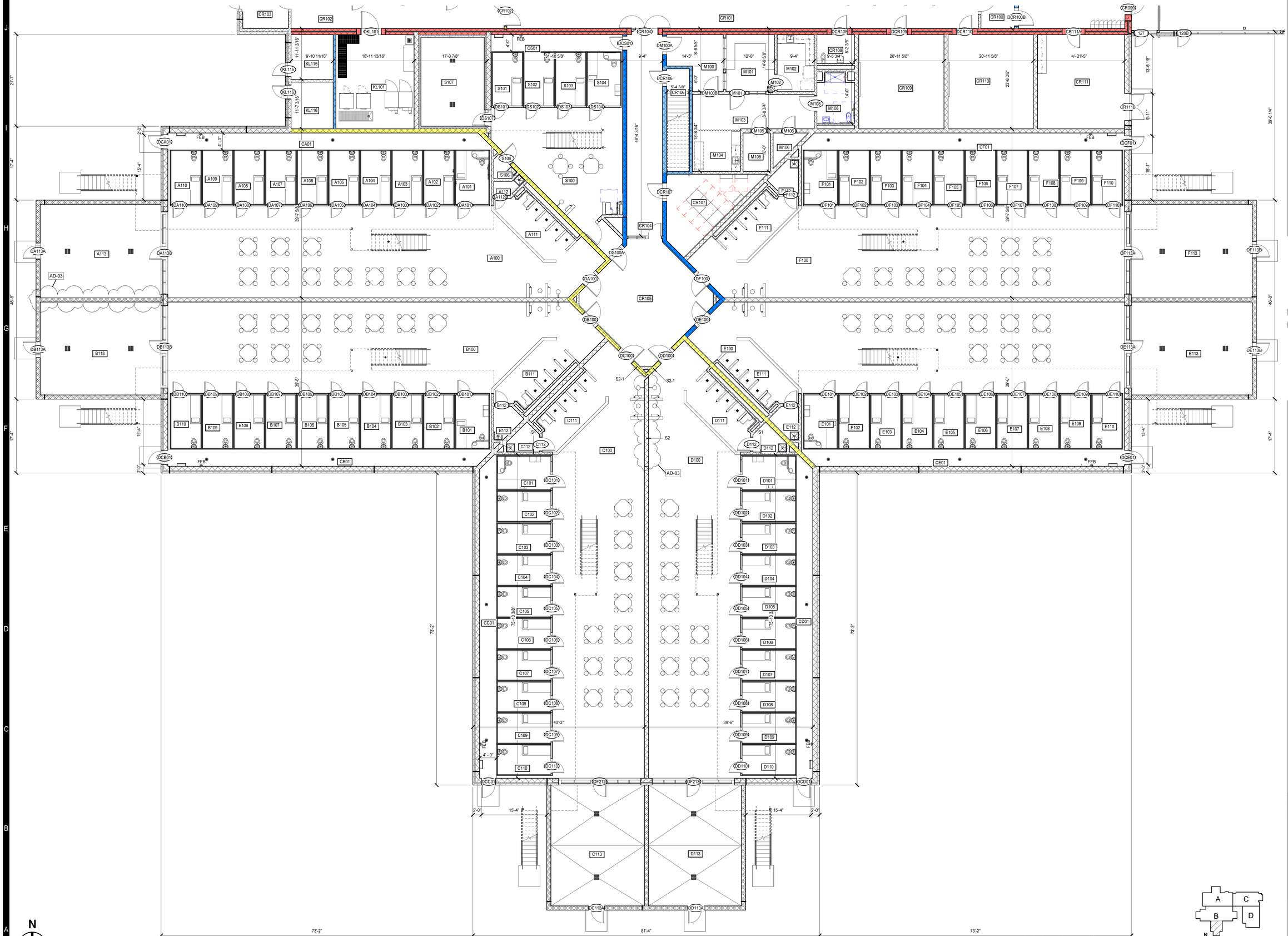

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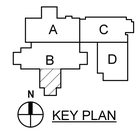
DIMENSION PLAN - PART B - ALTERNATE

1/8" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"



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DIMENSION PLAN - PART B - ALTERNATE

A2.1.14

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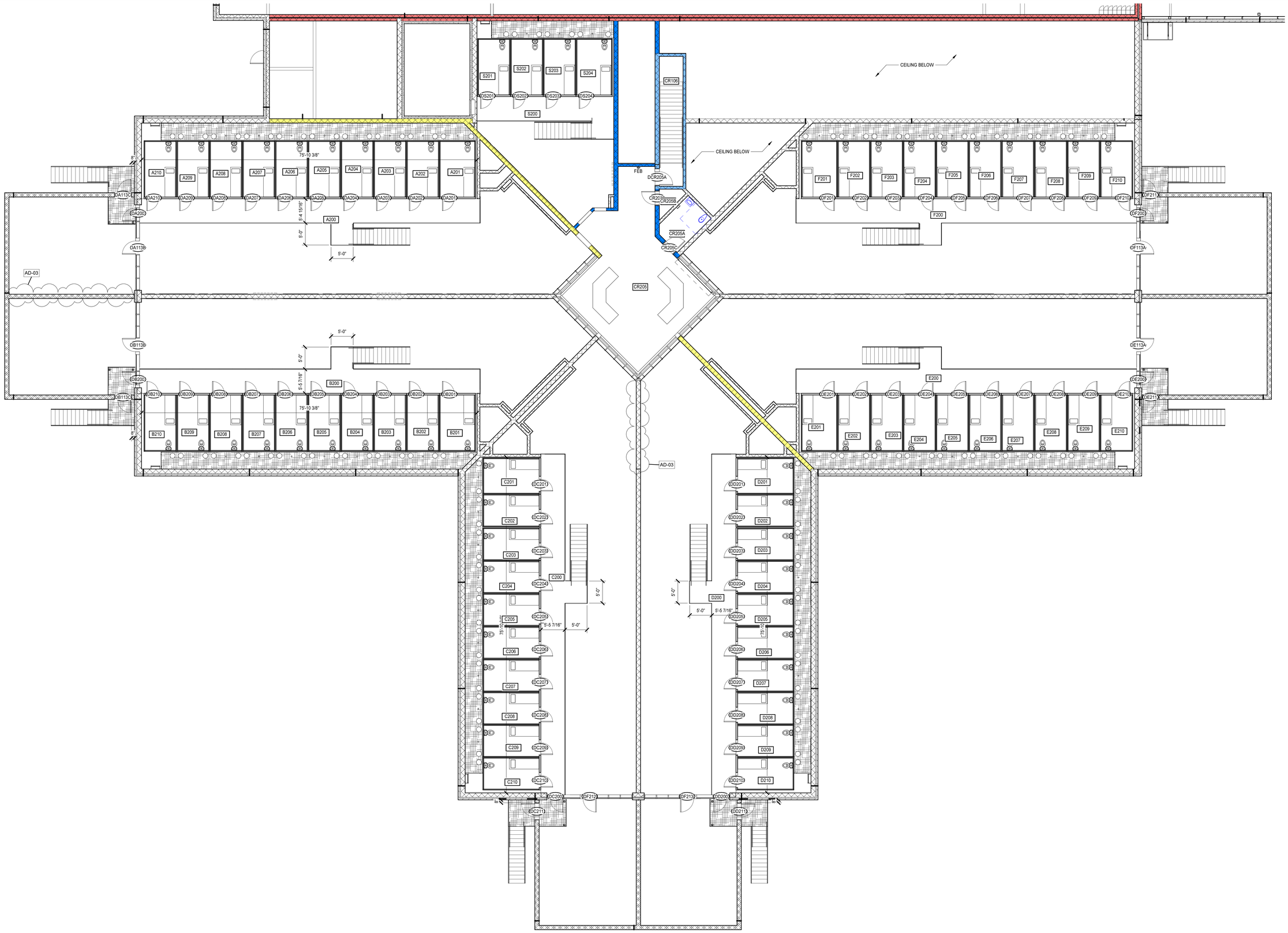

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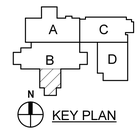
DIMENSION PLAN - PART B - TIER LEVEL - ALTERNATE

1/8" = 1'-0"

0' 2' 4' 8' 16'

1/8" = 1'-0"



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CERTIFICATE OF AUTHORIZATION
50149
NORTH CAROLINA
CHARLOTTE, NC

PENDER COUNTY LEC

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DIMENSION PLAN - PART B - TIER LEVEL - ALTERNATE

A2.1.15

6/7/2024 2:29:43 PM

FLOOR PLAN GENERAL NOTES

A. PROVIDE CONT. SILICONE CAULK AT ALL DOOR FRAMES WHERE GYP. BOARD AND FRAMES MEET BEFORE PAINTING OCCURS.

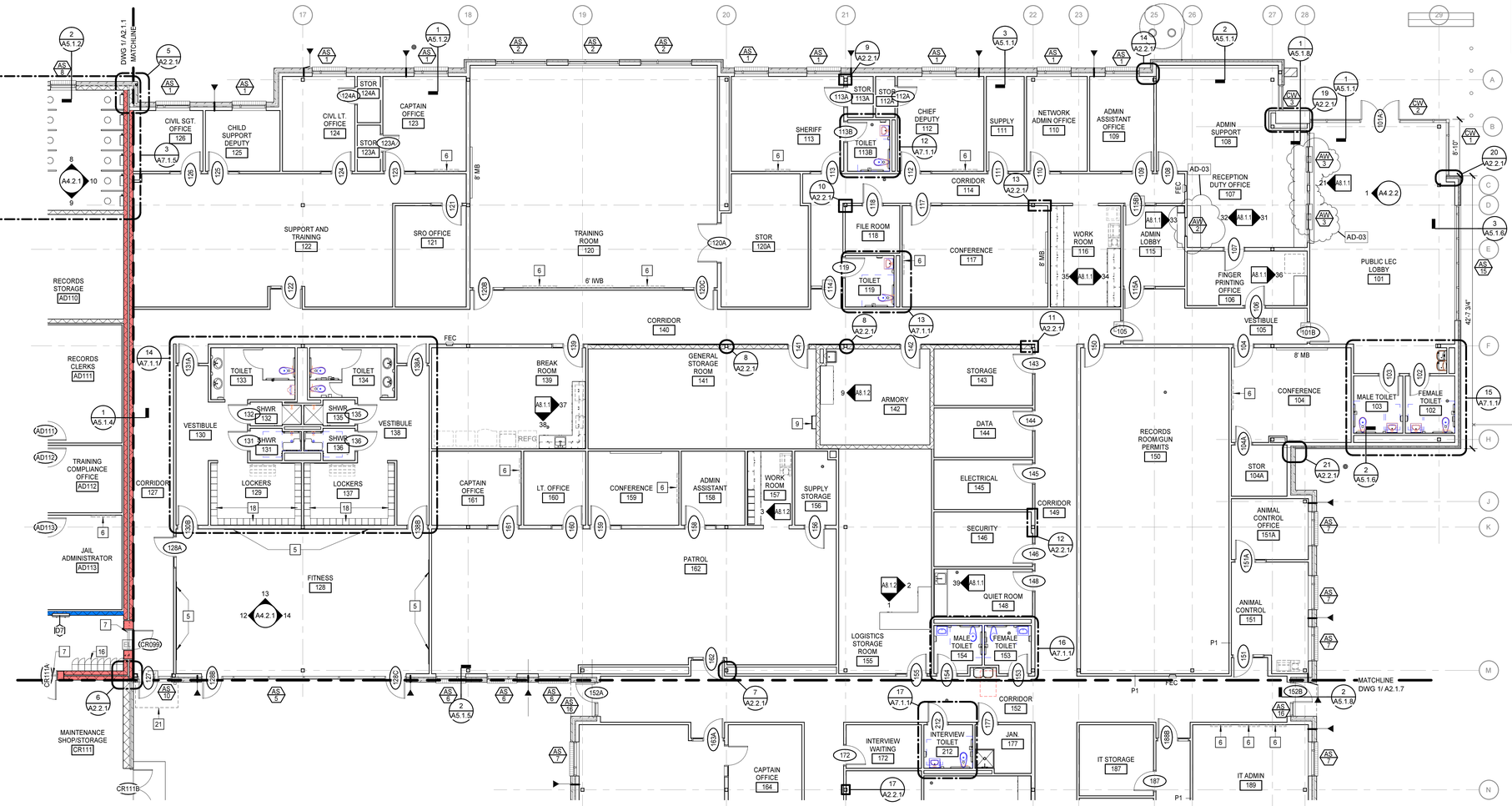
B. PROVIDE PAINTED METAL FINISH ON ALL CEILING AND WALL ACCESS PANELS FOR ACCESS TO MECHANICAL, ELECTRICAL, AND PLUMBING SPACES.

C. "MIN." FOR DIMENSIONS INDICATED MINIMUM ACCEPTABLE DIMENSION. IF "MIN" DIMENSIONS FALL SHORT OF WHAT IS SHOWN ON DRAWINGS, GC IS TO NOTIFY THE ARCHITECT IMMEDIATELY SO AS TO NOT DELAY THE PROJECT.

FLOOR PLAN KEYNOTES

APPLIES TO DRAWINGS A2.1.1 - A2.1.7
REPRESENTED BY [n]

1	CMU LOW WALL PER DETAIL 1/A5.2.1
2	DOUBLE TIER METAL LOCKERS 15"x15"x72"
3	INMATE PHONE (NIC)
4	KIOSK (NIC)
5	MIRROR - 48"W X 72"H
6	50" MONITOR (NIC) - MOUNT AT 66" AFF TO CENTER OF SCREEN
7	FLOOR EXPANSION JOINT
8	VIDEO VISITATION STATION
9	WALL MOUNTED, STEEL ROOF ACCESS LADDER
10	AUTOMATIC FIRE SHUTTER @ THIS LOCATION
11	WALL MOUNTED CHASE LADDER
12	CHAIN LINK FENCE - EXTEND TO UNDERSIDE OF CEILING
13	MECHANICALLY ASSISTED MOBILE STORAGE SHELVING SYSTEM - REFER TO ELEVATION ON A2 DRAWINGS.
14	WASHER (NIC)
15	DRYER (NIC)
16	FOUR-TIER METAL LOCKERS 12"x12"x72"
17	DOUBLE-TIER PHENOLIC Z-CONFIGURATION LOCKERS 12"x12"x72"
18	DOUBLE TIER METAL LOCKERS 12"x12"x72"
19	PACKAGE PASS - REFER TO DETAIL ON A7.2.1.
20	PASS-THRU EVIDENCE LOCKERS
21	DASHED LINE INDICATES A PRE-MANUFACTURED PROTECTIVE COVER ABOVE
22	REFRIGERATED PASS-THRU LOCKER COMPARTMENT



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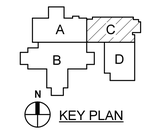
FLOOR PLAN - PART C
1/8" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"



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FLOOR PLAN - PART C

A2.1.6

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FINISH SCHEDULE - BASE BID

NUMBER	NAME	FLOOR	BASE	WALLS				CEILING	NOTES
				NORTH	EAST	SOUTH	WEST		
101	PUBLIC LEC LOBBY	RES-C	RES-C	EPX PT	EPX PT	EPX PT	EPX PT/A-PT	ACP-A	8
102	FEMALE TOILET	RES-C	RES-C	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
103	MALE TOILET	RES-C	RES-C	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
104	CONFERENCE	C-TILE-A	RB	PT	PT	PT	A-PT	ACP-A	
104A	STOR	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
105	VESTIBULE	QCT	RB	PT	PT	PT	PT	ACP-A/GB-PT	10
106	FINGER PRINTING OFFICE	QCT	RB	PT	PT	PT	PT	ACP-A	
107	RECEPTION DUTY OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
108	ADMIN SUPPORT	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
109	ADMIN ASSISTANT OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
110	NETWORK ADMIN OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
111	SUPPLY	QCT	RB	PT	PT	PT	PT	ACP-A	
112	CHIEF DEPUTY	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
112A	STOR	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
113	SHERIFF	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
113A	STOR	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
113B	TOILET	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
114	CORRIDOR	QCT	RB	PT	PT	PT	PT	ACP-A	
115	ADMIN LOBBY	QCT	RB	PT	PT	PT	PT	ACP-A	
116	WORK ROOM	QCT	RB	PT	PT	PT	PT	ACP-A	
117	CONFERENCE	C-TILE-A	RB	PT	PT	PT	A-PT	ACP-A	
118	FILE ROOM	QCT	RB	PT	PT	PT	PT	ACP-A	
119	TOILET	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
120	TRAINING ROOM	C-TILE-A	RB	PT	PT	A-PT	PT	ACP-A	
120A	STOR	CONC-POL	RB	PT	PT	PT	PT	ACP-A	
121	SRO OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
122	SUPPORT AND TRAINING	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
123	CAPTAIN OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
123A	STOR	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
124	CIVL LT. OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
124A	STOR	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
125	CHILD SUPPORT DEPUTY	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
126	CIVIL SGT. OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
127	CORRIDOR	QCT	RB	PT	PT	PT	PT	ACP-A	10
128	FITNESS	RAF-RFT	RB	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	
129	LOCKERS	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-B	8
130	VESTIBULE	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-B	8
131	SHWR	RES-A2	RES-A2	RES-B	RES-B	RES-B	RES-B	GB-PT	8
132	SHWR	RES-A2	RES-A2	RES-B	RES-B	RES-B	RES-B	GB-PT	8
133	TOILET	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-B	8
134	TOILET	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-B	8
135	SHWR	RES-A2	RES-A2	RES-B	RES-B	RES-B	RES-B	GB-PT	8
136	SHWR	RES-A2	RES-A2	RES-B	RES-B	RES-B	RES-B	GB-PT	8
137	LOCKERS	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-B	8
138	VESTIBULE	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-B	8
139	BREAK ROOM	QCT	RB	PT	PT	PT	PT	ACP-A	
140	CORRIDOR	QCT	RB	PT	PT	PT	PT	ACP-A/GB-PT	10
141	GENERAL STORAGE ROOM	CONC-SLR	RB	PT	PT	PT	PT	ACP-A	
142	ARMORY	CONC-SLR	RB	PT	PT	PT	PT	SGB PT	
143	STORAGE	QCT	RB	PT	PT	PT	PT	ACP-A	
144	DATA	CONC-SLR	RB	PT	PT	PT	PT	EXPC PT	
145	ELECTRICAL	CONC-SLR	RB	PT	PT	PT	PT	EXPC PT	
146	SECURITY	CONC-SLR	RB	PT	PT	PT	PT	EXPC PT	
148	QUIET ROOM	C-TILE-A	RB	A-PT	PT	PT	A-PT	ACP-A	
149	CORRIDOR	QCT	RB	PT	PT	PT	PT	ACP-A/GB-PT	10
150	RECORDS ROOM/GUN PERMITS	QCT	RB	PT	PT	PT	PT	ACP-A	
151	ANIMAL CONTROL	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
151A	ANIMAL CONTROL OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
152	CORRIDOR	QCT	RB	PT	PT	PT	PT	ACP-A/GB-PT	10
153	FEMALE TOILET	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
154	MALE TOILET	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
155	LOGISTICS STORAGE ROOM	QCT	RB	PT	PT	PT	PT	ACP-A	
156	SUPPLY STORAGE	QCT	RB	PT	PT	PT	PT	ACP-A	
157	WORK ROOM	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
158	ADMIN ASSISTANT	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
159	CONFERENCE	C-TILE-A	RB	PT	A-PT	PT	PT	ACP-A	
160	LT. OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
161	CAPTAIN OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
162	PATROL	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
163	INVESTIGATIONS	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
164	CAPTAIN OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
165	DETECTIVE LT. OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
166	DATA	CONC-SLR	RB	PT	PT	PT	PT	EXPC PT	
167	DETECTIVE LT. OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
168	SVU OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
169	SVU OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
170	CONFERENCE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
171	CORRIDOR	QCT	RB	PT	PT	PT	PT	ACP-A	
172	INTERVIEW WAITING	QCT	RB	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
173	INTERVIEW	QCT	RB	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
174	INTERVIEW	QCT	RB	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
175	INTERVIEW	QCT	RB	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
176	CHEMICAL LAB	SV-B	SV-B	EPX PT	EPX PT	EPX PT	EPX PT	ACP-B	8
177	JAN.	CONC-SLR	RB	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	
179	COMPUTER FORENSICS ROOM	C-TILE-B	RB	PT	PT	PT	PT	ACP-A	
180	OFFICE	QCT	RB	PT	PT	PT	PT	ACP-A	
181	EVIDENCE SECURITY OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
182	EVIDENCE RECEIVING	QCT	RB	PT	PT	PT	PT	ACP-A	
183	CORRIDOR	QCT	RB	PT	PT	PT	PT	ACP-A	
184	WORK AREA	QCT	RB	PT	PT	PT	PT	ACP-A	
185	OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
186	VESTIBULE	QCT	RB	PT	PT	PT	PT	ACP-A	
187	IT STORAGE	QCT	RB	PT	PT	PT	PT	ACP-A	
188	CORRIDOR	QCT	RB	PT	PT	PT	PT	ACP-A	
189	IT ADMIN	C-TILE-A	RB	A-PT	PT	PT	PT	ACP-A	
191	SYSTEM ADMIN OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
192	CONFERENCE	C-TILE-A	RB	PT	PT	A-PT	PT	ACP-A	
193	SERVER ROOM	RFT	RB	PT	PT	PT	PT	ACP-A	11
194	RECORDS	QCT	RB	PT	PT	PT	PT	ACP-A	
195	SUPPLY STORAGE	QCT	RB	PT	PT	PT	PT	ACP-A	
196	SUPERVISOR	C-TILE-B	RB	PT	PT	PT	PT	ACP-A	
197	911 DIRECTOR	C-TILE-B	RB	PT	PT	PT	PT	ACP-A	
198	COMMUNICATIONS/ 911	C-TILE-B	RB	PT/A-PT	PT	PT/A-PT	PT	ACP-A	11
199	STORAGE	QCT	RB	PT	PT	PT	PT	ACP-A	
200	BREAK ROOM	QCT	RB	PT	PT	PT	PT	ACP-A	
201	TOILET	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
202	QUIET ROOM	C-TILE-B	RB	PT	PT	PT	A-PT	ACP-A	
203	VESTIBULE	QCT	RB	PT	PT	PT	PT	ACP-A	
204	EVIDENCE ROOM	CONC-POL	RB	PT	PT	PT	PT	ACP-A	
205	VEHICLE BAY	CONC-LH	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	EXPC PT	
206	STOR	QCT	RB	PT	PT	PT	PT	ACP-A	
207	FEMALE TOILET	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
208	MALE TOILET	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
209	NARCOTICS OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
210	NARCOTICS	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
211	VESTIBULE	C-TILE-B	RB	PT	PT	PT	PT	ACP-A	
212	INTERVIEW TOILET	RES-A2	RES-A2	EPX-PT	EPX-PT	EPX-PT	EPX-PT	ACP-A	8
213	PRE-ACTION	CONC-SLR	RB	PT	PT	PT	PT	EXPC PT	
215	DRUG STORAGE	CONC-POL	EPX PT	PT	PT	PT	PT	ACP-A	
216	LS ELEC	CONC-SLR	--	PT	PT	PT	PT	EXPC PT	
217	ELEC.	CONC-SLR	--	PT	PT	PT	PT	EXPC PT	
218	MECH.	CONC-SLR	--	PT	PT	PT	PT	EXPC PT	
A100	MAXIMUM CUSTODY 'UNIT A' 20 BEDS	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC/SGB PT	
A101	SINGLE ADA	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
A102	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
A103	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
A104	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
A105	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
A106	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
A107	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
A108	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
A109	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
A110	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
A111	SHOWERS	RES-A1	RES-A1	RES-B	RES-B	RES-B	RES-B	--	4, 5, 9
A112	JAN	RES-A1	RES-A1	RES-B	RES-B	RES-B	RES-B	GB-PT	4
A113	REC YARD	CONC-SLR	--	--	--	--	--	MESH	5
AD100	VESTIBULE	RES-C	RES-C	EPX PT	EPX PT	EPX PT	EPX PT	EXPC PT	1
AD101	PUBLIC LOBBY	RES-C	RES-C	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
AD102	JAN	CONC-SLR	RB	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	
AD103	VIDEO VISITATION	QCT	RB	PT	PT	PT	PT	ACP-A	
AD104	MENS	RES-C	RES-C	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
AD105	WOMENS	RES-C	RES-C	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
AD106	RECEPTION	C-TILE-A	RB	PT	PT	A-PT	PT	ACP-A	
AD108	STOR	QCT	RB	PT	PT	PT	PT	ACP-A	
AD109	CORRIDOR	QCT	RB	PT	PT	PT	PT	ACP-A	
AD110	RECORDS STORAGE	QCT	RB	PT	PT	PT	PT	ACP-A	
AD111	RECORDS CLERKS	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
AD112	TRAINING COMPLIANCE OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
AD113	JAIL ADMINISTRATOR	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
AD114	ASST. JAIL ADMINISTRATOR	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
AD115	OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
AD116	WOMEN	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
AD117	MEN	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8

AD-03

FINISH SCHEDULE - BASE BID

NUMBER	NAME	FLOOR	BASE	WALLS				CEILING	NOTES
				NORTH	EAST	SOUTH	WEST		
AD118	OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
AD119	CONF ROOM	C-TILE-A	RB	PT	PT	A-PT	PT	ACP-A	
AD119A	STOR	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
AM101	MAGISTRATES PUBLIC LOBBY	RES-C	RES-C	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
AM102	OFFICE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
AM103	TOILET	RES-A2	RES-A2	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	8
AM104	MAGISTRATE AREA	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
AM105	STORAGE	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
B100	GENERAL POPULATION 'UNIT B' 39 BEDS	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC/SGB PT	
B101	SINGLE ADA	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
B102	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
B103	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
B104	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
B105	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
B106	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
B107	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
B108	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
B109	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
B110	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
B111	SHOWERS	RES-A1	RES-A1	RES-B	RES-B	RES-B	RES-B	--	4, 5, 9
B112	JAN	RES-A1	RES-A1	EPX PT	EPX PT	EPX PT	EPX PT	GB-PT	4
B113	REC YARD	CONC-SLR	--	--	--	--	--	MESH	5
CA01	CHASE	CONC-SLR	--	--	--	--	--	EXPC	
CB01	CHASE	CONC-SLR	--	--	--	--	--	EXPC	
CE01	CHASE	CONC-SLR	--	--	--	--	--	EXPC	
CF01	CHASE	CONC-SLR	--	--	--	--	--	EXPC	
CR099	CORRIDOR	QCT	RB	PT	PT	PT	PT	ACP-A	
CR100	SALLY PORT	CONC-POL	EPX PT	PT	PT	PT	PT	ACP-A-HDC	
CR101	CORRIDOR	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	7
CR102	CORRIDOR	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	7
CR103	SALLY PORT	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
CR104	CORRIDOR	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	7
CR105	SALLY PORT	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	7
CR106	STAIRS	CONC-POL	--	PT	PT	PT	PT	EXPC	
CR107	SECURITY ELEC	CONC-SLR	EPX PT	PT	PT	PT	PT	EXPC PT	
CR108	TOILET	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	GB-PT	
CR109	MULTIPURPOSE	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX A-PT	ACP-A	
CR110	MULTIPURPOSE	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX A-PT	ACP-A	
CR111	MAINTENANCE SHOP/STORAGE	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	
CR205	CENTRAL CONTROL	SV-A	RB	PT	PT	PT	PT	ACP-A	
CS01	CHASE	CONC-SLR	--	PT	PT	PT	PT	EXPC	
E100	GENERAL POPULATION 'UNIT E' 39 BEDS	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC/SGB PT	
E101	SINGLE ADA	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
E102	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
E103	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
E104	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
E105	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
E106	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
E107	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
E108	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
E109	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
E110	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
E111	SHOWERS	RES-A1	RES-A1	RES-B	RES-B	RES-B	RES-B	--	4, 5, 9
E112	JAN	RES-A1	RES-A1	EPX PT	EPX PT	EPX PT	EPX PT	GB-PT	4
E113	REC YARD	CONC-SLR	--	--	--	--	--	MESH	5
F100	FEMALE GENERAL POPULATION 'UNIT F' 39 BEDS	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC/SGB PT	
F101	SINGLE ADA	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
F102	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
F103	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
F104	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
F105	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
F106	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
F107	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
F108	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
F109	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
F110	DOUBLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
F111	SHOWERS	RES-A1	RES-A1	RES-B	RES-B	RES-B	RES-B	--	4, 5, 9
F112	JAN	RES-A1	RES-A1	EPX PT	EPX PT	EPX PT	EPX PT	GB-PT	4
F113	REC YARD	CONC-SLR	--	--	--	--	--	MESH	5
HCE01	HOUSE COMMUNICATION EQUIPMENT	CONC-SLR	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	EXPC PT	
IP100	VEHICLE SALLY PORT	CONC-LH	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	EXPC PT	
IP101	INTAKE	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	
IP102	JAN.	CONC-SLR	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	GB-PT	
IP103	TOILET	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	GB-PT	
IP104	BREATHALYZER	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB PT	
IP105	MAGISTRATE/ INMATE	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB PT	
IP106	HOLDING	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB-PT	
IP107	HOLDING	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB-PT	
IP108	BOOKING DESK	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
IP108A	OFFICE/ RECORDS	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
IP108B	STAFF TLT	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	GB-PT	
IP109	OBSERVATION HOLDING	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB-PT	
IP110	OBSERVATION HOLDING	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB-PT	
IP111	GROUP HOLDING	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB-PT	
IP112	HOLDING	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB-PT	
IP113	HOLDING	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB-PT	
IP114	HOLDING	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB-PT	
IP115	SEGREGATED HOLDING	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
IP116	BOOKING	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
IP117	DRESS OUT	RES-A1	RES-A1	RES-B	RES-B	RES-B	RES-B	SGB PT	4
IP118	DRESS OUT	RES-A1	RES-A1	RES-B	RES-B	RES-B	RES-B	SGB PT	4
IP119	PROPERTY STORAGE	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	EXPC PT	
IP120	ISSUE	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	EXPC PT	
IP121	CHANGE	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB PT	
IP122	SALLYPORT	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	
IP123	RELEASE CORRIDOR	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	
IP125	ATTORNEY VISITATION	CONC-POL	EPX PT	PT	PT	PT	PT	ACP-A-HDC	
IP126	ATTORNEY VISITATION	CONC-POL	EPX PT	PT	PT	PT	PT	ACP-A-HDC	
IP127	ATTORNEY WAITING	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
IP128	VISIT	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
IP129	VISIT	C-TILE-A	RB	PT	PT	PT	PT	ACP-A	
IP130	VISIT	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB PT	
IP131	VISIT	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB PT	
IP132	STAFF TOILET	CONC-POL	--	EPX PT	EPX PT	EPX PT	EPX PT	GB-PT	
IP133	VIDEO ARRAIGNMENT WAITING	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB PT	
IP133A	VIDEO ARRAIGNMENT	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	SGB PT	
KL100	KITCHEN	SV-A	SV-A	EPX PT	EPX PT	EPX PT	EPX PT	ACP-B-HDC	4, 5, 6
KL101	LAUNDRY	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	GB-PT	
KL102	STAFF DINING	QCT	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	
KL103	JAN	SV-A	SV-A	EPX PT	EPX PT	EPX PT	EPX PT	SGB PT	4
KL104	OFFICE	SV-A	SV-A	PT	PT	PT	PT	ACP-B-HDC	4
KL104A	TOILET	SV-A	SV-A	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	4
KL104B	STORAGE	CONC-SLR	RB	PT	PT	PT	PT	ACP-B-HDC	
KL105	LOCKERS	SV-A	SV-A	EPX PT	EPX PT	EPX PT	EPX PT	ACP-B-HDC	4
KL105A	TOILET	SV-A	SV-A	EPX PT	EPX PT	EPX PT	EPX PT	SGB PT	4
KL106	BULK STORAGE	CONC-SLR	--	PT	PT	PT	PT	EXPC PT	
KL107	TRANSPORT CORRIDOR	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
KL108	DRY STORAGE	SV-A	SV-A	EPX PT	EPX PT	EPX PT	EPX PT	EXPC PT	4
KL109	TRANSPORT OFFICE	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
KL110	COLD STORAGE	PER MFR	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
KL111	MECHANICAL	CONC-SLR	EPX PT	PT	PT	PT	PT	EXPC	
KL112	ELECTRICAL	CONC-SLR	EPX PT	PT	PT	PT	PT	EXPC	
KL113	ELECTRICAL	CONC-SLR	EPX PT	PT	PT	PT	PT	EXPC	
KL114	LOADING	CONC-SLR	EPX PT	PT	PT	PT	PT	EXPC PT	
KL115	ELECTRICAL	CONC-SLR	EPX PT	PT	PT	PT	PT	EXPC	
KL116	DATA	CONC-SLR	EPX PT	PT	PT	PT	PT	EXPC	
KL117	DATA	CONC-SLR	EPX PT	PT	PT	PT	PT	EXPC PT	
M100	WAITING	SV-B	SV-B	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
M101	NURSE	SV-B	SV-B	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
M102	PHARMACY	SV-B	SV-B	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
M103	MEDICAL	SV-B	SV-B	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
M104	EXAM	SV-B	SV-B	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
M105	TELEMED	SV-B	SV-B	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC	
M106	STOR	SV-B	SV-B	EPX PT	EPX PT	EPX PT	EPX PT	GB-PT	
M108	TOILET	RES-A1	RES-A1	RES-B	RES-B	RES-B	RES-B	GB-PT	4
S100	SEGREGATION 'UNIT S' 8 BEDS	CONC-POL	EPX PT	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A-HDC/SGB PT	
S101	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
S102	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
S103	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
S104	SINGLE	CONC-POL	--	PER MFR	PER MFR	PER MFR	PER MFR	PER MFR	
S105	SHOWER	RES-A1	RES-A1	RES-B	RES-B	RES-B	RES-B	--	4, 5, 9
S106	JAN	RES-A1	RES-A1	EPX PT	EPX PT	EPX PT	EPX PT	GB-PT	4
S107	REC YARD	CONC-SLR	--	--	--	--	--	MESH	5
W101	WAREHOUSE	CONC-LH	RB	EPX PT	EPX PT	EPX PT	EPX PT	EXPC PT	
W102	TOILET	CONC-LH	RB	EPX PT	EPX PT	EPX PT	EPX PT	ACP-A	
W103	SRT STORAGE	CONC-LH	RB	PT	PT	PT	PT	EXPC PT	
W104	SRT. BAY	CONC-LH	RB	EPX PT	EPX PT	EPX PT	EPX PT	EXPC PT	
W105	CORRIDOR	CONC-LH	RB	PT	PT	PT	PT		

FINISH SCHEDULE GENERAL NOTES

A. FINISH SCHEDULE DESCRIBES ONLY THE BASIC OR PREDOMINANT SURFACE FINISH.

B. PROVIDE SAME FINISHES AS THE ADJACENT SPACE IN ALCOVES AND CONTINUOUS SPACES WITHOUT DESIGNATED SPACE NUMBERS.

C. CASEWORK FINISHES ARE NOT NOTED IN THE FINISH SCHEDULE. REFER TO CASEWORK ELEVATIONS AND SPECIFICATIONS FOR MATERIALS AND FINISHES.

D. DIRECTIONAL WALL FINISH INDICATORS (NORTH, EAST, SOUTH, WEST) REFER TO THE "PLAN" NORTH ORIENTATION.

E. BULKHEADS AND SOFFITS MAY NOT BE INDICATED IN FINISH SCHEDULES. REFER TO RCP DETAILS, AND OTHER DOCUMENTS FOR EXTENT.

F. PROVIDE CONTINUOUS SEALANT BETWEEN INTERIOR SLAB-ON-GRADE AND VERTICAL ELEMENT WHERE JOINT IS NOT CONCEALED BY FINISH BASE OR OTHER CONSTRUCTION.

G. ALL NON-DETENTION EXTERIOR WINDOWS TO RECEIVE ROLLER SHADES, UNO.

FINISH SCHEDULE NOTES

1. PROVIDE BROOM FINISH ON CONCRETE. PROVIDE SMOOTH FINISH AROUND PERIMETER OF ROOM.
2. STEEL DOORS AND FRAMES SHALL BE ACCENT PAINTED.
3. STAIR TREADS AND PLATFORM FLOOR SHALL BE DIAMOND-TREAD GALVANIZED METAL RAILINGS SHALL BE GALVANIZED.
4. INTEGRAL COVE BASE 8" H. TERMINATE AT CMU MORTAR JOINT.
5. APPLY BLOCK FILLER TO CREATE SMOOTH FINISH.
6. PROVIDE STAINLESS STEEL CORNER GUARDS AT ALL OUTSIDE CORNER CONDITIONS.
7. PROVIDE 8" H STAINLESS STEEL CRASH RAIL ON WALLS. MOUNT AT 36" AFF TO CENTER OF RAIL.
8. INTEGRAL COVE BASE 4" H. FEATHER TO MEET WALL FINISH.
9. RES-B SHALL EXTEND TO 8'-0" AFF. COVE INSIDE CORNERS.
10. PROVIDE POLYMER CORNERGUARDS AT OUTSIDE GYPSUM WALL CORNER CONDITIONS.
11. RAISED ACCESS FLOOR

MOSELEYARCHITECTS
6210 ARDREY KELL ROAD • THE HUB AT WAVERLY, SUITE 425 • CHARLOTTE, NC 28277
PHONE (704) 540-3755 FAX (704) 540-3754
MOSELEYARCHITECTS.COM

STEVEN J HOPKINS 11547
01/15/24

MOSELEY ARCHITECTS, PC 50149

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

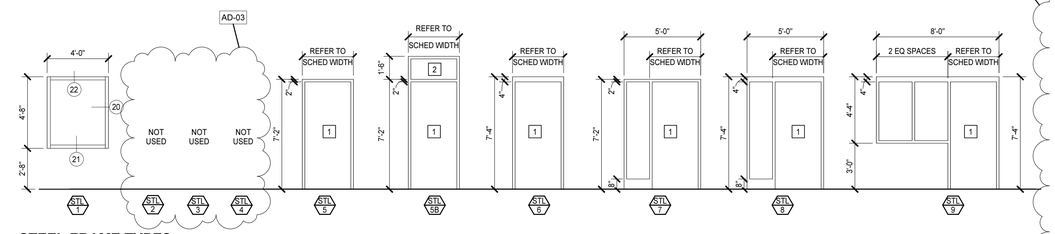
PROJECT NO: 611888
DATE: 05/01/2024

REVISIONS	
DATE	DESCRIPTION
06/12/24	AD-03

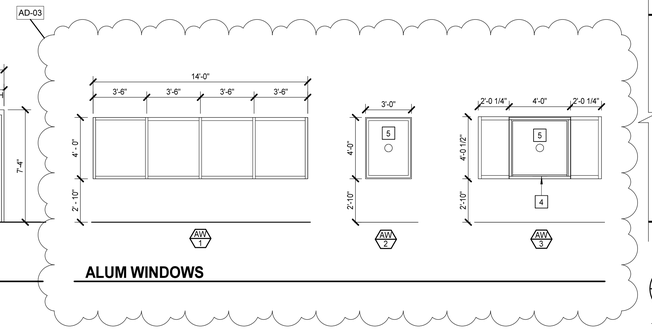
FINISH SCHEDULE

A3.0.1

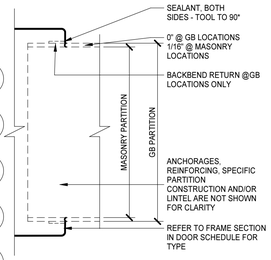
6/12/2024 4:03:35 PM



STEEL FRAME TYPES

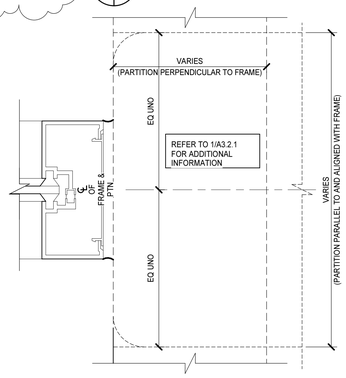


ALUM WINDOWS



27 INTERIOR WRAP HEAD/JAMB/SILL

A3.2.2 6" = 1'-0"



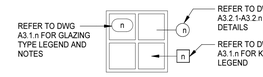
DOOR AND FRAME GENERAL NOTES

A. UNLESS INDICATED OTHERWISE, ALL DETAIL NUMBERS IN THE DOOR AND FRAME SCHEDULE FOR HEAD, JAMB AND SILL CONDITIONS REFER TO DRAWINGS A3.2.1 - A3.2.n.

B. DOOR AND FRAME DETAILS INDICATE GENERAL CHARACTERISTICS OF DOOR AND FRAME SIZES AND COMPONENTS AND MAY NOT INDICATE EXACT FIELD CONDITIONS OR REQUIREMENTS. COORDINATE DETAILS WITH OTHER DRAWINGS AND SPECS TO DETERMINE ALL COMPONENTS (E.G., SEALANTS, ANCHORS, HARDWARE, LINTELS, CLIPS) REQUIRED FOR COMPLETE AND FUNCTIONAL INSTALLATION.

C. DOOR SWINGS ON FLOOR PLANS TAKE PRECEDENCE OVER SWINGS INDICATED ELSEWHERE (E.G., ELEVATIONS).

DOOR, FRAME AND GLAZING KEYNOTES



1 SIZE AS REQUIRED TO ACCOMMODATE DOOR, HARDWARE AND COMPONENTS

2 LOUVER LOCATION

3 BACKBEND RETURN @ GB LOCATIONS ONLY

4 DEAL TRAY LOCATION. REFER TO SPEC SECTION 085653.

5 SPEAK-THROUGH LOCATION. REFER TO SPEC SECTION 085653.

AD-03

GLAZING TYPES

REPRESENTED BY: n

G1. 1/4" CLEAR

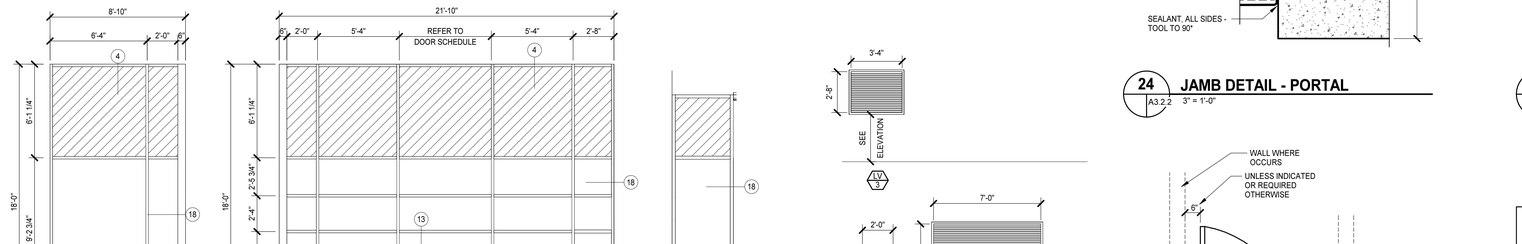
G2. 1" TINTED INSULATING

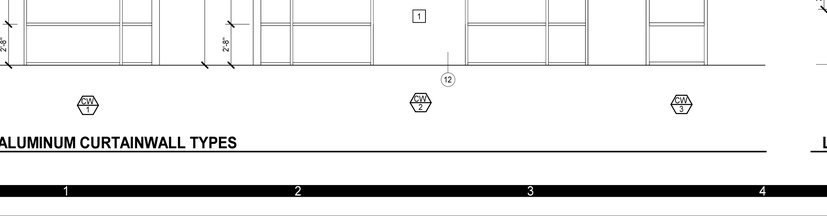
G3. 1" SPANDREL PANEL

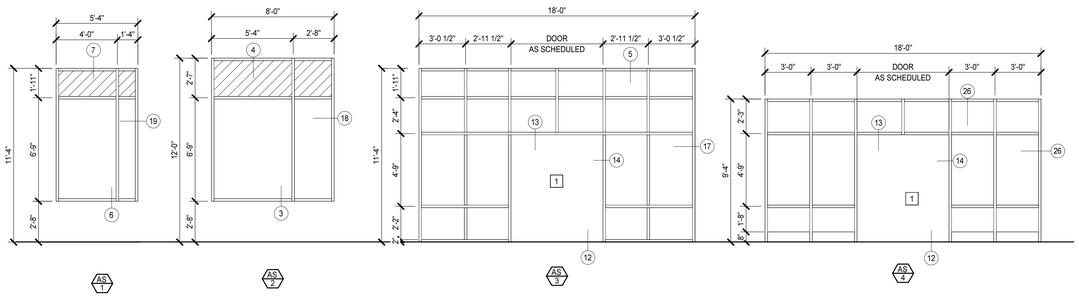
G4. LEVEL 4 BALLISTIC RATED GLAZING

G5. 90 MIN. FIRE RATED

NOTES:
1. ALL GLAZING IN INTERIOR FRAMES SHALL BE TYPE G1, UNO
2. ALL GLAZING IN EXTERIOR FRAMES SHALL BE TYPE G2, UNO
3. GLAZE ALL OPENINGS IN FRAMES UNLESS SPECIFICALLY INDICATED OTHERWISE
4. ALL GLAZING SHALL BE SAFETY GLASS UNLESS INDICATED OTHERWISE

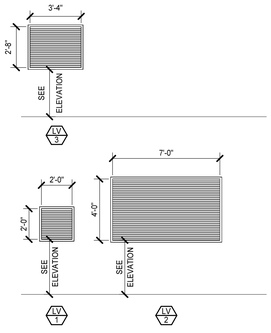






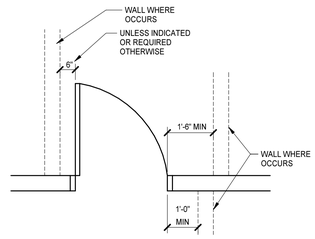
ALUMINUM STOREFRONT TYPES

ALUMINUM CURTAINWALL TYPES

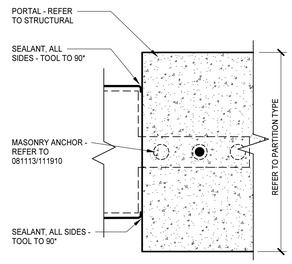


REFER TO STEEL FRAME 5B FOR ADDITIONAL LOUVER LOCATIONS TO BE INTEGRAL WITH DOORS.

LOUVER TYPES

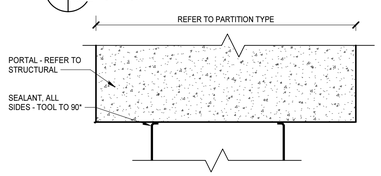


MANEUVERING CLEARANCE AT DOORS



24 JAMB DETAIL - PORTAL

A3.2.2 3" = 1'-0"

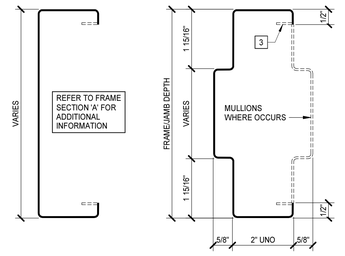


25 INTERIOR BETWEEN THE JAMB - BUTTED HEAD/JAMB/SILL

A3.2.2 6" = 1'-0"

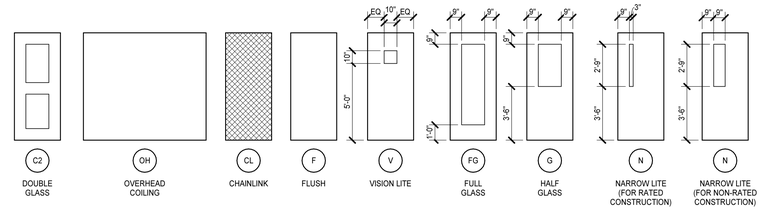
23 HEAD DETAIL - PORTAL

A3.2.2 3" = 1'-0"



1. ALL FRAME/JAMB DEPTHS, OTHER THAN WRAP CONDITIONS, SHALL BE _____ UNO.
2. ALL FRAME/JAMB DEPTHS AT WRAP CONDITIONS SHALL BE SIZED TO SUIT PARTITION.
3. DOORS, PANELS, GLAZING, STOPS, AND OTHER FRAME INFILLS ARE NOT SHOWN IN FRAME SECTIONS AS THEY VARY - PROVIDE SAME WHERE INDICATED.

STEEL FRAME SECTIONS



DOOR TYPES

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STEVEN J HOPKINS — REGISTERED ARCHITECT — 11547 — NORTH CAROLINA — CHARLOTTE, NC — 01/15/24

MOSELEY ARCHITECTS, P.C. — REGISTERED ARCHITECTS CORPORATION — 50149 — NORTH CAROLINA — CHARLOTTE

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: 05/01/2024

REVISIONS

DATE	DESCRIPTION
06/12/24	AD-03

DOOR & FRAME GLAZING TYPES

A3.2.2

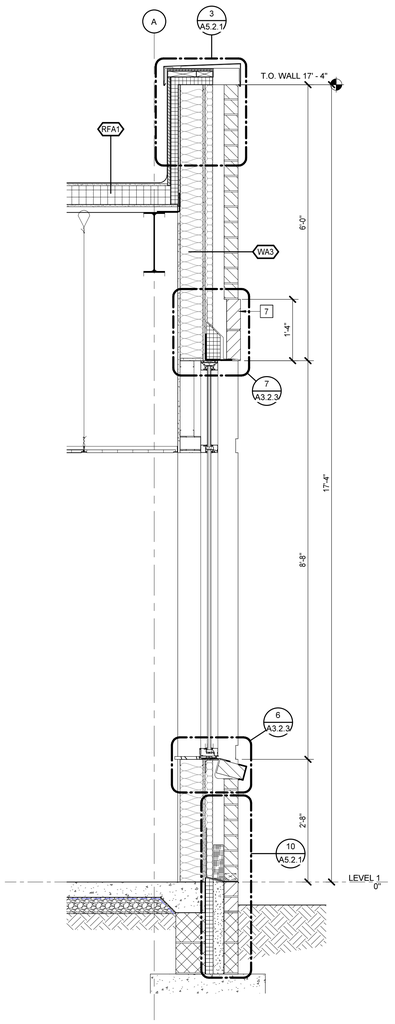
6/10/2024 3:56:06 PM

WALL SECTION KEYNOTES

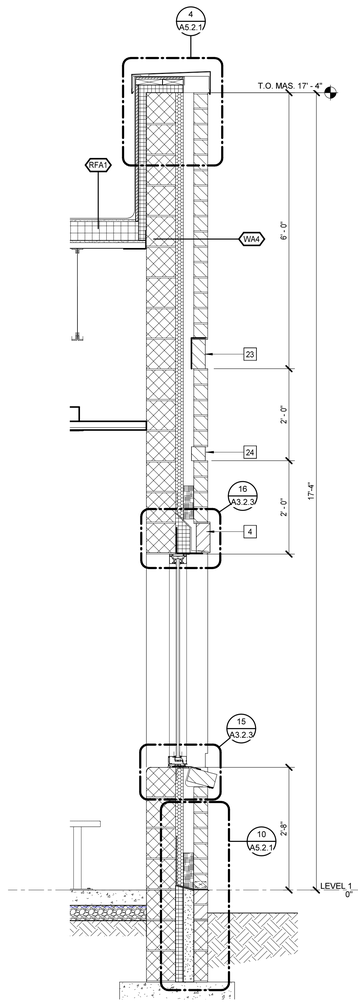
APPLIES TO DRAWINGS A5.1.1 - A5.1.n
REPRESENTED BY [n]

1	CEILING PER A9 SERIES
2	ACOUSTICAL WALL PANEL
3	OVERHEAD COILING DOOR
4	5/8" PROJECTED SOLDIER COURSE
5	ALUMINUM CURTAINWALL SYSTEM
6	PREMANUFACTURED PROTECTIVE COVER
7	5/8" PROJECTED SOLDIER COURSE - 2 COURSE
8	STRUCTURAL STEEL PER S-SERIES
9	SECURITY BARRIER MESH, 1/4" X 6" BATTEN PLATE AND THRU- BOLTS @ 12" O.C.
10	CONCRETE FRAME - REFER TO S-SERIES
11	DETENTION HOLLOW METAL FRAME - REFER TO DETENTION FRAME SCHEDULE
12	SECURITY SEALANT
13	REC. YARD SLAB RECESSED 1/4"
14	VAPOR BARRIER
15	STEEL CELL PER DIVISION 13
16	3'-6" HIGH, 1-1/4" DIA . STEEL PIPE GUARDRAIL & GATE
17	STEEL GRATING ELEVATED SERVICE WALKWAY
18	WALL MOUNTED LADDER
19	CHASE LIGHT FIXTURE, SEE E-SERIES
20	EXTERIOR LIGHT FIXTURE - SEE E-SERIES
21	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FRAMING
22	ALUMINUM COMPOSITE METAL PANEL
23	5/8" RECESSED SOLDIER COURSE
24	5/8" RECESSED BRICK COURSE
25	RAISED ACCESS FLOORING SYSTEM
26	DEPRESSED SLAB - SEE S-SERIES
27	DIMENSIONAL CHARACTERS - REFER TO DIVISION 10 SECTION "SIGNAGE"
28	CONCEALED FASTENER METAL WALL PANEL
29	REFER TO SHEET A0.1 FOR RATED TOP OF WALL TERMINATION NOTES
30	NOT USED
31	CONC. SPLASH BLOCK
32	FIRE RATED, PICK RESISTANT, COMPRESSIBLE WALL SEAL

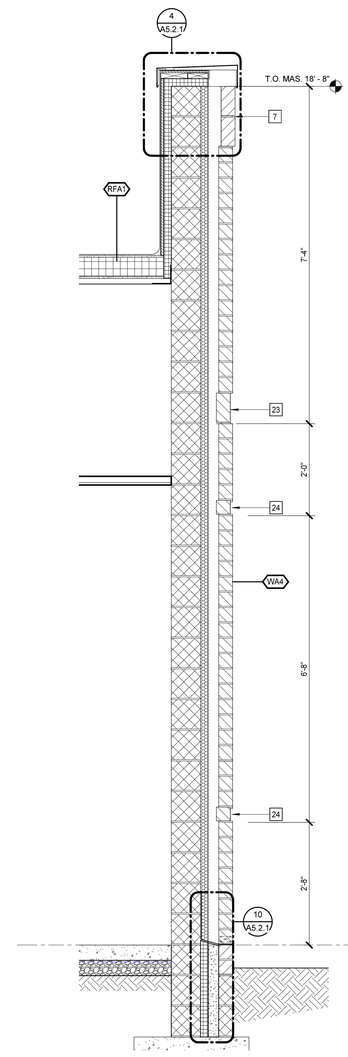
AD-03



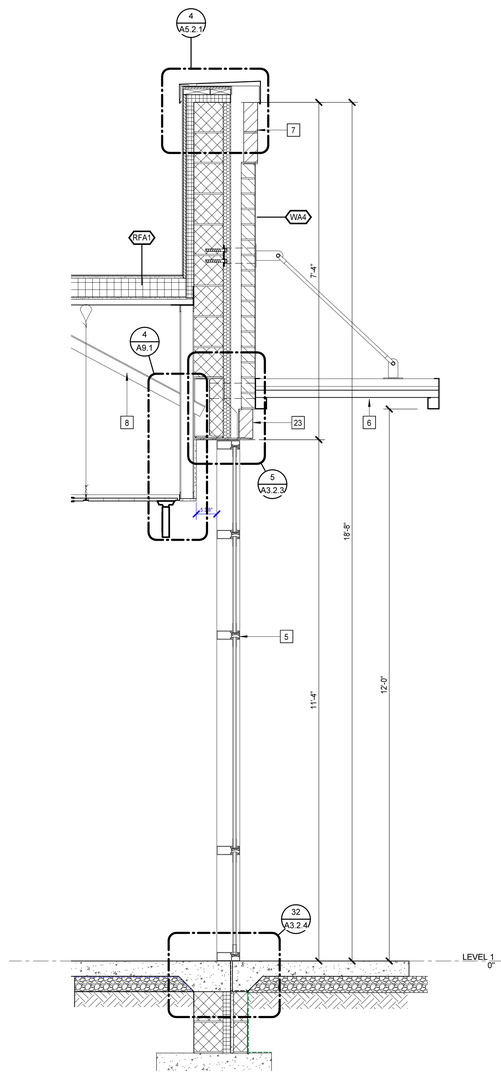
1 WALL SECTION
A2.1.4 A5.1.2 3/4" = 1'-0"



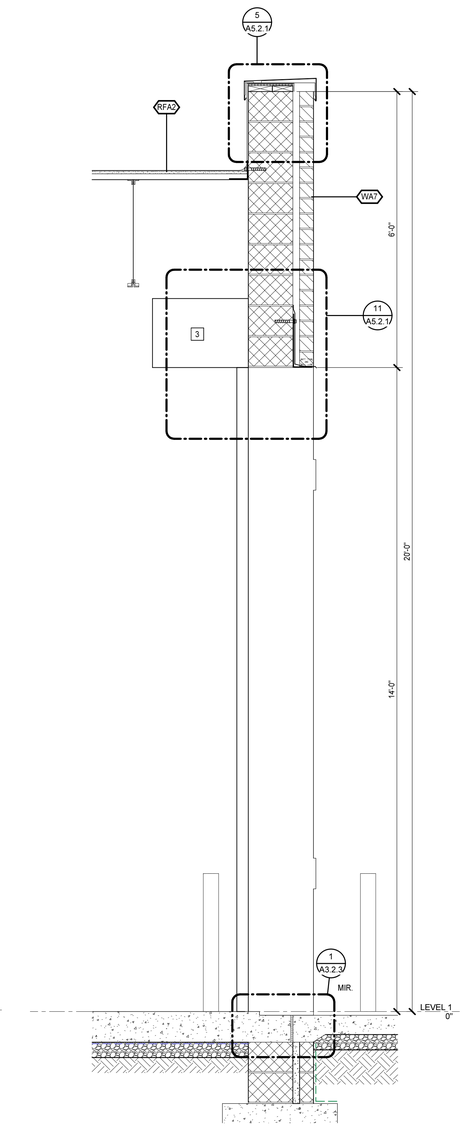
2 WALL SECTION
A2.1.1 A5.1.2 3/4" = 1'-0"



3 WALL SECTION
A2.1.1 A5.1.2 3/4" = 1'-0"



4 WALL SECTION
A2.1.1 A5.1.2 3/4" = 1'-0"



5 WALL SECTION
A2.1.1 A5.1.2 3/4" = 1'-0"

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1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
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REVISIONS

DATE	DESCRIPTION
06/12/24	AD-03

WALL SECTIONS

A5.1.2

6/7/2024 2:22:42 PM

WALL SECTION KEYNOTES

APPLIES TO DRAWINGS A5.1.1 - A5.1.n
REPRESENTED BY n

1	CEILING PER A9 SERIES	17	STEEL GRATING ELEVATED SERVICE WALKWAY
2	ACOUSTICAL WALL PANEL	18	WALL MOUNTED LADDER
3	OVERHEAD COILING DOOR	19	CHASE LIGHT FIXTURE, SEE E-SERIES
4	5/8" PROJECTED SOLDIER COURSE	20	EXTERIOR LIGHT FIXTURE - SEE E-SERIES
5	ALUMINUM CURTAINWALL SYSTEM	21	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FRAMING
6	PREMANUFACTURED PROTECTIVE COVER	22	ALUMINUM COMPOSITE METAL PANEL
7	5/8" PROJECTED SOLDIER COURSE - 2 COURSE	23	5/8" RECESSED SOLDIER COURSE
8	STRUCTURAL STEEL PER S-SERIES	24	5/8" RECESSED BRICK COURSE
9	SECURITY BARRIER MESH, 1/4" X 6" BATTEN PLATE AND THRU- BOLTS @ 12" O.C.	25	RAISED ACCESS FLOORING SYSTEM
10	CONCRETE FRAME - REFER TO S-SERIES	26	DEPRESSED SLAB - SEE S-SERIES
11	DETENTION HOLLOW METAL FRAME - REFER TO DETENTION FRAME SCHEDULE	27	DIMENSIONAL CHARACTERS - REFER TO DIVISION 10 SECTION "SIGNAGE"
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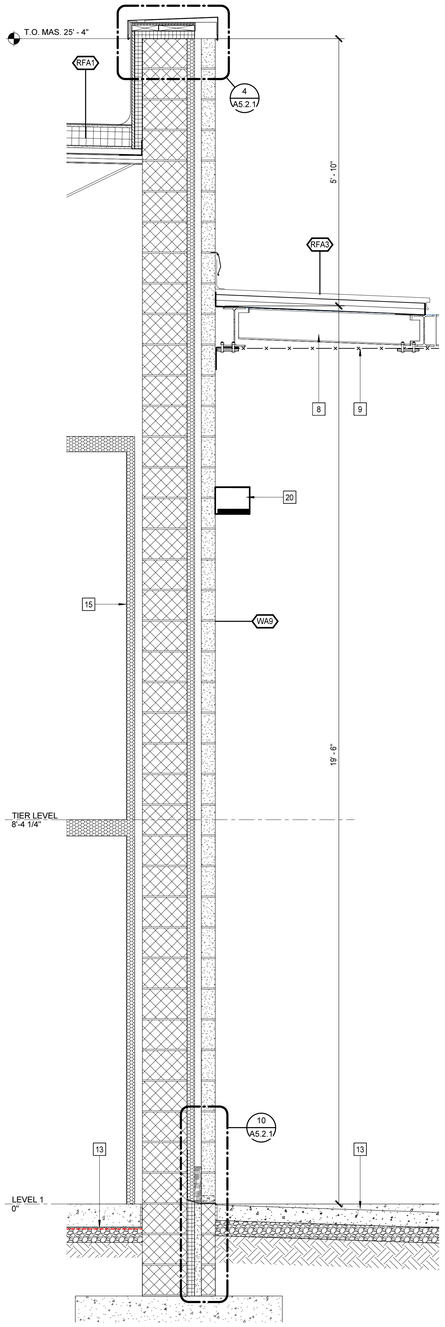
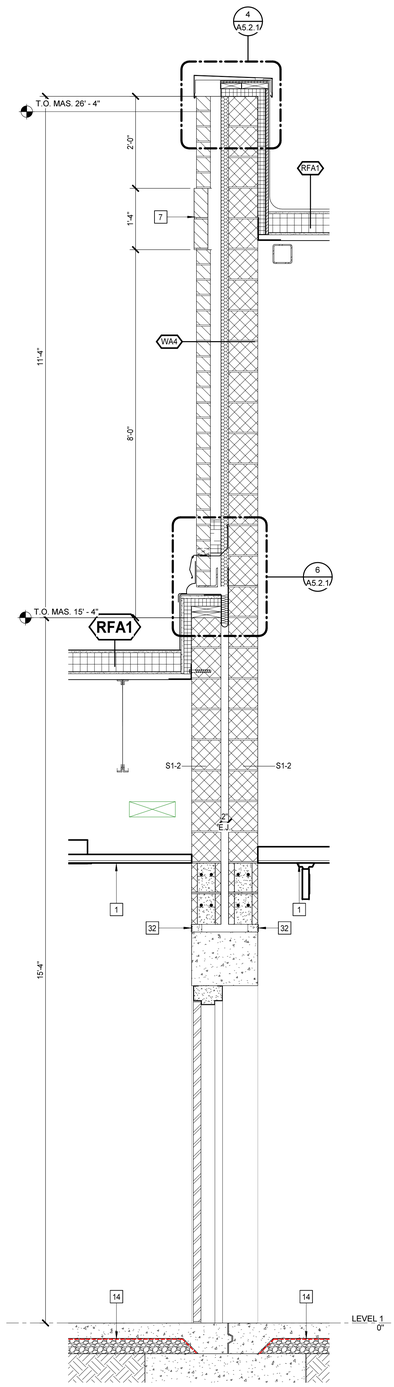
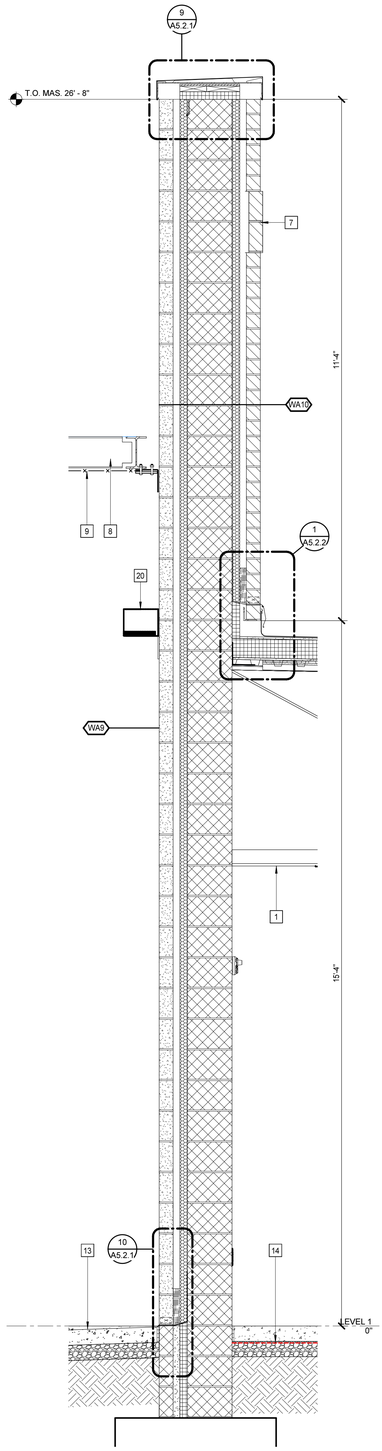
13	REC. YARD SLAB RECESSED 1/4"	29	REFER TO SHEET A0.1 FOR RATED TOP OF WALL TERMINATION NOTES (AD-03)
14	VAPOR BARRIER	30	NOT USED
15	STEEL CELL PER DIVISION 13	31	CONC. SPLASH BLOCK
16	3'-6" HIGH, 1-1/4" DIA . STEEL PIPE GUARDRAIL & GATE	32	FIRE RATED, PICK RESISTANT, COMPRESSIBLE WALL SEAL



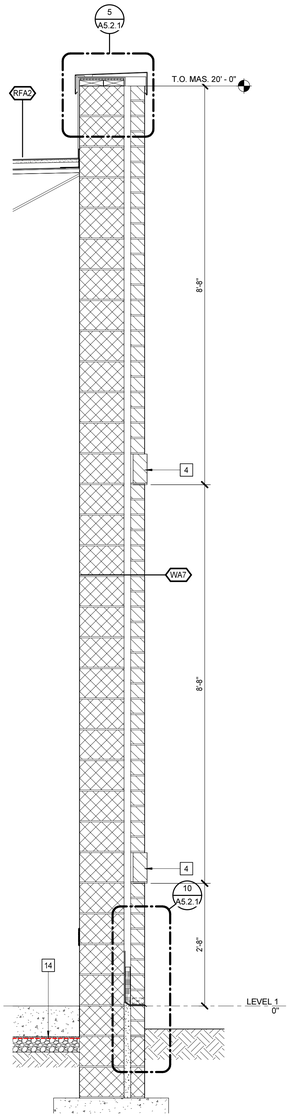
1 WALL SECTION
A2.1.2 A5.1.3 3/4" = 1'-0"



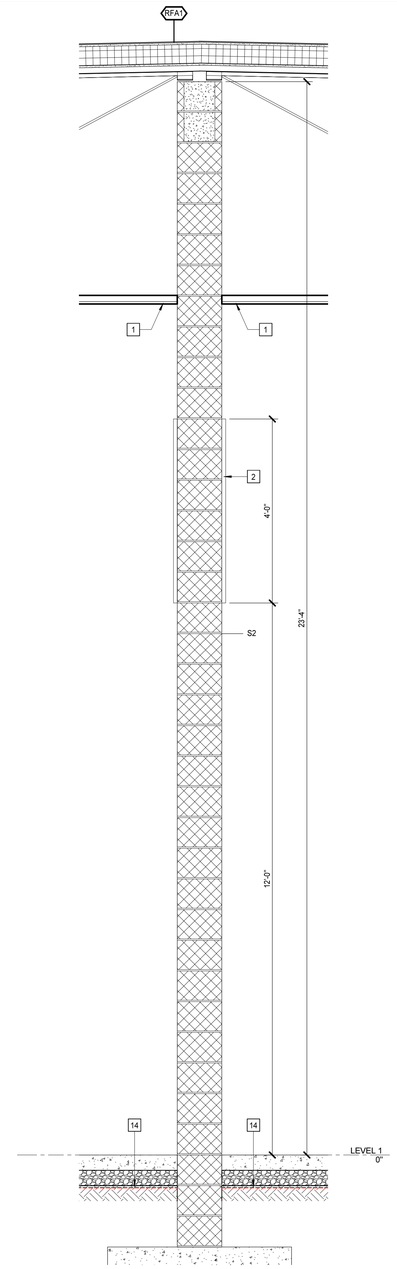
2 WALL SECTION
A2.1.1 A5.1.3 3/4" = 1'-0"



3 WALL SECTION
A2.1.2 A5.1.3 3/4" = 1'-0"



4 WALL SECTION
A2.1.1 A5.1.3 3/4" = 1'-0"



5 WALL SECTION
A2.1.2 A5.1.3 3/4" = 1'-0"

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PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
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REVISIONS	
DATE	DESCRIPTION
06/12/24	AD-03

WALL SECTIONS

A5.1.3

6/7/2024 2:22:45 PM

WALL SECTION KEYNOTES

APPLIES TO DRAWINGS A5.1.1 - A5.1.n
REPRESENTED BY [n]

1	CEILING PER A9 SERIES	17	STEEL GRATING ELEVATED SERVICE WALKWAY
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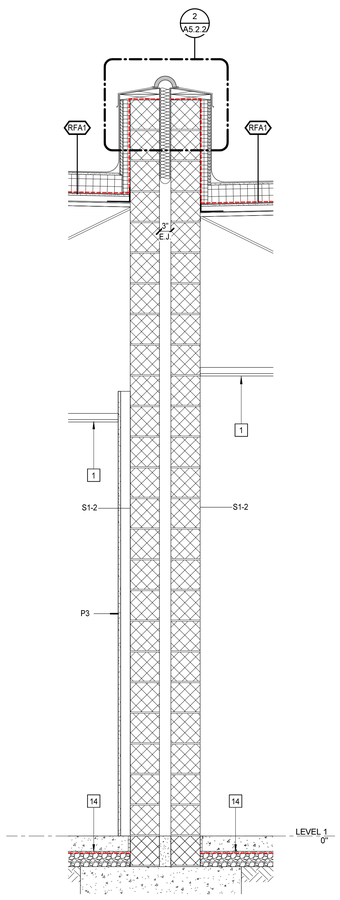
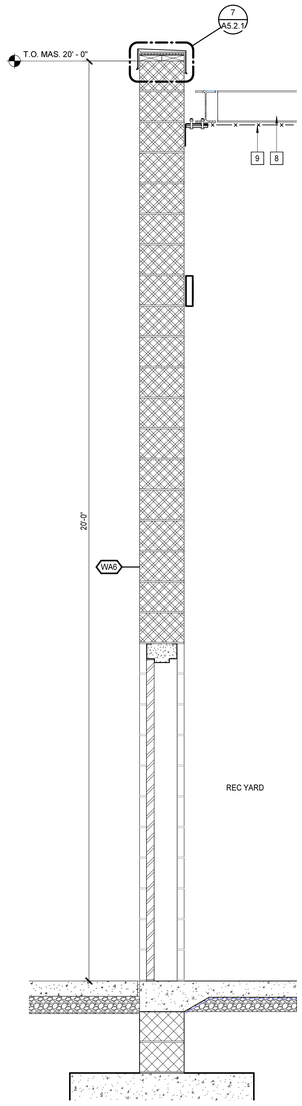
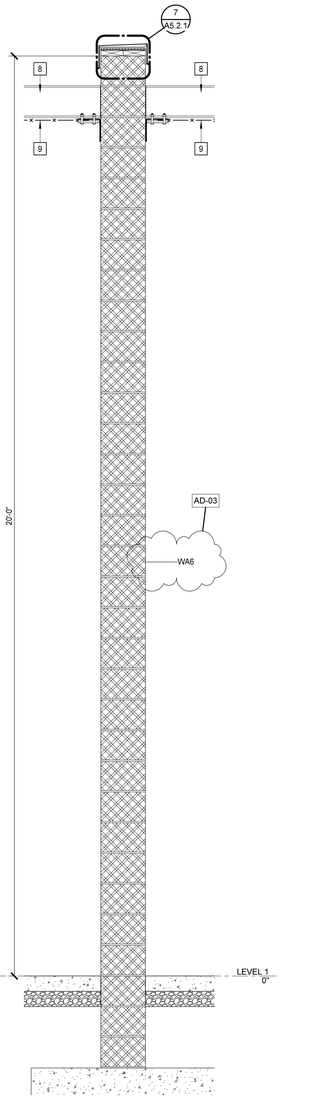
AD-03



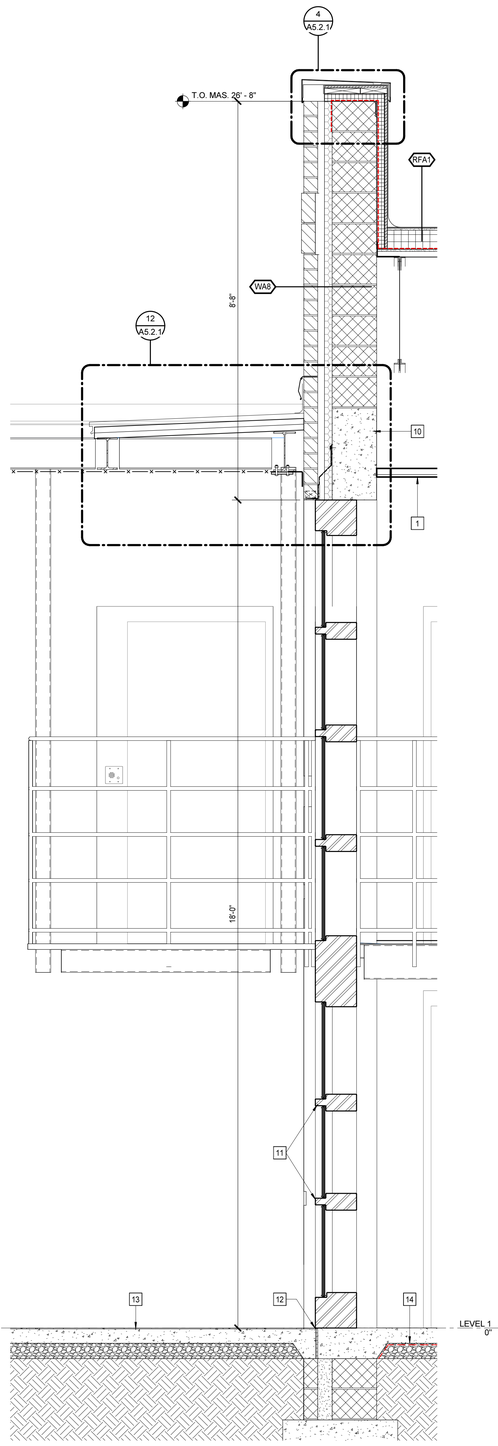
1 WALL SECTION
A2.1.1 | A5.1.4 3/4" = 1'-0"



2 WALL SECTION
A2.1.2 | A5.1.4 3/4" = 1'-0"



3 WALL SECTION
A2.1.2 | A5.1.4 3/4" = 1'-0"



4 WALL SECTION
A2.1.2 | A5.1.4 3/4" = 1'-0"

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CERTIFICATION
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REVISIONS

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WALL SECTIONS

A5.1.4

6/7/2024 2:22:47 PM

WALL SECTION KEYNOTES

APPLIES TO DRAWINGS A5.1.1 - A5.1.n
REPRESENTED BY n

1	CEILING PER A9 SERIES	17	STEEL GRATING ELEVATED SERVICE WALKWAY
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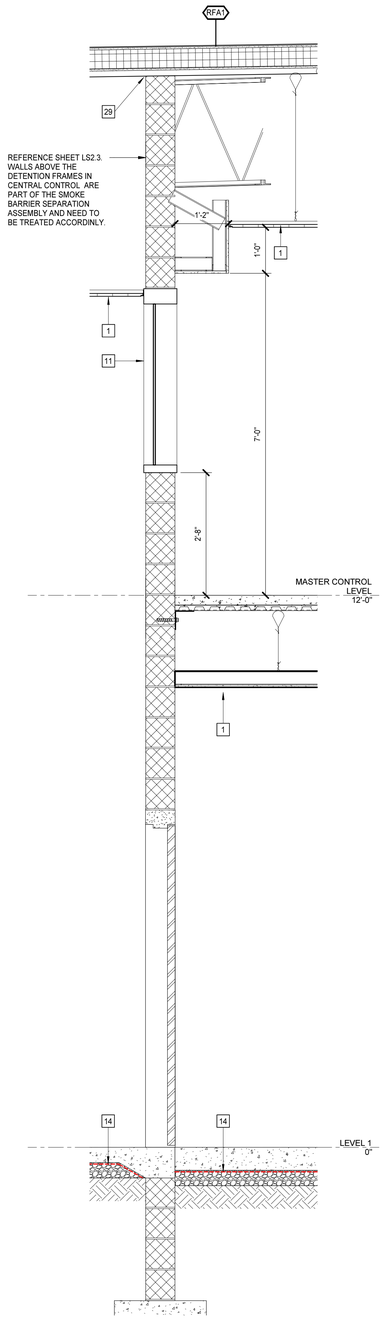
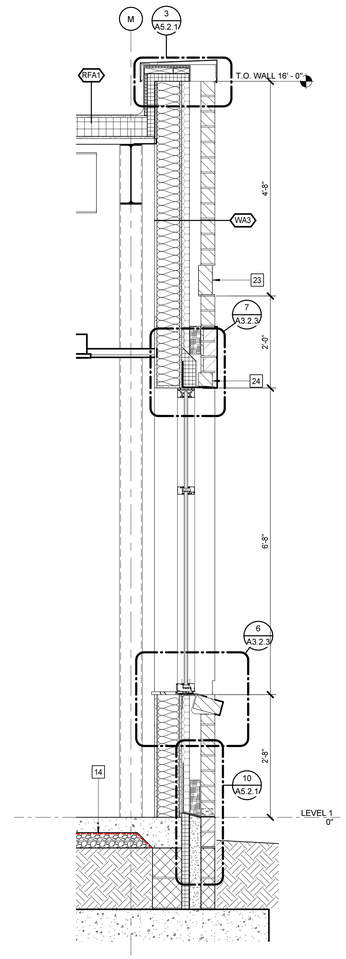
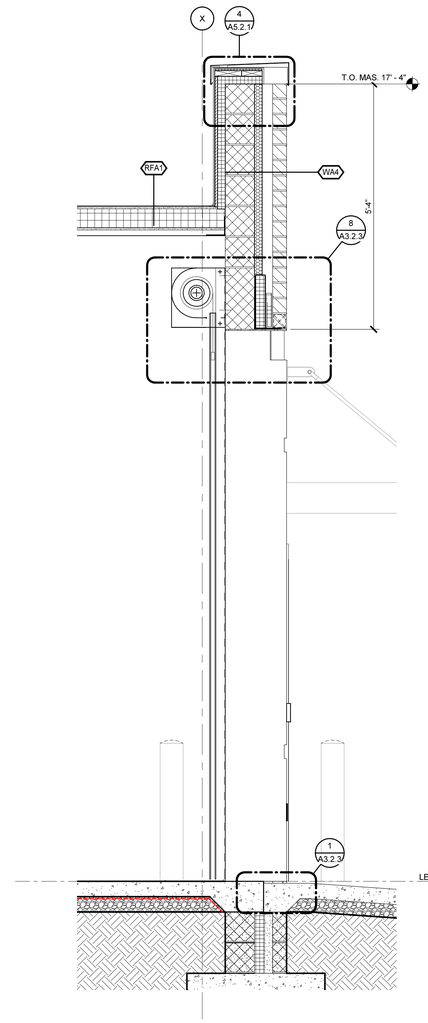
AD-03



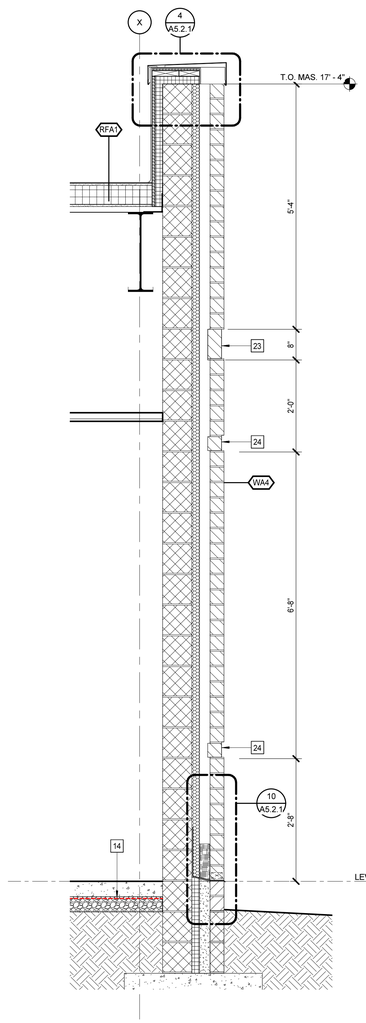
1 WALL SECTION
A2.1.2 A5.1.5 3/4" = 1'-0"



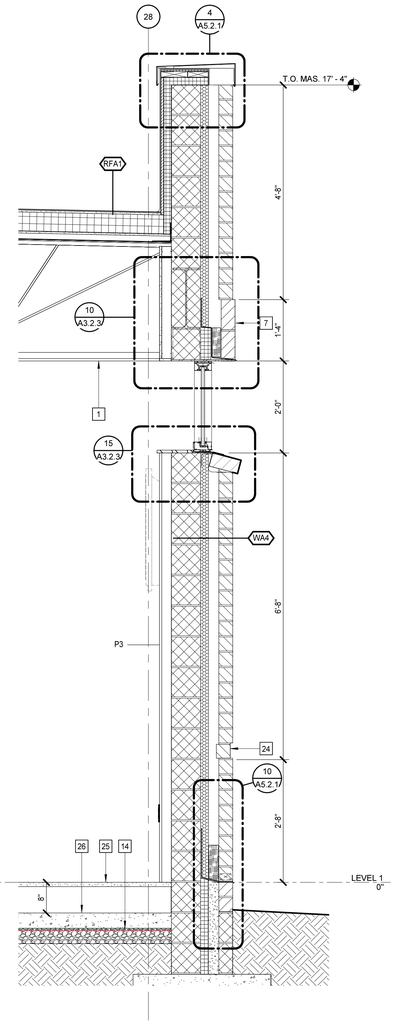
2 WALL SECTION
A2.1.4 A5.1.5 3/4" = 1'-0"



3 WALL SECTION
A2.1.4 A5.1.5 3/4" = 1'-0"



4 WALL SECTION
A2.1.4 A5.1.5 3/4" = 1'-0"



5 WALL SECTION
A2.1.4 A5.1.5 3/4" = 1'-0"

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05/01/2024

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REGISTERED ARCHITECTURAL CORPORATION
50149
NORTH CAROLINA
CHARLOTTE, NC

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: 05/01/2024

DATE	REVISIONS DESCRIPTION
06/12/24	AD-03

WALL SECTIONS

A5.1.5

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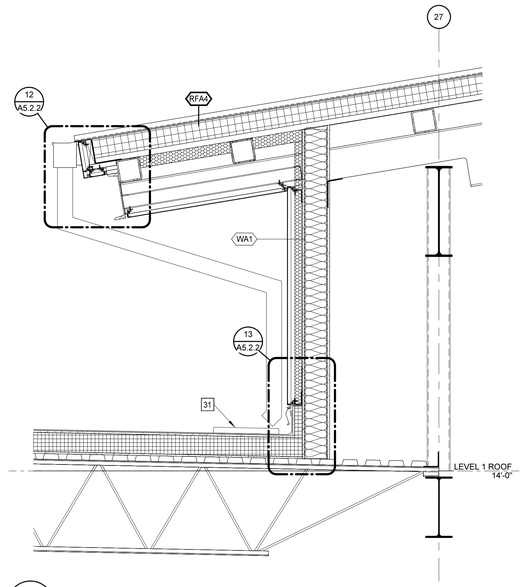
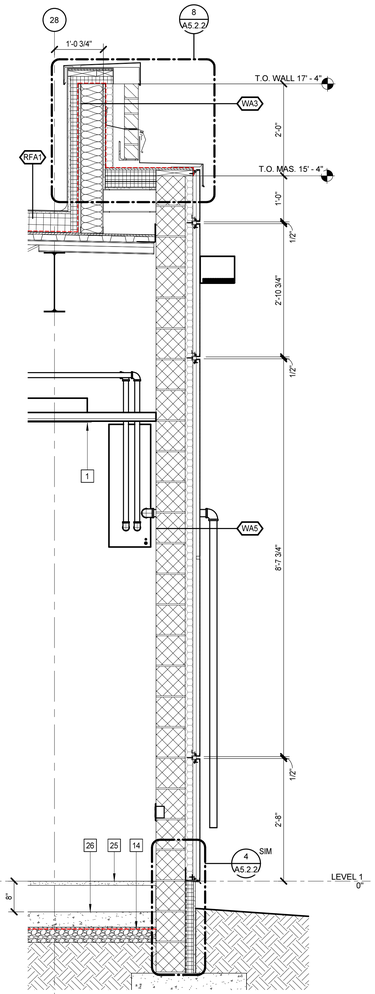
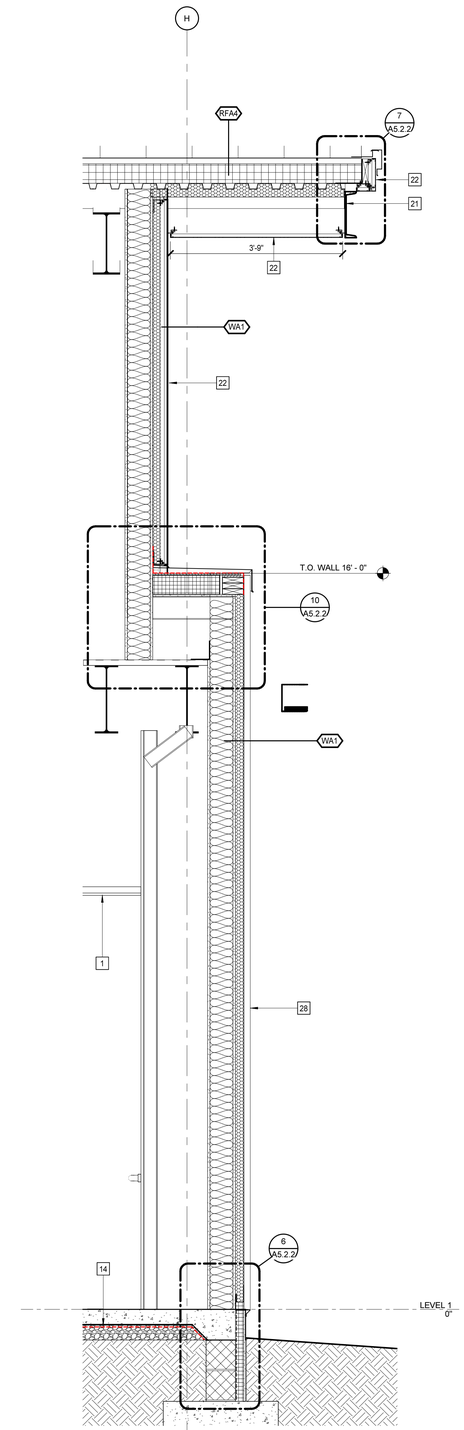


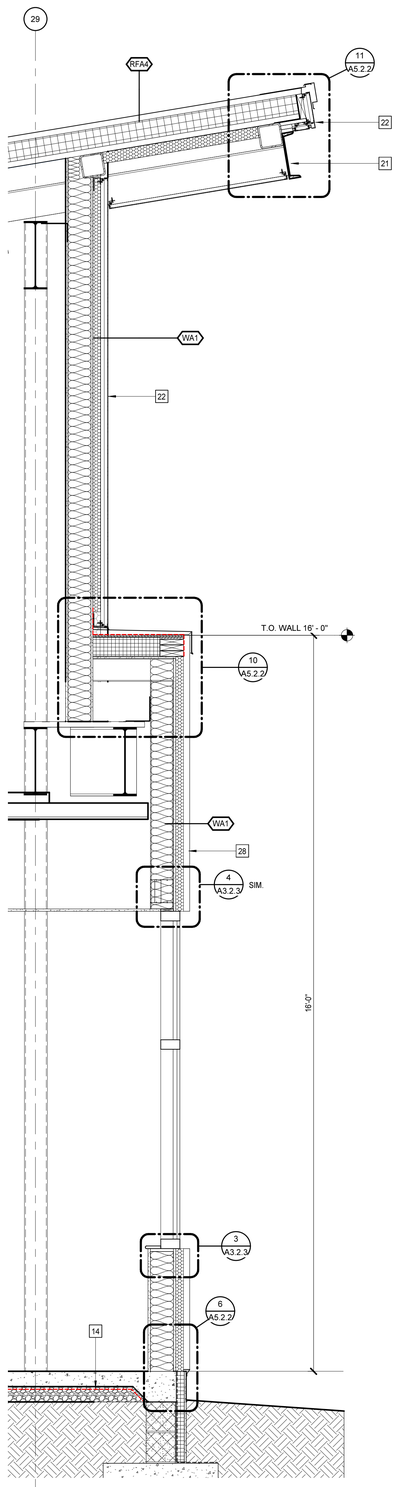
5 WALL SECTION
A10.1 A5.1.6 3/4" = 1'-0"



1 WALL SECTION
A2.1.4 A5.1.6 3/4" = 1'-0"



2 WALL SECTION
A2.1.4 A5.1.6 3/4" = 1'-0"

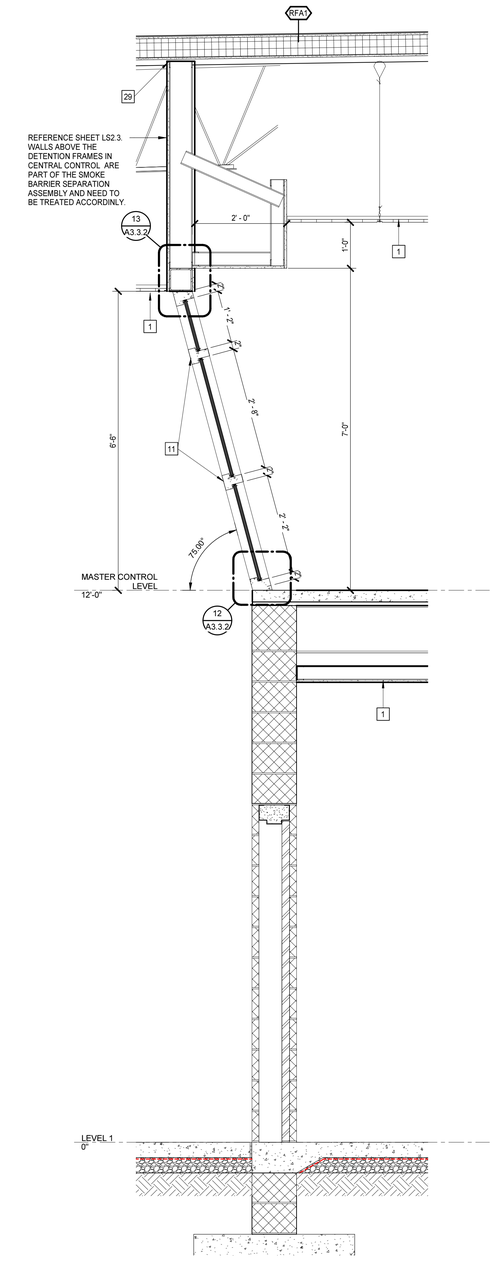


3 WALL SECTION
A2.1.4 A5.1.6 3/4" = 1'-0"

WALL SECTION KEYNOTES
APPLIES TO DRAWINGS A5.1.1 - A5.1.n
REPRESENTED BY n

1	CEILING PER A9 SERIES	17	STEEL GRATING ELEVATED SERVICE WALKWAY
2	ACOUSTICAL WALL PANEL	18	WALL MOUNTED LADDER
3	OVERHEAD COILING DOOR	19	CHASE LIGHT FIXTURE, SEE E-SERIES
4	5/8" PROJECTED SOLDIER COURSE	20	EXTERIOR LIGHT FIXTURE - SEE E-SERIES
5	ALUMINUM CURTAINWALL SYSTEM	21	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FRAMING
6	PREMANUFACTURED PROTECTIVE COVER	22	ALUMINUM COMPOSITE METAL PANEL
7	5/8" PROJECTED SOLDIER COURSE - 2 COURSE	23	5/8" RECESSED SOLDIER COURSE
8	STRUCTURAL STEEL PER S-SERIES	24	5/8" RECESSED BRICK COURSE
9	SECURITY BARRIER MESH, 1/4" X 6" BATTEN PLATE AND THRU- BOLTS @ 12" O.C.	25	RAISED ACCESS FLOORING SYSTEM
10	CONCRETE FRAME - REFER TO S-SERIES	26	DEPRESSED SLAB - SEE S-SERIES
11	DETENTION HOLLOW METAL FRAME - REFER TO DETENTION FRAME SCHEDULE	27	DIMENSIONAL CHARACTERS - REFER TO DIVISION 10 SECTION "SIGNAGE"
12	SECURITY SEALANT	28	CONCEALED FASTENER METAL WALL PANEL
13	REC. YARD SLAB RECESSED 1/4"	29	REFER TO SHEET A0.1 FOR RATED TOP OF WALL TERMINATION NOTES
14	VAPOR BARRIER	30	NOT USED
15	STEEL CELL PER DIVISION 13	31	CONC. SPLASH BLOCK
16	3'-6" HIGH, 1-1/4" DIA . STEEL PIPE GUARDRAIL & GATE	32	FIRE RATED, PICK RESISTANT, COMPRESSIBLE WALL SEAL

AD-03



4 WALL SECTION
A2.1.2 A5.1.6 3/4" = 1'-0"

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11547
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05/01/2024

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WALL SECTIONS

A5.1.6

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WALL SECTION KEYNOTES

APPLIES TO DRAWINGS A5.1.1 - A5.1.n
REPRESENTED BY n

1	CEILING PER A9 SERIES
2	ACOUSTICAL WALL PANEL
3	OVERHEAD COILING DOOR
4	5/8" PROJECTED SOLDIER COURSE
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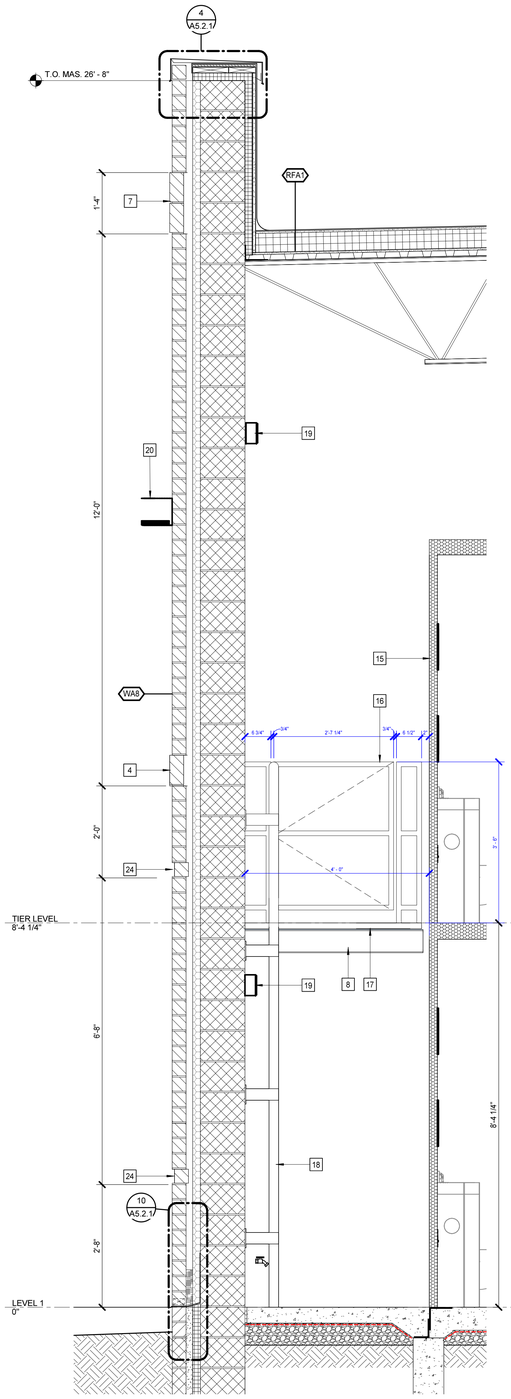
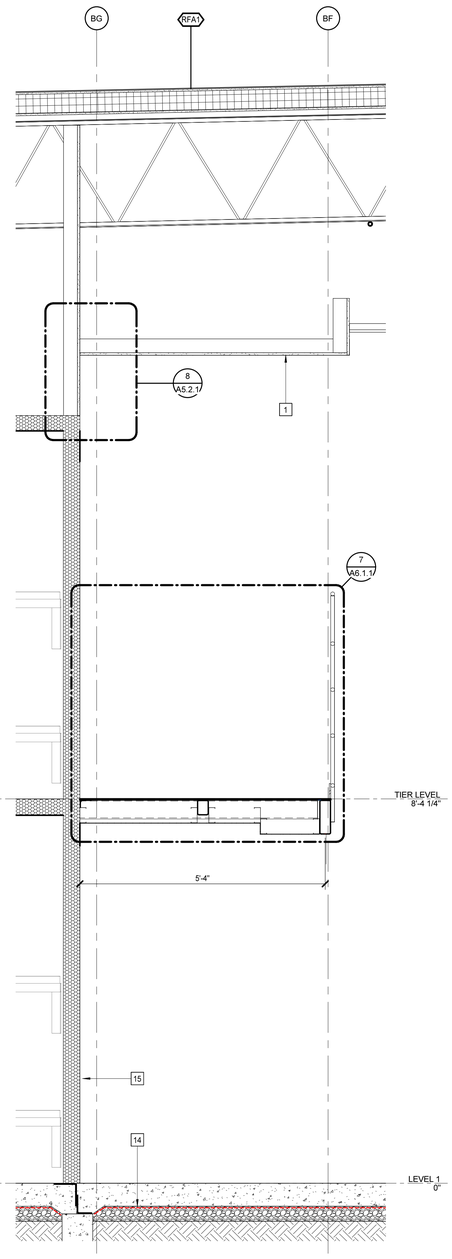
29	REFER TO SHEET A0.1 FOR RATED TOP OF WALL TERMINATION NOTES
30	NOT USED
31	CONC. SPLASH BLOCK
32	FIRE RATED, PICK RESISTANT, COMPRESSIBLE WALL SEAL

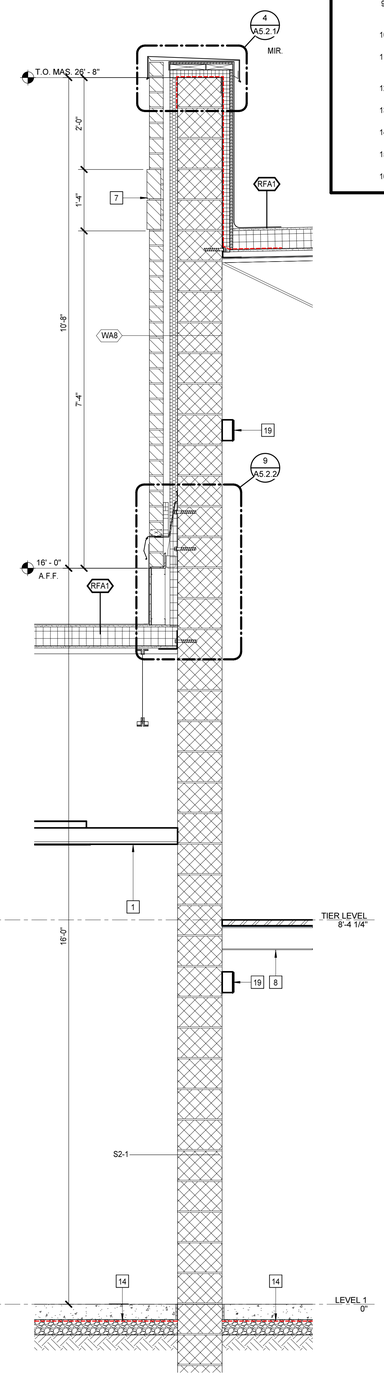
AD-03



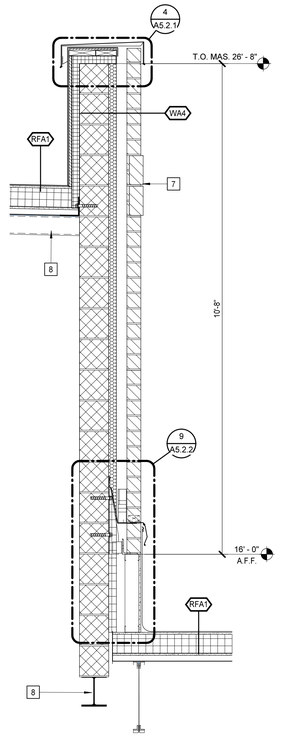
1 A2.1.2 A5.1.7 **WALL SECTION** 3/4" = 1'-0"



2 A2.1.2 A5.1.7 **WALL SECTION** 3/4" = 1'-0"



3 A2.1.1 A5.1.7 **WALL SECTION** 3/4" = 1'-0"



4 A2.1.3 A5.1.7 **WALL SECTION** 3/4" = 1'-0"

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WALL SECTIONS

A5.1.7

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WALL SECTION KEYNOTES

APPLIES TO DRAWINGS A5.1.1 - A5.1.n
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1	CEILING PER A9 SERIES
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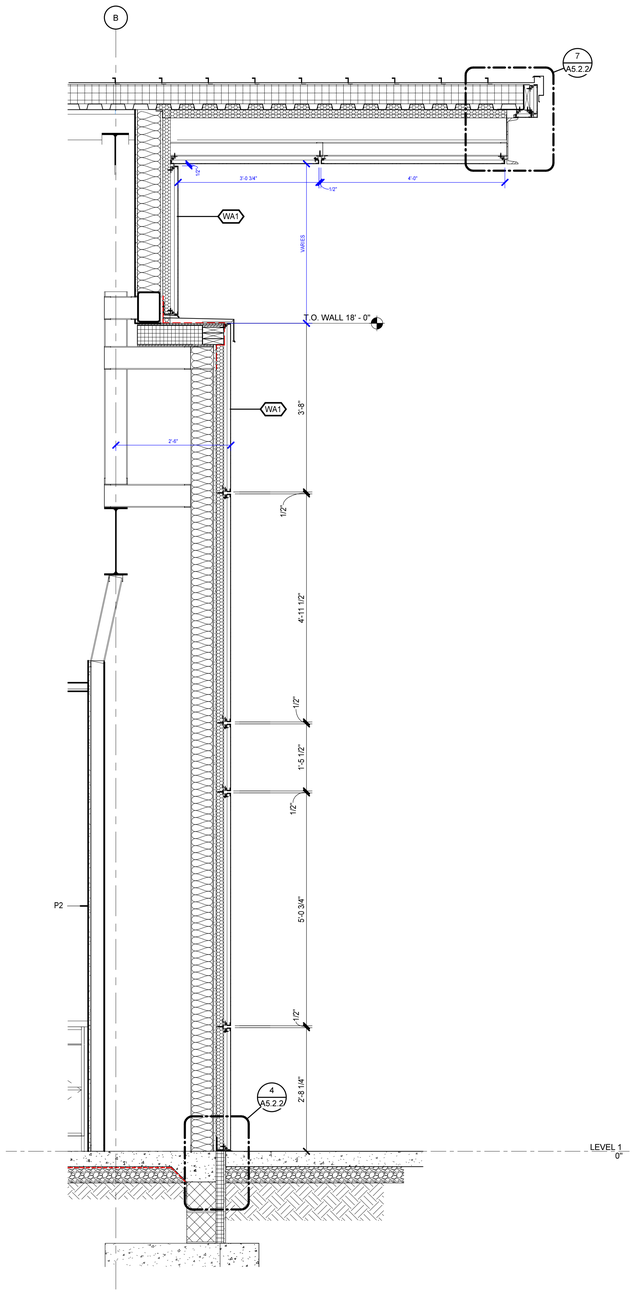
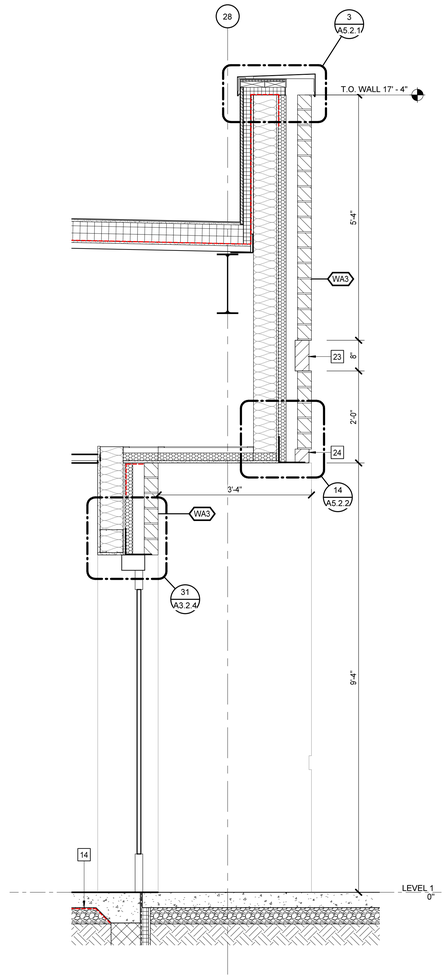


1 A2.1.4 A5.1.8 **WALL SECTION**
3/4" = 1'-0"



2 A2.1.4 A5.1.8 **WALL SECTION**
3/4" = 1'-0"

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A5.1.8

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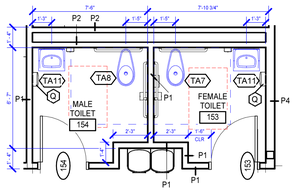
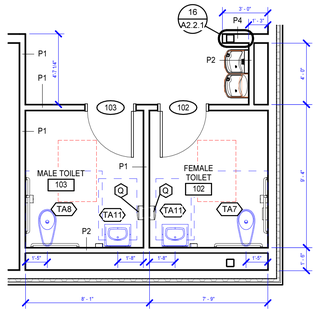
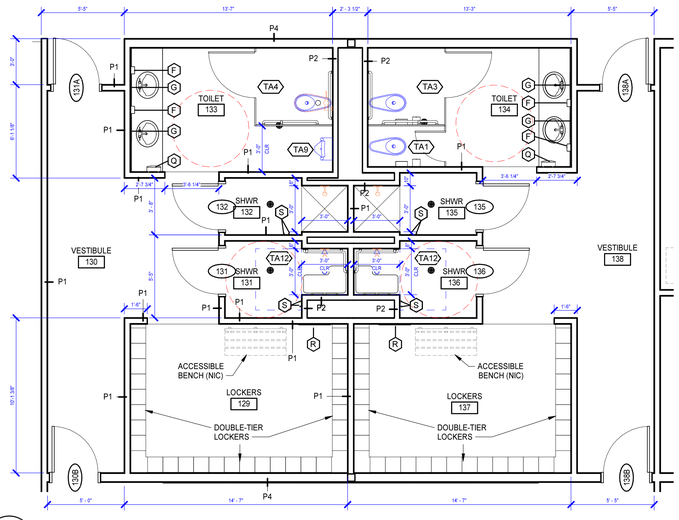


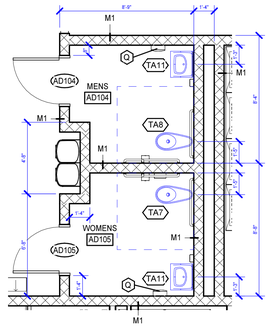
16 A2.1.6 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"



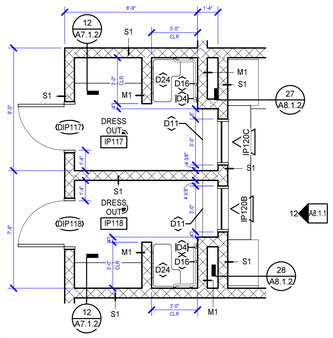
15 A2.1.6 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"



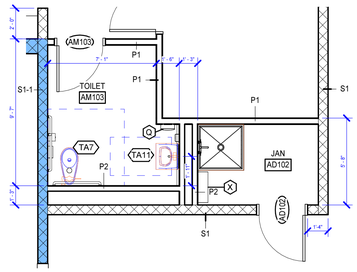
14 A2.1.6 A7.1.1 **ENLARGED LOCKER ROOM PLAN** 1/4" = 1'-0"



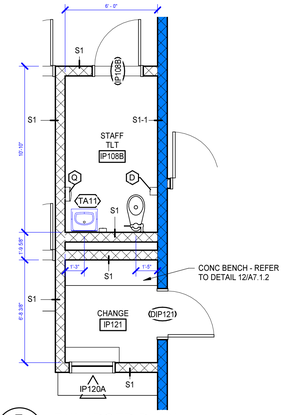
9 A2.1.1 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"



6 A2.1.1 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"



8 A2.1.1 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"



7 A2.1.1 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"

TOILET ASSEMBLIES

APPLIES TO DRAWINGS A7.1 - A7.nn
REPRESENTED BY (TAn)

MARK	REMARKS	PLAN
TA1		2'-10" CLEAR, UNO; 5'-0" CLEAR; * 1'-3" MIN; TOILET PARTITION OR WALL; WATER CLOSET
TA2	OMIT (E)	
BARRIER FREE TA3		5'-0" CLEAR; 4" MAX; 5'-0" CLEAR; 1'-5"; TOILET PARTITION OR WALL; WATER CLOSET
BARRIER FREE TA4	OMIT (E)	
BARRIER FREE TA5		3'-0" CLEAR; 5'-0" CLEAR; TOILET PARTITION; 1'-6"; TOILET PARTITION OR WALL; WATER CLOSET
BARRIER FREE TA6	OMIT (E)	
BARRIER FREE TA7		WATER CLOSET
BARRIER FREE TA8	OMIT (E)	
TA9		2'-6" CLR; UNO; URINAL SCREEN; WALL, TOILET PARTITION, OR URINAL SCREEN; 1'-10"; 1'-3" MIN; 1'-3" MIN; URINAL
BARRIER FREE TA10		3'-0" CLEAR; URINAL SCREEN; WALL, TOILET PARTITION, OR URINAL SCREEN; 1'-10"; 1'-6" MIN; 1'-6" MIN; URINAL
TA11	CENTER (G) OVER LAVATORY	LAVATORY
BARRIER FREE TA12		SEAT WALL; 3'-0" CLR INSIDE; 3'-0" CLR INSIDE; CONTROL WALL; SHOWER - TRANSFER STYLE
TA13	OMIT (C H J)	
BARRIER FREE TA14		CONTROL WALL; 5'-0" CLR INSIDE; 2'-6" CLR INSIDE; SHOWER - ROLL-IN STYLE
BARRIER FREE TA15		2'-6" CLR INSIDE; CONTROL WALL; 5'-0" CLR INSIDE; BATHTUB

LEGEND NOTES:

A. HANDING/ORIENTATION MAY VARY. REFER TO PLANS FOR PROPER ORIENTATION.

B. PLUMBING FIXTURE GRAPHICS IN THIS LEGEND ARE REPRESENTATIVE ONLY. ACTUAL PLUMBING FIXTURES MAY VARY.

C. COAT/ROBE HOOKS INDICATED ON THE BACK OF TOILET COMPARTMENT DOORS ARE PART OF THE TOILET COMPARTMENT ASSEMBLY AND ARE NOT CONSIDERED A TOILET ACCESSORY.

DETENTION EQUIPMENT SCHEDULE

NO	DESCRIPTION	MOUNTING HEIGHT	DETAIL	NOTES
D1	DETENTION MIRROR, SINGLE	REFER TO DETAIL	1/A7.2.1	
D2	DETENTION MIRROR, DOUBLE	REFER TO DETAIL	2/A7.2.1	
D3	GRAB BAR, ANTI-LIGATURE, 42"	REFER TO WATER CLOSET ELEVS	3/A7.2.1	
D4	GRAB BAR, ANTI-LIGATURE – 18" VERTICAL	REFER TO WATER CLOSET ELEVS		REFER TO DETAIL 3/A7.2.1
D5	GRAB BAR, ANTI-LIGATURE, 36"	REFER TO WATER CLOSET ELEVS	3/A7.2.1	
D6	RECESSED TOILET PAPER HOLDER	REFER TO DETAIL	6/A7.2.1	
D7	PISTOL LOCKER, 8-COMPARTMENT, RECESSED MTD	REFER TO DETAIL	5/A7.2.1	
D8	SS BENCH, FLOOR-MOUNTED	FLOOR MOUNTED	7/A7.2.1	
D9	STOOL, DETENTION, FLOOR-MOUNTED	FLOOR MOUNTED	9/A7.2.1	
D10	SWING STOOL, DETENTION, WALL-MOUNTED	REFER TO DETAIL	4/A7.2.1	
D11	DETENTION SS COUNTER, 12" DEPTH		11/A7.2.1	
D12	TRANSACTION DRAWER	REFER TO DETAIL	16/A7.2.1	
D13	BUNK, SINGLE, FLOOR-MOUNTED	FLOOR MOUNTED	15/A7.2.1	
D14	CELL SEAT	REFER TO CELL ELEVATIONS	2/A7.2.2	BY CELL MODULE MFR
D15	CELL DESK/WORKSURFACE	REFER TO CELL ELEVATIONS	1/A7.2.2	BY CELL MODULE MFR
D16	18"x36" CORNER GRAB BAR ASSEMBLY, ANTI -LIGATURE	REFER TO SHOWER ELEVATIONS		
D17	DETENTION 4-MAN TABLE	FLOOR MOUNTED	13/A7.2.1	
D17A	DETENTION 4-MAN TABLE - ACCESSIBLE	FLOOR MOUNTED	14/A7.2.1	
D18	BUNK, SINGLE, WALL-MOUNTED	15" TOP OF PAN	3/A7.2.2	BY CELL MODULE MFR
D19	BUNK, DOUBLE, WALL-MOUNTED	BOTTOM BUNK 15", TOP BUNK 50", TOP OF PAN	3/A7.2.2	BY CELL MODULE MFR
D20	SEMI-RECESSED TOILET PAPER HOLDER			BY CELL MODULE MFR
D21	SAFETY HOOK, SINGLE	REFER TO DETAIL	8/A7.2.1	
D22	DOUBLE DETENTION HOOK - ANTI-LIGATURE	REFER TO DETAIL	8/A7.2.1	
D23	VIDEO DISCOVERY STATION			REFER TO SECTION 285200
D24	L-SHAPED FOLDING SHOWER SEAT	1'-6" TO SEAT SURFACE		
D25	GRAB BAR, ANTI-LIGATURE, 24"	REFER TO WATER CLOSET ELEVS	3/A7.2.1	
D26	GRAB BAR, ANTI-LIGATURE, 48"	REFER TO WATER CLOSET ELEVS	3/A7.2.1	

AD-03

TOILET ACCESSORIES SCHEDULE

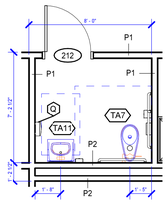
MARK	DESCRIPTION	MOUNTING HEIGHT	REMARKS
	<varies>	<varies>	
A	36" HORIZONTAL GRAB BAR	REFER TO WATER CLOSET ELEVATIONS	
B	42" HORIZONTAL GRAB BAR	REFER TO WATER CLOSET ELEVATIONS	
C	18" VERTICAL GRAB BAR	REFER TO WATER CLOSET ELEVATIONS	
D	TOILET TISSUE DISPENSER	REFER TO WATER CLOSET ELEVATIONS	
E	SANITARY NAPKIN DISPOSAL	REFER TO WATER CLOSET ELEVATIONS	
F	SOAP DISPENSER	3'-4" AFF TO DISPENSING OUTLET	
G	MIRROR (18" x 36"), OVER LAV AND COUNTERTOP	3'-4" AFF TO BOTTOM OF REFLECTIVE SURFACE	
H	18"x36" CORNER GRAB BAR ASSEMBLY	REFER TO SHOWER ELEVATIONS	
J	L-SHAPED FOLDING SHOWER SEAT	1'-6" TO SEAT SURFACE	
Q	PAPER TOWEL DISPENSER	3'-8" AFF TO DISPENSING OUTLET	
R	MIRROR (24" x 60")	2'-0" AFF TO BOTTOM OF REFLECTIVE SURFACE	
S	ROBE HOOK	3'-11" TO TOP OF HOOK	
X	COMBINATION UTILITY SHELF / MOP HOLDER		

1. ACCESSORY ITEMS ARE IDENTIFIED BY (⬡) ON PLANS. LETTERS CORRESPOND TO SCHEDULE ABOVE.
2. ACTUAL DIMENSIONS OF ACCESSORIES MAY VARY. COORDINATE DIFFERENCES, IF ANY.
3. REFER TO ALL CASEWORK ELEVATIONS FOR ADDITIONAL TOILET ACCESSORY LOCATIONS.
4. PROVIDE MOP AND BROOM HOLDER W/ SHELF (X) AT ALL CUSTODIAL/JANITORIAL SINKS. MOUNT AT 5'-0" AFF TO CENTERLINE AND LOCATE ON SIDE WALL OF SINK (NOT ON WALL ABOVE FAUCET).
5. PROVIDE ROBE HOOK ON INTERIOR FACE OF ALL TOILET ROOM DOORS WHEREIN ONLY ONE WATER CLOSET IS PROVIDED. MOUNT AT 3'-11" AFF TO TOP.

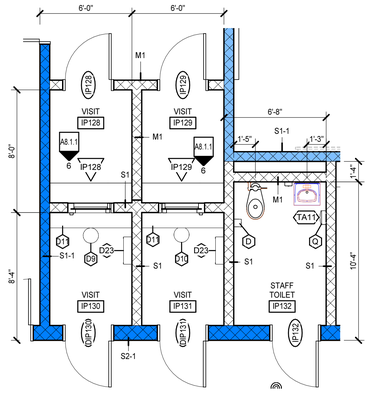
TOILET ASSEMBLIES, SCHEDULE AND ENLARGED PLAN GENERAL NOTES

A. PLAN DIMENSIONS ARE TO FACE OF WALL OR PARTITION. WHERE APPLIED FINISHES OCCUR-SUCH AS CERAMIC TILE-DIMENSIONS ARE TO FACE OF APPLIED FINISH. FOR WAINSCOTS: FLOOR PLAN DIMENSIONS ARE TO FACE OF WAINSCOT MATERIAL. APPLIED FINISHES ARE NOT ALLOWED TO REDUCE CLEAR DIMENSIONS. "APPLIED FINISHES" IN THIS CASE DO NOT INCLUDE TRIM, BASE, AND ACOUSTIC WALL PANELS.

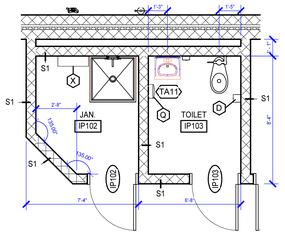
B. CLEAR DIMENSIONS ARE TO FACE OF APPLIED WALL AND PARTITION FINISHES.



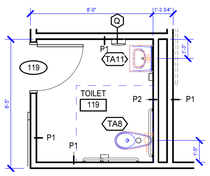
17 A2.1.6 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"



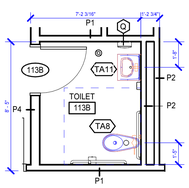
11 A2.1.1 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"



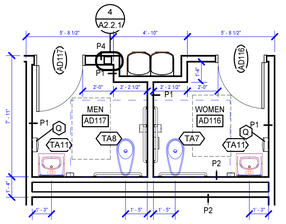
5 A2.1.1 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"



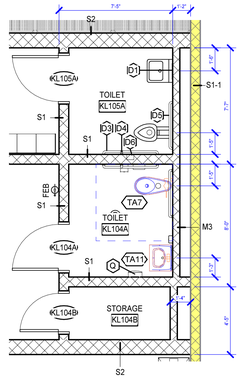
13 A2.1.6 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"



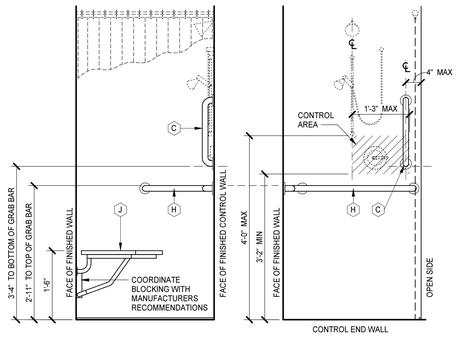
12 A2.1.6 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"



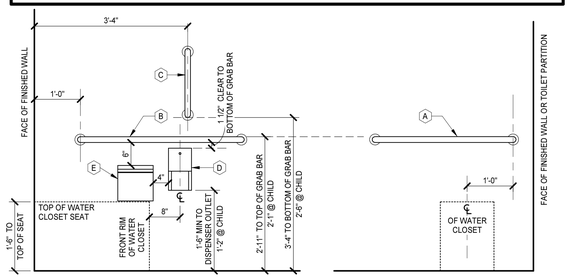
10 A2.1.1 A7.1.1 **ENLARGED PLAN** 1/4" = 1'-0"



4 A2.1.1 A7.1.1 **ENLARGED PLAN - KITCHEN TOILETS** 1/4" = 1'-0"



TRANSFER-TYPE SHOWER ELEVATIONS



WATER CLOSET ELEVATIONS

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PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: 05/01/2024

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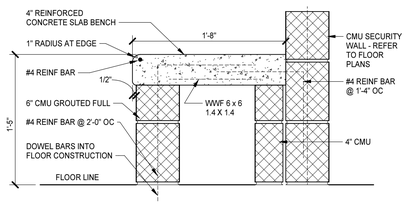
DATE	DESCRIPTION
06/12/24	AD-03

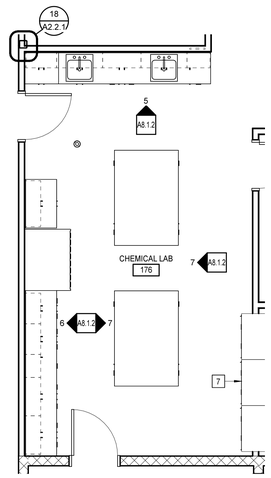
TOILET ASSEMBLIES, SCHEDULE & ENLARGED PLANS

A7.1.1

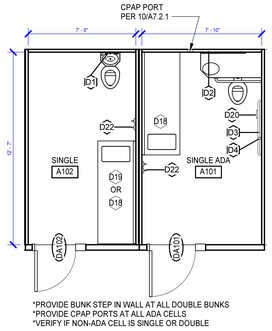
6/11/2024 1:58:16 PM



12 CONCRETE BENCH
A7.1.1 A7.1.2 1 1/2" = 1'-0"

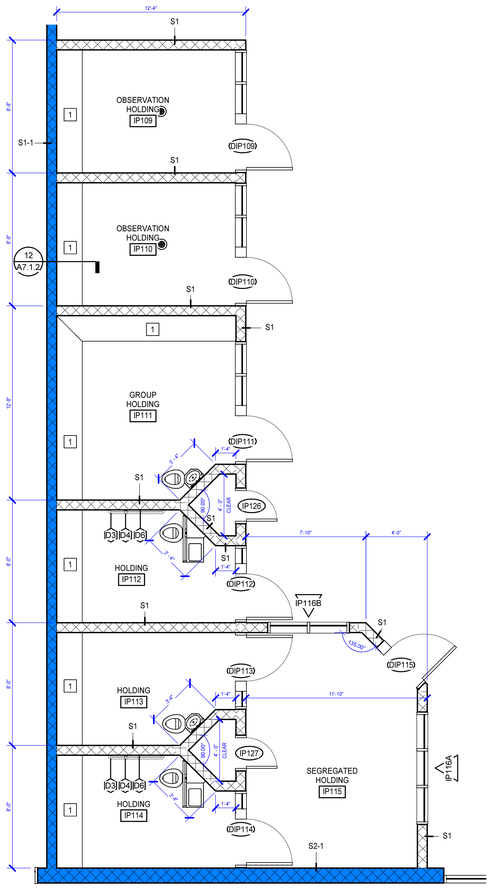


11 ENLARGED PLAN
A2.1.7 A7.1.2 1/4" = 1'-0"

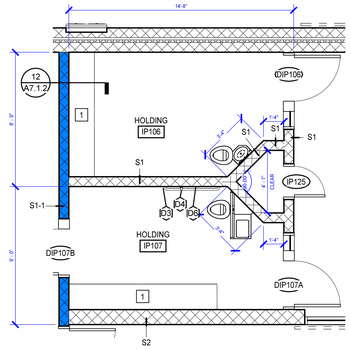


*PROVIDE BUNK STEP IN WALL AT ALL DOUBLE BUNKS
*PROVIDE CPAP PORTS AT ALL ADA CELLS
*VERIFY IF NON-ADA CELL IS SINGLE OR DOUBLE

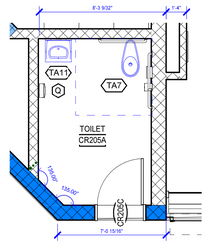
9 ENLARGED PLAN - TYPICAL CELL MODULE
A2.1.2 A7.1.2 1/4" = 1'-0"



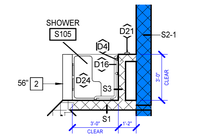
7 ENLARGED PLAN
A2.1.1 A7.1.2 1/4" = 1'-0"



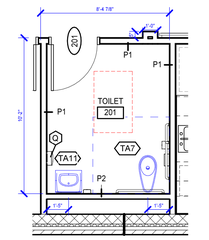
8 ENLARGED PLAN
A2.1.1 A7.1.2 1/4" = 1'-0"



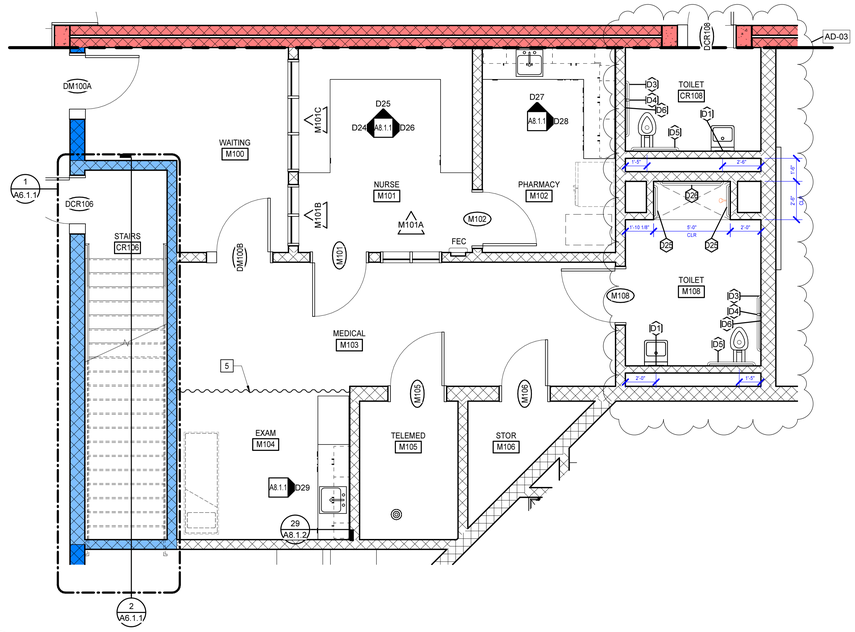
10 ENLARGED PLAN
A2.1.3 A7.1.2 1/4" = 1'-0"



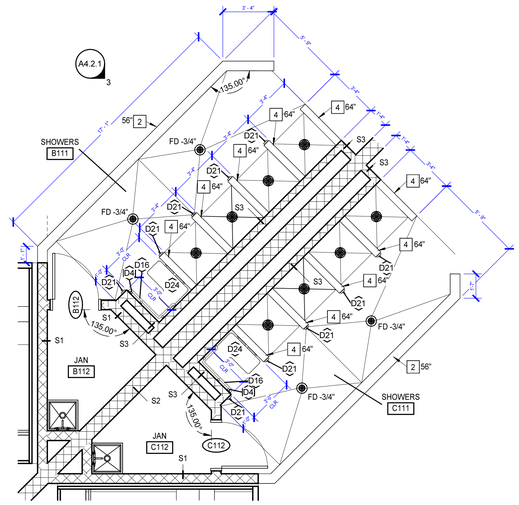
6 ENLARGED PLAN
A2.1.2 A7.1.2 1/4" = 1'-0"



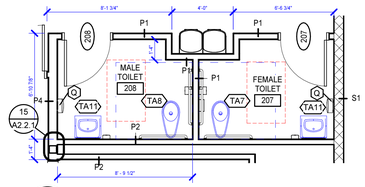
3 ENLARGED PLAN
A2.1.7 A7.1.2 1/4" = 1'-0"



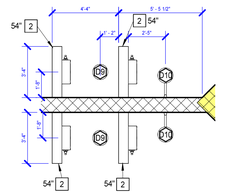
5 ENLARGED PLAN - MEDICAL AREA
A2.1.2 A7.1.2 1/4" = 1'-0"



4 ENLARGED PLAN
A2.1.2 A7.1.2 1/4" = 1'-0"



2 ENLARGED PLAN
A2.1.7 A7.1.2 1/4" = 1'-0"



1 ENLARGED PLAN
A2.1.2 A7.1.2 1/4" = 1'-0"

ENLARGED PLAN GENERAL NOTES

A. PROVIDE CORNER GUARDS AT ALL EXPOSED OUTSIDE GYP. BOARD CORNERS, REF. SPECS.

B. PROVIDE CONT. SILICONE CAULK AT ALL DOOR FRAMES WHERE GYP. BOARD AND FRAMES MEET BEFORE PAINTING OCCURS.

C. PROVIDE PAINTED METAL FINISH ON ALL CEILING AND WALL ACCESS PANELS FOR ACCESS TO MECHANICAL, ELECTRICAL, AND PLUMBING SPACES.

D. "MIN." FOR DIMENSIONS INDICATED MINIMUM ACCEPTABLE DIMENSION. IF "MIN." DIMENSIONS FALL SHORT OF WHAT IS SHOWN ON DRAWINGS, G.C. IS TO NOTIFY THE ARCHITECT IMMEDIATELY SO AS TO NOT DELAY THE PROJECT.

ENLARGED PLAN KEYNOTES

APPLIES TO DRAWINGS A7.1.2
REPRESENTED BY n

1	CONCRETE BENCH. REFER TO DETAIL 12/A7.1.2
2	CMU LOW WALL PER DETAIL 1/A5.2.1
3	MOTORIZED ROLL-UP PRIVACY SHUTTER AT FEMALE HOUSING ONLY
4	CMU LOW WALL PER DETAIL 2/A5.2.1
5	CUBICLE CURTAIN AND TRACK
7	PASS-THRU EVIDENCE LOCKERS

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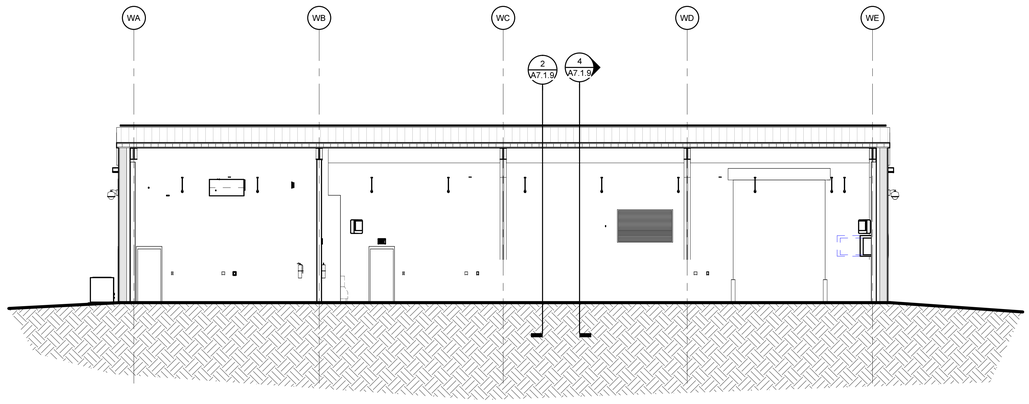
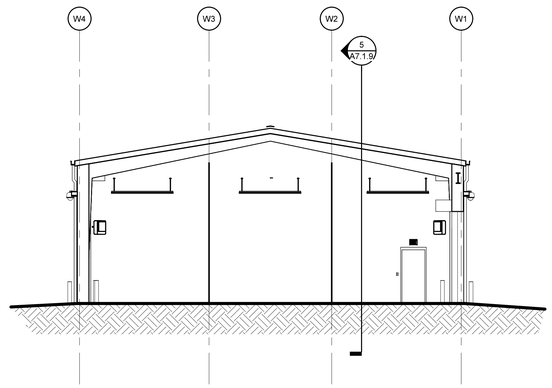
ENLARGED PLANS

A7.1.2

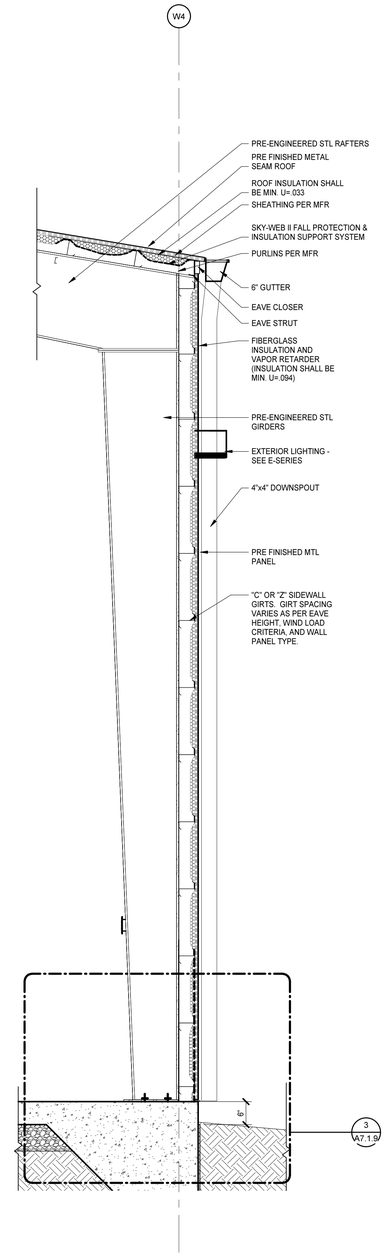
6/11/2024 1:58:23 PM

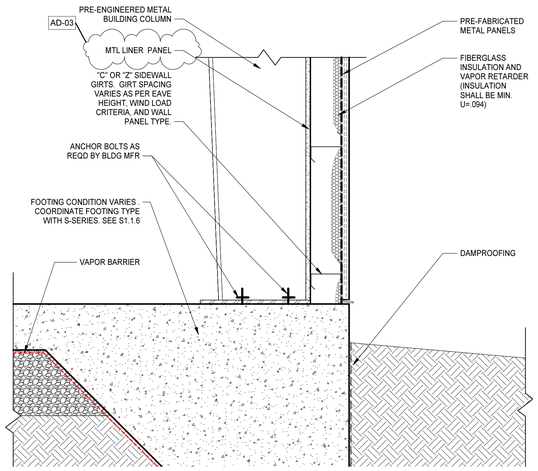


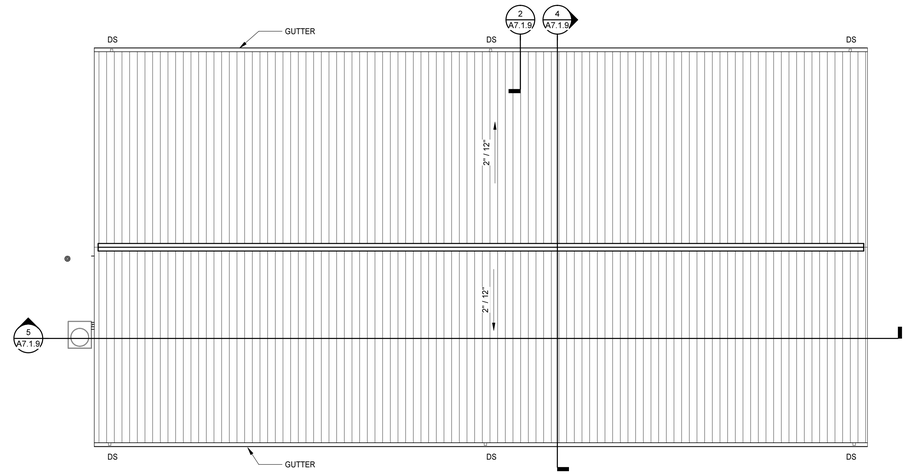
5 A7.1.8 A7.1.9 **WAREHOUSE SECTION 2**
1/8" = 1'-0"



4 A7.1.8 A7.1.9 **WAREHOUSE SECTION 1**
1/8" = 1'-0"







3 A7.1.9 A7.1.9 **WAREHOUSE - ENLARGED DETAIL**
1 1/2" = 1'-0"

2 A7.1.8 A7.1.9 **WAREHOUSE EXTERIOR WALL SECTION**
3/4" = 1'-0"

1 A7.1.9 **ROOF PLAN - WAREHOUSE**
1/8" = 1'-0"

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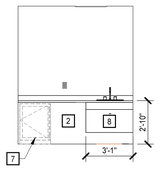
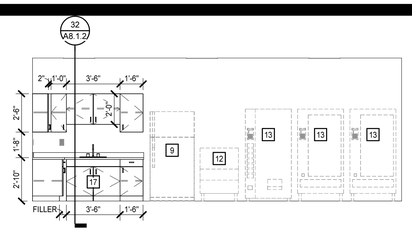
WAREHOUSE PLANS & DETAILS

A7.1.9

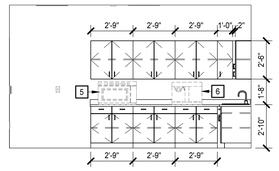
6/10/2024 1:56:27 PM



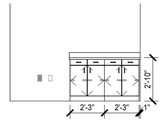
39 QUIET ROOM 148
1/4" = 1'-0"



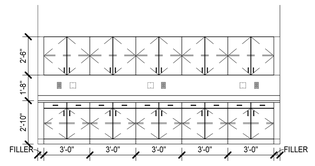
38 BREAKROOM 139 - S
1/4" = 1'-0"



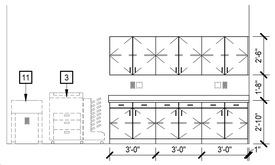
37 BREAKROOM 139 - E
1/4" = 1'-0"



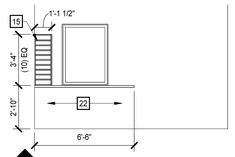
36 FINGER PRINTING OFFICE 106
1/4" = 1'-0"



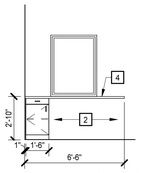
35 WORK ROOM 116 - W
1/4" = 1'-0"



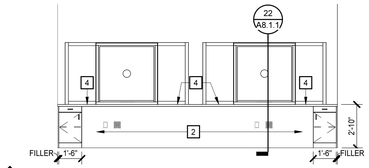
34 WORK ROOM 116 - E
1/4" = 1'-0"



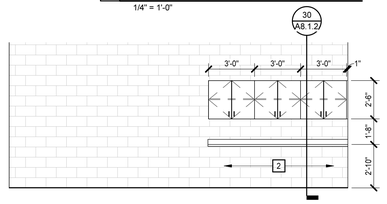
33 ADMIN LOBBY 115
1/4" = 1'-0"



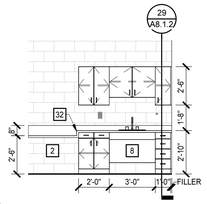
32 RECEPTION DUTY OFFICE 107 - W
1/4" = 1'-0"



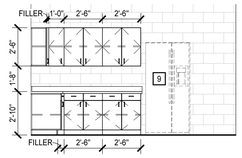
31 RECEPTION DUTY OFFICE 107 - E
1/4" = 1'-0"



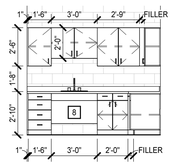
30 MAINT. SHOP CR111
1/4" = 1'-0"



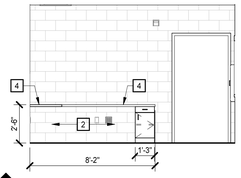
D29 EXAM M104
1/4" = 1'-0"



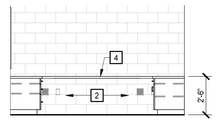
D28 PHARMACY M102 - E
1/4" = 1'-0"



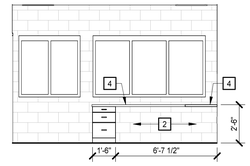
D27 PHARMACY M102 - N
1/4" = 1'-0"



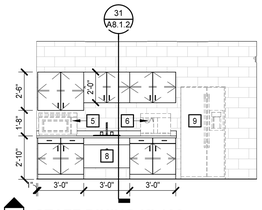
D26 NURSE M101 - E
1/4" = 1'-0"



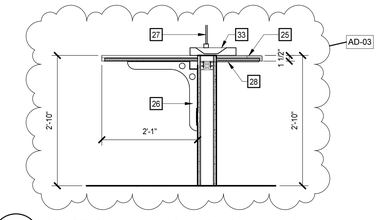
D25 NURSE M101 - N
1/4" = 1'-0"



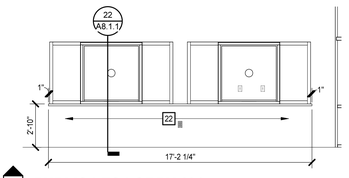
D24 NURSE M101 - W
1/4" = 1'-0"



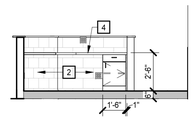
23 STAFF DINING KL102
1/4" = 1'-0"



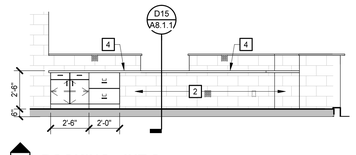
22 A8.1.1 A8.1.1 SECTION - PUBLIC LEC LOBBY 101
3/4" = 1'-0"



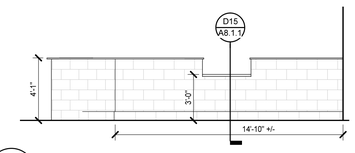
21 PUBLIC LEC LOBBY 101
1/4" = 1'-0"



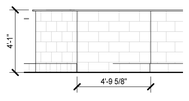
D20 BOOKING - INT W
1/4" = 1'-0"



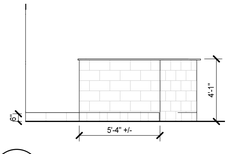
D19 BOOKING - INT S
1/4" = 1'-0"



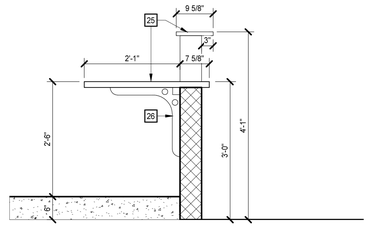
D18 A7.1.2 A8.1.1 BOOKING - EXT N
1/4" = 1'-0"



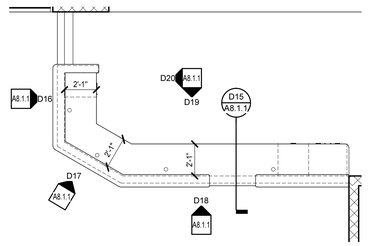
D17 A8.1.1 A8.1.1 BOOKING - EXT NE
1/4" = 1'-0"



D16 A8.1.1 A8.1.1 BOOKING - EXT E
1/4" = 1'-0"



D15 A8.1.1 A8.1.1 BOOKING DESK SECTION
3/4" = 1'-0"



D14 A2.1.1 A8.1.1 ENLARGED PLAN - BOOKING DESK IP108
1/4" = 1'-0"

CASEWORK GENERAL NOTES

A. UNLESS INDICATED OTHERWISE, ALL COUNTERTOP(S):
- 2'-10" AFF OR 2'-10" TO TOP OF RIM AT DROP-IN SINKS AND LAVATORIES WHERE OCCURS
- 2'-1" DEEP
- SOLID SURFACE
- BACKSPLASHES: 4" HIGH AT ALL SIDES AND BACK

B. UNLESS INDICATED OTHERWISE, ALL BASE CABINET(S):
- 2'-0" DEEP NOMINAL
- TOE KICKS: 4" HIGH AND 3" DEEP
- SINK LOCATIONS: 3'-0" WIDE CLEAR KNEE SPACE (NO BASE CABINET) FOR BARRIER FREE ACCESS

C. UNLESS INDICATED OTHERWISE, ALL WALL CABINET(S):
- 1'-0" DEEP NOMINAL
- 2'-6" HIGH
- TOP AT 7'-0" AFF

D. BUILT-IN EQUIPMENT: SIZE OPENING (HEIGHT, WIDTH, AND DEPTH) AND ROUGH-IN REQUIREMENTS AS REQUIRED BASED ON APPROVED MANUFACTURER SUBMITTED.

E. ALL SHELVES: ADJUSTABLE UNLESS INDICATED OTHERWISE.

F. PROVIDE FINISH END PANELS AT ALL EXPOSED CASEWORK ENDS.

G. LOCKS: PROVIDE AT BOOKING DESK IP108, NURSE M101, PHARMACY M102, AND EXAM M104, UNLESS INDICATED OTHERWISE.

H. PAINT UNDERCOUNTER SUPPORT BRACKETS TO MATCH WALL.

I. ELEVATION TAGS BEGINNING WITH "D" INDICATES DETENTION CASEWORK.

J. PROVIDE FULL BULLNOSE EDGE AND 2" RADIUSED CORNERS FOR DETENTION CASEWORK SSM COUNTERTOPS.

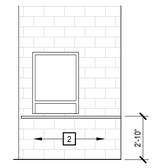
K. PROVIDE UNDERCOUNTER WIRE MANAGEMENT AT COUNTERTOPS WITH GROMMETS.

CASEWORK KEYNOTES

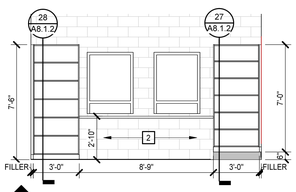
REPRESENTED BY n

APPLIES TO DRAWINGS A8.1.1-A8.1.2

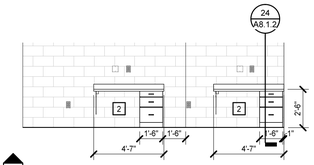
1	PACKAGE PASS - REFER TO DETAIL ON DRAWING A7.2.1.	AD-03
2	OPEN KNEE SPACE - PROVIDE UNDERCOUNTER SUPPORT BRACKETS AS INDICATED IN SPECIFICATION 064100	
3	COPIER (NIC)	
4	GROMMET - COORDINATE LOCATION WITH OWNER	
5	MICROWAVE (NIC)	
6	COFFEE MAKER (NIC)	
7	UNDERCOUNTER REFRIGERATOR (NIC)	
8	REMOVEABLE BARRIER-FREE PLAM PANEL	
9	REFRIGERATOR (NIC)	
10	OPEN CABINET	
11	SHREDDER (NIC)	
12	ICE MACHINE (NIC)	
13	VENDING MACHINE (NIC)	
14	EYE WASH	
15	OPEN MAIL SLOTS	
16	FUME HOOD	
17	ACCESSIBLE SINK CABINET WITH ATTACHED TOE KICK	
18	CPU HOLDER	
19	LABORATORY CASEWORK - REFER TO DIVISION 12 "WOOD LABORATORY CASEWORK"	
20	32" DEEP COUNTERTOP	
21	12" DEEP COUNTERTOP	AD-03
22	OPEN KNEE SPACE - PROVIDE CONCEALED UNDERCOUNTER SUPPORT BRACKETS AS INDICATED IN SPECIFICATION 064100	
23	18" DEEP COUNTERTOP	
24	50" DEEP COUNTERTOP	
25	SOLID SURFACE MATERIAL	
26	UNDERCOUNTER UTILITY BRACE. PAINT TO MATCH WALL COLOR	
27	TRANSACTION WINDOW	
28	CONCEALED SUPPORT BRACKET	
29	PROVIDE FINISHED END PANEL	
30	ACIDS STORAGE CABINET	
31	FLAMMABLES STORAGE CABINET	
32	WATERFALL EDGE	AD-03
33	PAPER PASS INTEGRAL TO WINDOW FRAME ASSEMBLY. REFER TO SPEC SECTION 085653.	



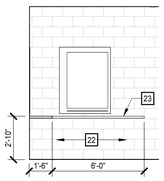
13 ISSUE IP120 - N
1/4" = 1'-0"



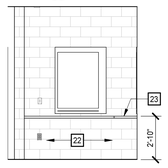
12 ISSUE IP120 - W
1/4" = 1'-0"



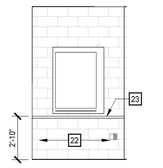
D11 BREATHALYZER IP104
1/4" = 1'-0"



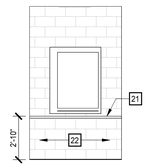
10 MAGISTRATE AREA AM104 - W
1/4" = 1'-0"



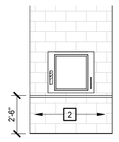
9 MAGISTRATE AREA AM104 - S
1/4" = 1'-0"



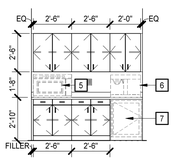
8 MAGISTRATE AREA AM104 - E
1/4" = 1'-0"



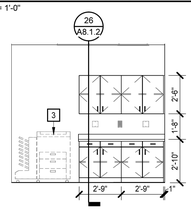
7 MAGISTRATE LOBBY AM101
1/4" = 1'-0"



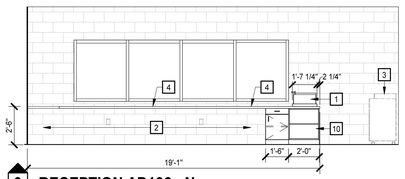
6 ATTORNEY VISITATION
1/4" = 1'-0"



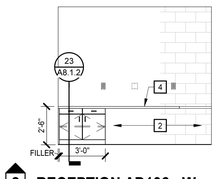
5 BREAK NOOK - AD109
1/4" = 1'-0"



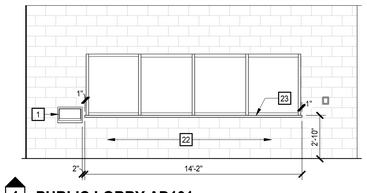
4 RECEP/ADMIN WORK AREA AD107
1/4" = 1'-0"



3 RECEPTION AD106 - N
1/4" = 1'-0"



2 RECEPTION AD106 - W
1/4" = 1'-0"



1 PUBLIC LOBBY AD101
1/4" = 1'-0"

MOSELEYARCHITECTS
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01/15/24

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NORTH CAROLINA
CHARLOTTE

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

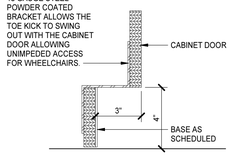
PROJECT NO: 611888
DATE: 05/01/2024

REVISIONS	
DATE	DESCRIPTION
06/12/24	AD-03

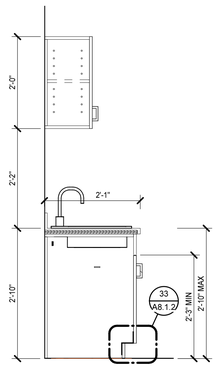
CASEWORK AND ELEVATIONS

A8.1.1

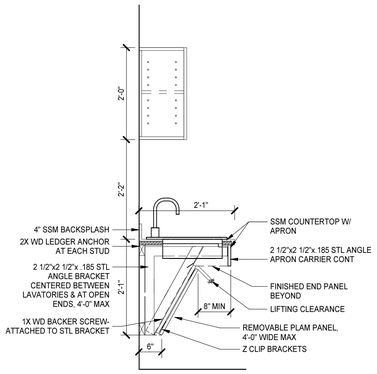
6/10/2024 3:57:21 PM



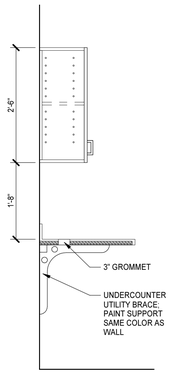
33 DETAIL - ACCESSIBLE TOEKICK
3" = 1'-0"



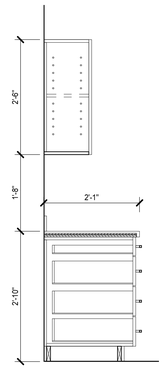
32 BARRIER-FREE SINK BASE
3/4" = 1'-0"



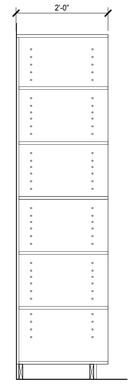
31 BARRIER-FREE PANEL
3/4" = 1'-0"



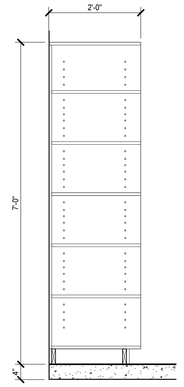
30 SECTION
3/4" = 1'-0"



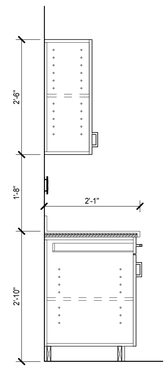
29 SECTION
3/4" = 1'-0"



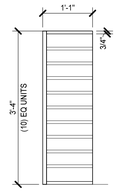
28 SECTION
3/4" = 1'-0"



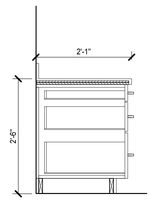
27 SECTION
3/4" = 1'-0"



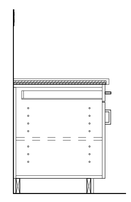
26 SECTION
3/4" = 1'-0"



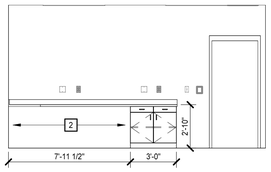
25 SECTION
3/4" = 1'-0"



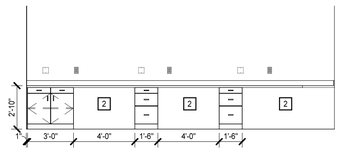
24 SECTION
3/4" = 1'-0"



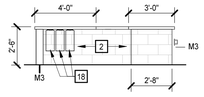
23 SECTION
3/4" = 1'-0"



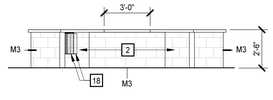
22 COMPUTER FORENSICS 179 - S
1/4" = 1'-0"



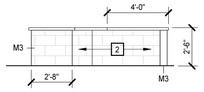
21 COMPUTER FORENSICS 179 - E
1/4" = 1'-0"



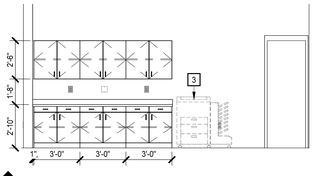
D20 CENTRAL CONTROL CR205 - LEFT
1/4" = 1'-0"



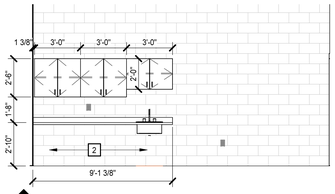
D19 CENTRAL CONTROL CR205 - CENTER
1/4" = 1'-0"



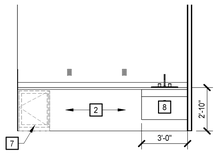
D18 CENTRAL CONTROL CR205 - RIGHT
1/4" = 1'-0"



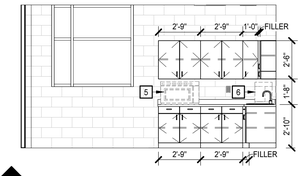
17 NARCOTICS 210
1/4" = 1'-0"



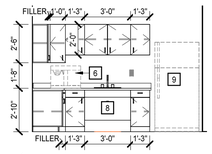
16 VEHICLE BAY 205
1/4" = 1'-0"



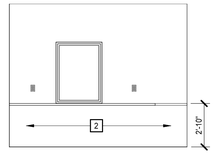
15 QUIET ROOM 202
1/4" = 1'-0"



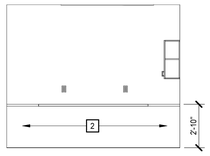
14 BREAK ROOM 200 - S
1/4" = 1'-0"



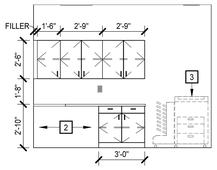
13 BREAK ROOM 200 - W
1/4" = 1'-0"



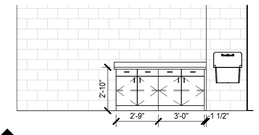
12 WORK AREA 184 - S
1/4" = 1'-0"



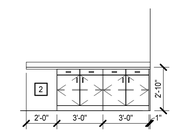
11 WORK AREA 184 - W
1/4" = 1'-0"



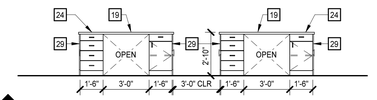
10 WORK AREA 184 - N
1/4" = 1'-0"



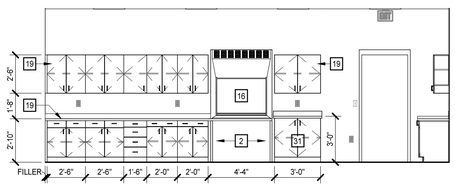
9 ARMORY 142
1/4" = 1'-0"



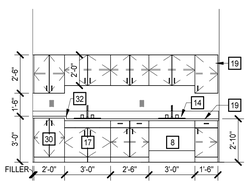
8 EVIDENCE RECEIVING 182
1/4" = 1'-0"



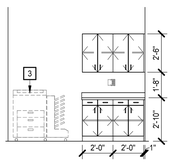
7 CHEMICAL LAB 176 - ISLANDS
1/4" = 1'-0"



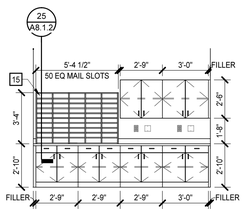
6 CHEMICAL LAB 176 - W
1/4" = 1'-0"



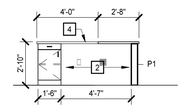
5 CHEMICAL LAB 176 - N
1/4" = 1'-0"



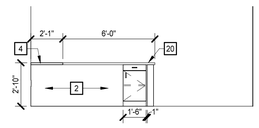
4 INVESTIGATIONS 163
1/4" = 1'-0"



3 WORK ROOM 157
1/4" = 1'-0"



2 LOGISTICS STORAGE 155 - E
1/4" = 1'-0"



1 LOGISTICS STORAGE 155 - S
1/4" = 1'-0"

CASEWORK GENERAL NOTES

A. UNLESS INDICATED OTHERWISE, ALL COUNTERTOP(S):
- 2'-10" AFF OR 2'-10" TO TOP OF RIM AT DROP-IN SINKS AND LAVATORIES WHERE OCCURS
- 2'-1" DEEP
- SOLID SURFACE
- BACKSPLASHES: 4" HIGH AT ALL SIDES AND BACK

B. UNLESS INDICATED OTHERWISE, ALL BASE CABINET(S):
- 2'-0" DEEP NOMINAL
- TOE KICKS: 4" HIGH AND 3" DEEP
- SINK LOCATIONS: 3'-0" WIDE CLEAR KNEE SPACE (NO BASE CABINET) FOR BARRIER FREE ACCESS

C. UNLESS INDICATED OTHERWISE, ALL WALL CABINET(S):
- 1'-0" DEEP NOMINAL
- 2'-6" HIGH
- TOP AT 7'-0" AFF

D. BUILT-IN EQUIPMENT: SIZE OPENING (HEIGHT, WIDTH, AND DEPTH) AND ROUGH-IN REQUIREMENTS AS REQUIRED BASED ON APPROVED MANUFACTURER SUBMITTED.

E. ALL SHELVES: ADJUSTABLE UNLESS INDICATED OTHERWISE.

F. PROVIDE FINISH END PANELS AT ALL EXPOSED CASEWORK ENDS.

G. LOCKS: PROVIDE AT BOOKING DESK IP108, NURSE M101, PHARMACY M102, AND EXAM M104, UNLESS INDICATED OTHERWISE.

H. PAINT UNDERCOUNTER SUPPORT BRACKETS TO MATCH WALL.

I. ELEVATION TAGS BEGINNING WITH "D" INDICATES DETENTION CASEWORK.

J. PROVIDE FULL BULLNOSE EDGE AND 2" RADIUSED CORNERS FOR DETENTION CASEWORK SSM COUNTERTOPS.

K. PROVIDE UNDERCOUNTER WIRE MANAGEMENT AT COUNTERTOPS WITH GROMMETS.

CASEWORK KEYNOTES

REPRESENTED BY n

APPLIES TO DRAWINGS A8.1.1-A8.1.2

1	PACKAGE PASS - REFER TO DETAIL ON DRAWING A7.2.1. AD-03
2	OPEN KNEE SPACE - PROVIDE UNDERCOUNTER SUPPORT BRACKETS AS INDICATED IN SPECIFICATION 064100
3	COPIER (NIC)
4	GROMMET - COORDINATE LOCATION WITH OWNER
5	MICROWAVE (NIC)
6	COFFEE MAKER (NIC)
7	UNDERCOUNTER REFRIGERATOR (NIC)
8	REMOVEABLE BARRIER-FREE PLAM PANEL
9	REFRIGERATOR (NIC)
10	OPEN CABINET
11	SHREDDER (NIC)
12	ICE MACHINE (NIC)
13	VENDING MACHINE (NIC)
14	EYE WASH
15	OPEN MAIL SLOTS
16	FUME HOOD
17	ACCESSIBLE SINK CABINET WITH ATTACHED TOE KICK
18	CPU HOLDER
19	LABORATORY CASEWORK - REFER TO DIVISION 12 "WOOD LABORATORY CASEWORK"
20	32" DEEP COUNTERTOP
21	12" DEEP COUNTERTOP AD-03
22	OPEN KNEE SPACE - PROVIDE CONCEALED UNDERCOUNTER SUPPORT BRACKETS AS INDICATED IN SPECIFICATION 064100
23	18" DEEP COUNTERTOP
24	50" DEEP COUNTERTOP
25	SOLID SURFACE MATERIAL
26	UNDERCOUNTER UTILITY BRACE; PAINT TO MATCH WALL COLOR
27	TRANSACTION WINDOW
28	CONCEALED SUPPORT BRACKET
29	PROVIDE FINISHED END PANEL
30	ACIDS STORAGE CABINET
31	FLAMMABLES STORAGE CABINET
32	WATERFALL EDGE
33	PAPER PASS INTEGRAL TO WINDOW FRAME ASSEMBLY. REFER TO SPEC SECTION 085553 AD-03

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STEVEN J HOPKINS — REGISTERED ARCHITECT — 11547 — NORTH CAROLINA — CHARLOTTE, NC — 01/15/24

MOSELEY ARCHITECTS — REGISTERED ARCHITECTURAL CORPORATION — 50149 — NORTH CAROLINA — CHARLOTTE, NC

PENDER COUNTY LEC

DHSR# J-368 / FID# 220537
PENDER COUNTY, NORTH CAROLINA
1417 OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: 05/01/2024

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CASEWORK, ELEVATIONS, AND DETAILS

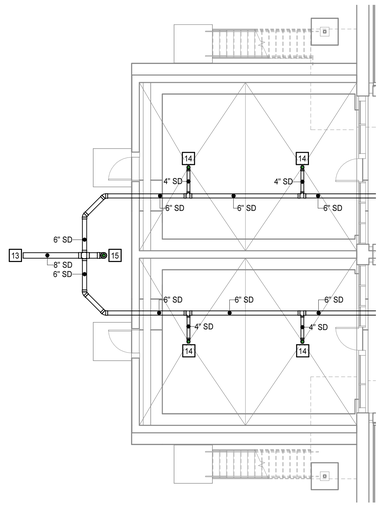
A8.1.2

6/10/2024 3:57:44 PM

KEYNOTES

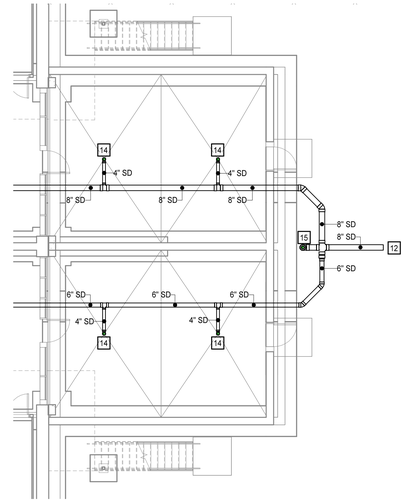
APPLIES TO DRAWINGS P2.0.2
REPRESENTED BY n

1. 4"SAN INVERT ELEVATION AT -3' 1" BFF. REFER TO CIVIL FOR CONTINUATION.
2. SANITARY UP TO GROUND CLEANOUT.
3. SANITARY UP TO FLOOR CLEANOUT.
4. 3"SAN PTRAP-UP TO FLOOR DRAIN.
5. 2"SAN PTRAP-UP TO SHOWER DRAIN.
6. 4"SAN-UP TO WATER CLOSET.
7. 2"SAN-UP TO LAVATORY.
8. 2"SAN-UP TO SINK.
9. 3"SAN PTRAP-UP TO MOP BASIN.
10. SANITARY UP TO WALL CLEANOUT.
11. 4"SAN-UP TO PENAL COMBINATION FIXTURE.
12. 8"SD INVERT ELEVATION AT -3' 8" BFF. REFER TO CIVIL FOR CONTINUATION.
13. 8"SD INVERT ELEVATION AT -3' 0" BFF. REFER TO CIVIL FOR CONTINUATION.
14. 4"SD-UP TO AREA DRAIN.
15. STORM DRAINAGE UP TO GROUND CLEANOUT.
16. STORM DRAINAGE UP TO FLOOR CLEANOUT.
17. 3"SAN PTRAP-UP TO FLOOR SINK.
18. 3"SAN PTRAP-UP TO LAUNDRY TRENCH DRAIN.
19. 3"SD INVERT ELEVATION AT -2' 0" BFF. REFER TO CIVIL FOR CONTINUATION.
20. REFER TO REC YARD A113 & B113 PLAN FOR CONTINUATION.
21. REFER TO REC YARD E113 & F113 PLAN FOR CONTINUATION.



N

FOUNDATION PLAN - PART B - REC YARD A113 & B113
1/8" = 1'-0"



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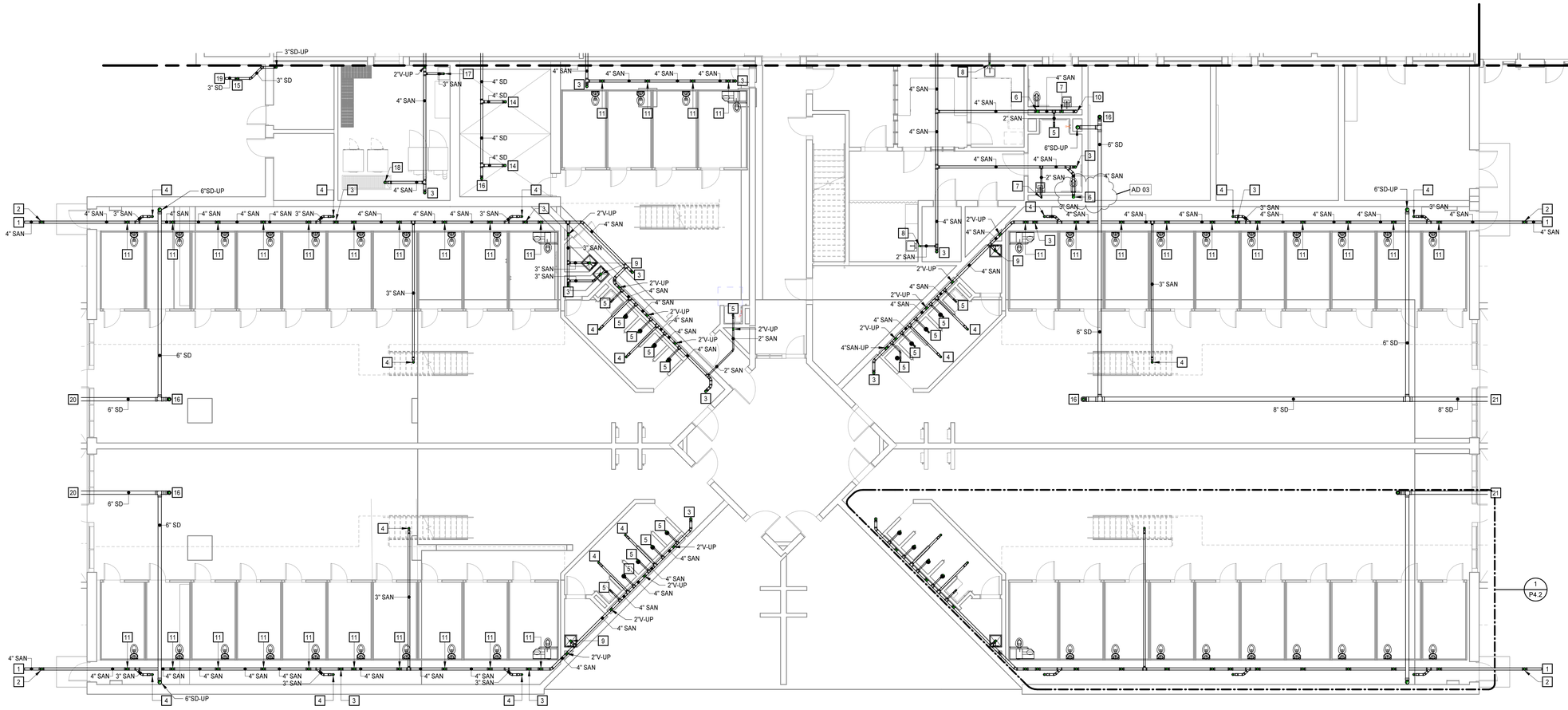
FOUNDATION PLAN - PART B - REC YARD E113 & F113
1/8" = 1'-0"



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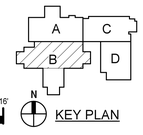
FOUNDATION PLAN - PART B - PLUMBING
1/8" = 1'-0"



0' 2' 4' 8' 16'
1/8" = 1'-0"

KEY PLAN

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MOSELEY ARCHITECTS PROFESSIONAL ENGINEERING CORPORATION C-3469 NORTH CAROLINA CHARLOTTE, NC

PENDER COUNTY LEC

PENDER COUNTY, NORTH CAROLINA
OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: MAY 1, 2024

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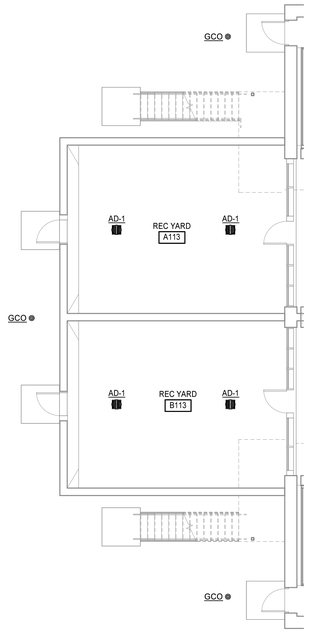
FOUNDATION PLAN - PART B - PLUMBING

P2.0.2

6/12/2024 9:28:13 AM



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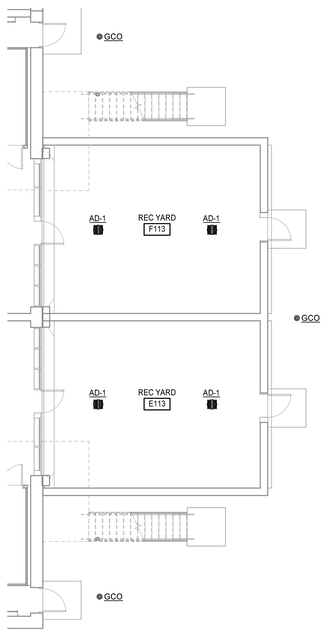
FIRST FLOOR PLAN - PART B - REC YARD A113 & B113

1/8" = 1'-0"



N

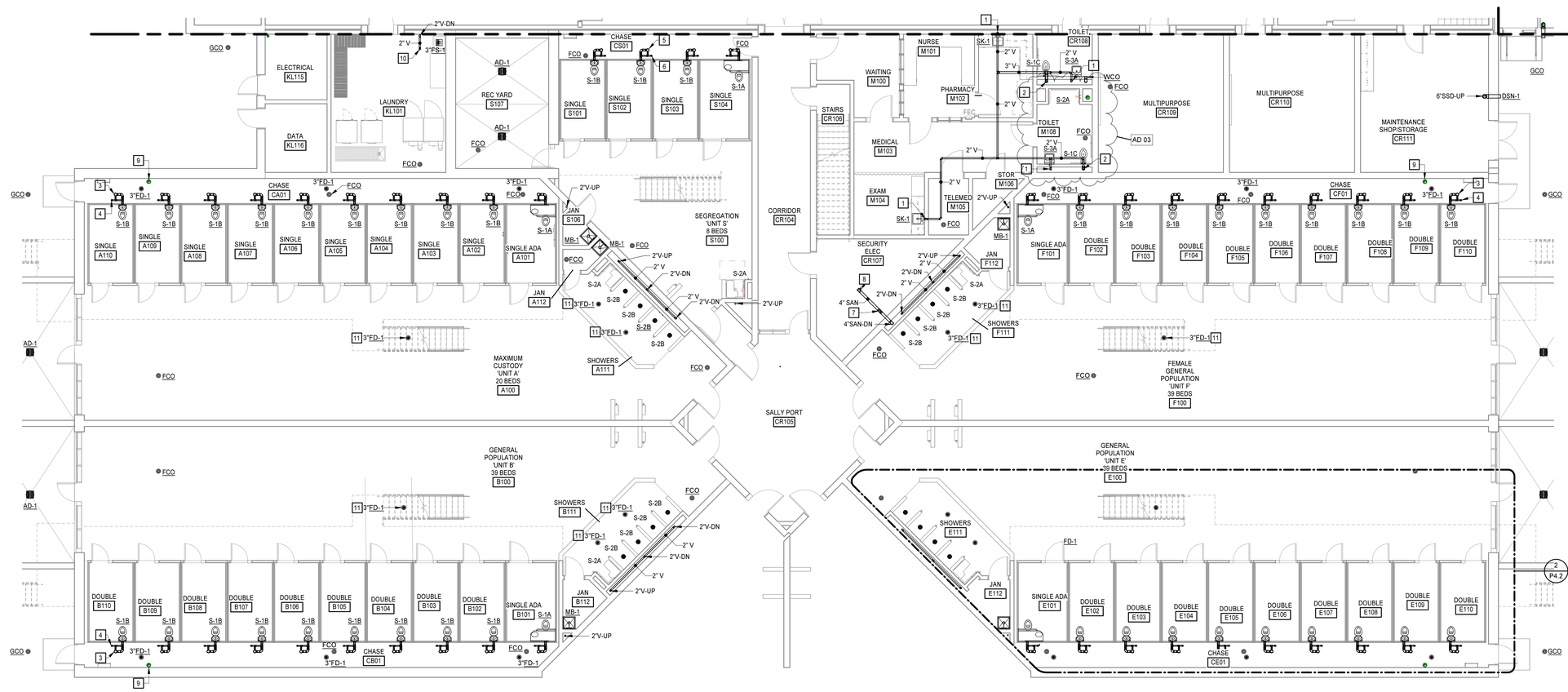
FIRST FLOOR PLAN - PART B - REC YARD E113 & F113

1/8" = 1'-0"

KEYNOTES

APPLIES TO DRAWINGS P2.1.2
REPRESENTED BY: n

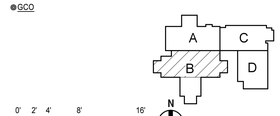
1. 2"V-DN TO 2"SAN-DN.
2. 2"V-DN TO 4"SAN-DN.
3. 4"SAN STACK-UP WITH WCO AT BASE. TYP OF 10.
4. 1 1/2"V-UP. TYP OF 10.
5. 4"SAN STACK-UP WITH WCO AT BASE. TYP OF 4.
6. 1 1/2"V-UP. TYP OF 4.
7. 4"SAN-UP TO WATER CLOSET.
8. 2"SAN-UP TO LAVATORY.
9. 6"SD STACK WITH WCO AT BASE.
10. 2"V-UP TO 2"VTR.
11. PROVIDE TRAP PRIMER CONNETIONS FOR FLOOR DRAINS IN HOUSING UNIT AREAS.



N

FIRST FLOOR PLAN - PART B - SANITARY

1/8" = 1'-0"



0' 2' 4' 8' 16'
1/8" = 1'-0"

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PENDER COUNTY, NORTH CAROLINA
OLD SAVANNAH ROAD BURGAW, NC

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FIRST FLOOR PLAN - PART B - SANITARY

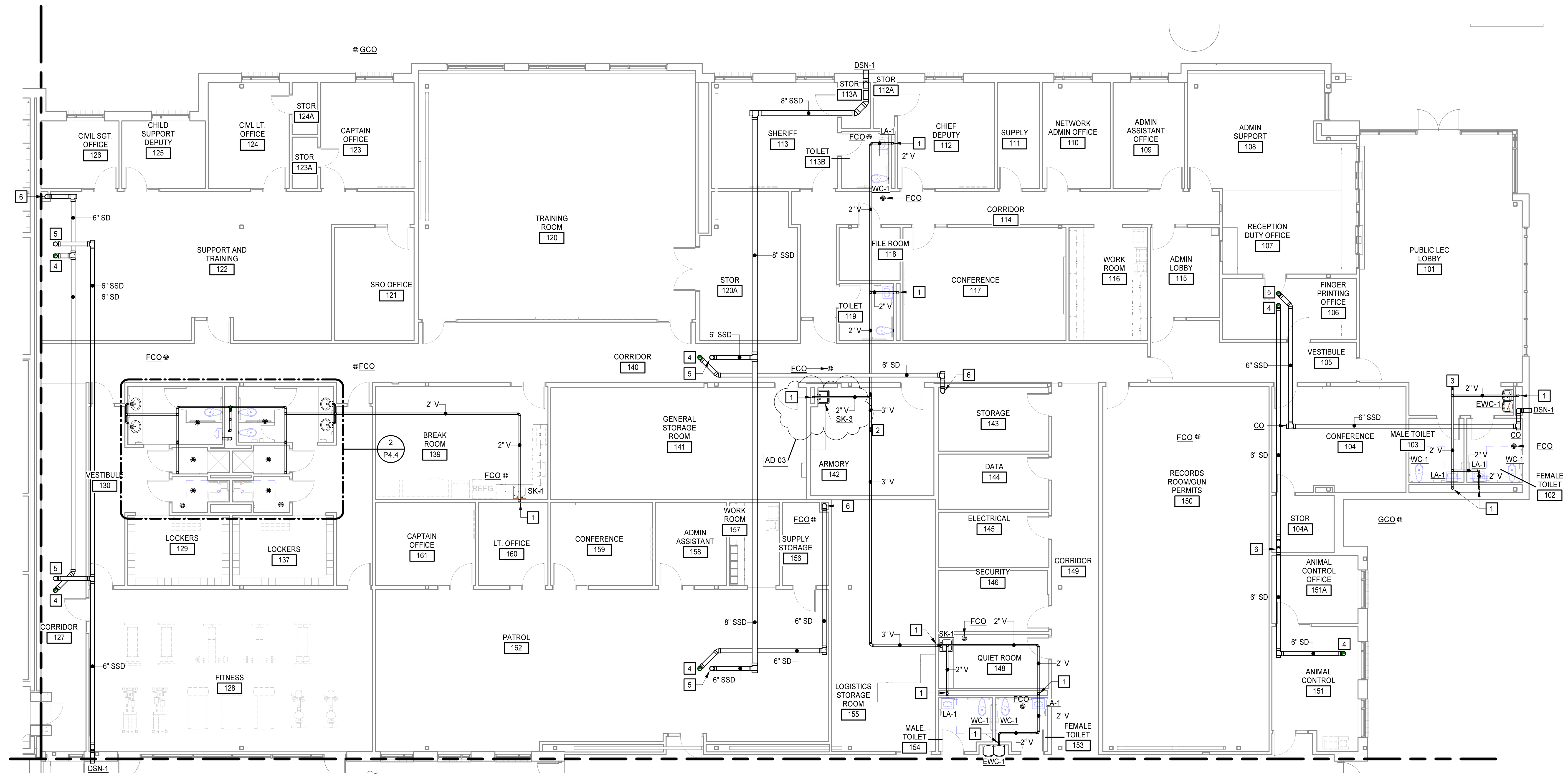
P2.1.2

6/12/2024 9:28:21 AM

KEYNOTES

APPLIES TO DRAWINGS P2.1.3
REPRESENTED BY n

1. 2"V-DN TO 2"SAN-DN.
2. 3"V-UP TO 3"VTR
3. 2"V-UP TO 2"VTR
4. 6"SD-UP TO RD-1
5. 6"SSD-UP TO SRD-1
6. 6"SD-DN WITH WCO AT BASE.

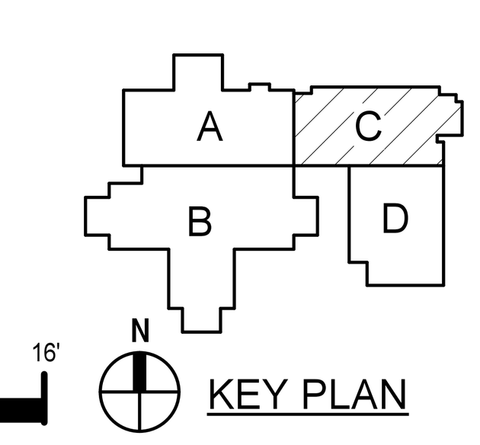


N

FIRST FLOOR PLAN - PART C - SANITARY

1/8" = 1'-0"

0' 2' 4' 8' 16'
1/8" = 1'-0"



KEY PLAN

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NORTH CAROLINA PROFESSIONAL SEAL 043951 ENGINEER DAVID T. WHATELY

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FIRST FLOOR PLAN - PART C - SANITARY

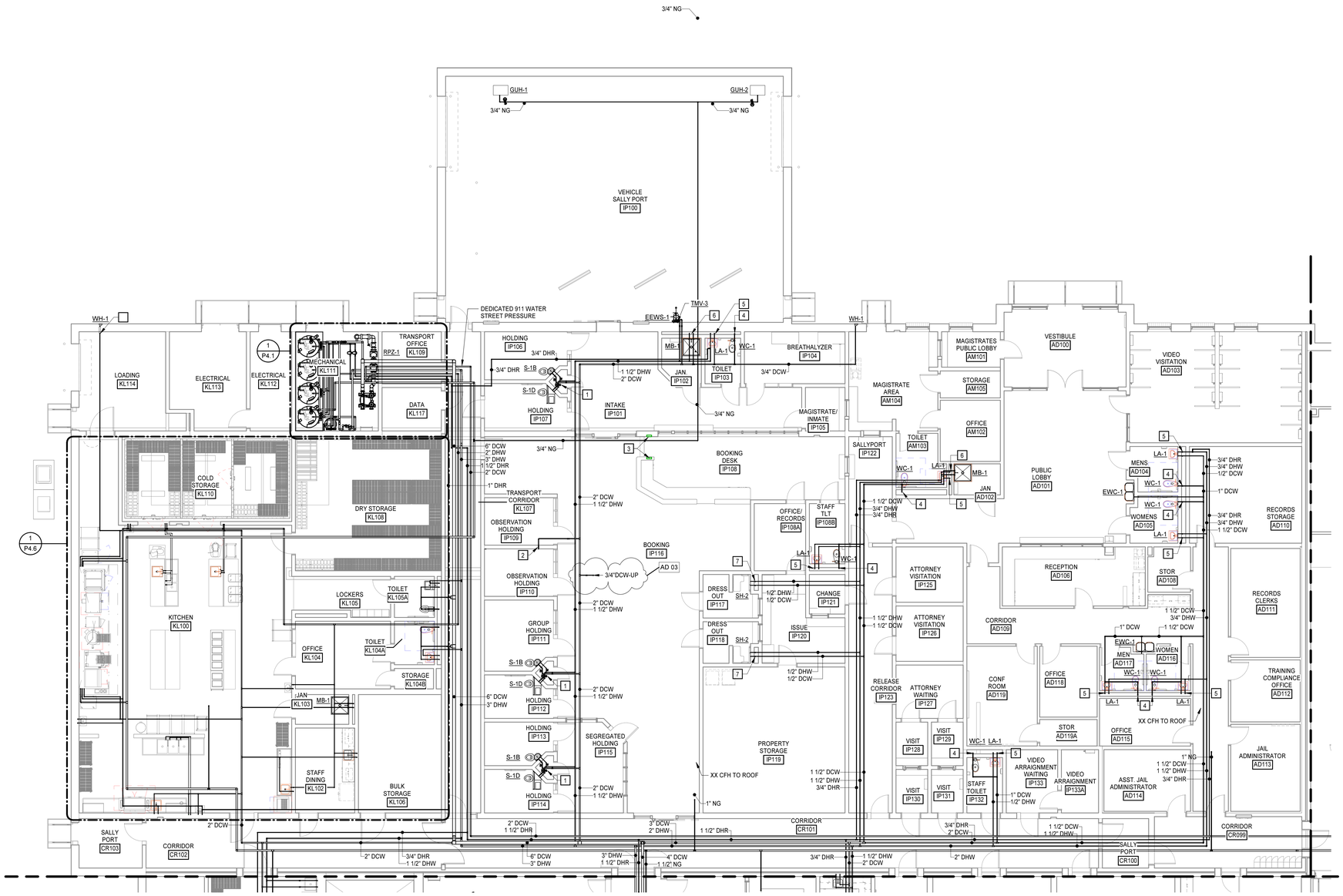
P2.1.3

6/12/2024 9:28:25 AM

KEYNOTES

APPLIES TO DRAWINGS P2.1.5
REPRESENTED BY n

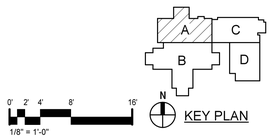
1. PROVIDE DOMESTIC COLD AND HOT WATER MOTORIZED ISOLATION VALVES. VALVES SHALL BE CONTROLLED BY THE SECURITY ELECTRONICS SYSTEM IN MASTER CONTROL ROOM. RELAY AND VALVE ACTUATOR POWER SHALL BE PROVIDED BY DIVISION 26. COORDINATE WITH SECURITY ELECTRONICS SYSTEM FOR SERCURITY SYSTEM INTERFACE. REFER TO DOMESTIC WATER MOTORIED ISOLATION VALVE DETAIL. ALL ZONE CELLBLOCK MANUAL AN SOLENOID VALVE TO BE LOACED IN CHASE WALLS AND ACCESSIBLE FROM LADDER.
2. 1"DCW-DN TO FLUSHING FLOOR DRAIN. PUSH BUTTON FLUSH VALVE LOCATED IN WALL.
3. FLUSHING FLOOR DRAIN REMOTE BUTTON. REFER TO DETAIL FOR ADDITONAL INFORMATION.
4. 1"DCW-DN TO WATER CLOSET.
5. 1/2"DCW & 1/2"DHW-DN TO LAVATORY.
6. 3/4"DCW & 3/4"DHW-DN TO MOP BASIN.
7. 1/2"DCW & 1/2"DHW-DN TO SHOWER.



N

FIRST FLOOR PLAN - PART A - DOMESTIC

1/8" = 1'-0"



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FIRST FLOOR PLAN - PART A - DOMESTIC

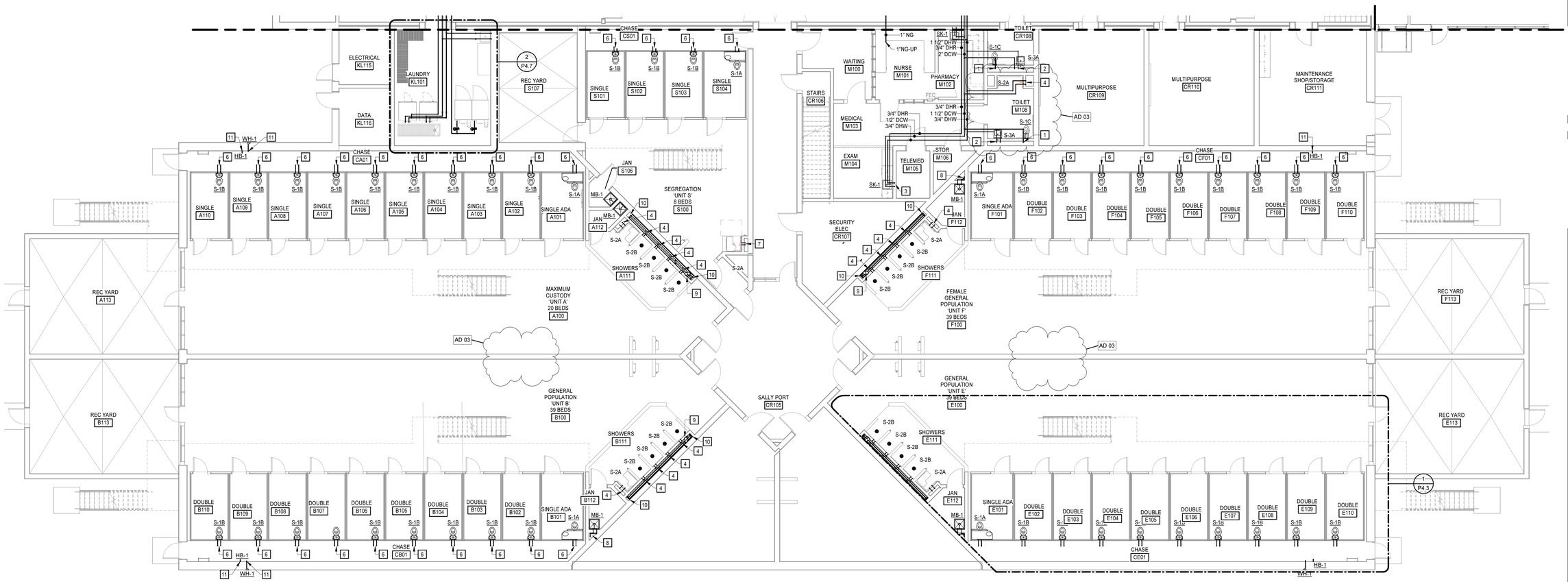
P2.1.5

6/12/2024 9:28:34 AM

KEYNOTES

APPLIES TO DRAWINGS P2.1.6
REPRESENTED BY n

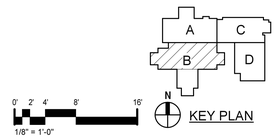
1. 1"DCW-DN TO WATER CLOSET.
2. 1/2"DCW & 1/2"DHW-DN TO LAVATORY.
3. 1/2"DCW & 1/2"DHW-DN TO SINK.
4. 1/2"DCW & 1/2"DHW-DN TO SHOWER.
5. 3/4"DCW & 3/4"DHW-DN TO MOP BASIN.
6. 1"DCW & 1/2"DHW-UP.
7. 1/2"DCW & 1/2"DHW-DN.
8. 3/4"DCW & 3/4"DHW-UP.
9. PROVIDE DOMESTIC COLD AND HOT WATER MOTORIZED ISOLATION VALVES. VALVES SHALL BE CONTROLLED BY THE SECURITY ELECTRONICS SYSTEM IN MASTER CONTROL ROOM. RELAY AND VALVE ACTUATOR POWER SHALL BE PROVIDED BY DIVISION 26. COORDINATE WITH SECURITY ELECTRONICS SYSTEM FOR SERCURITY SYSTEM INTERFACE. REFER TO DOMESTIC WATER MOTORIED ISOLATION VALVE DETAIL. ALL ZONE CELLBLOCK MANUAL AN SOLENOID VALVE TO BE LOACED IN CHASE WALLS AND ACCESSIBLE FROM LADDER.
10. 2 1/2"DCW, 2 1/2"DHW, & 1"DHR-UP TO MEZZANINE LEVEL.
11. 3/4"DCW-UP.



N

FIRST FLOOR PLAN - PART B - DOMESTIC

1/8" = 1'-0"



0' 2' 4' 8' 16'
1/8" = 1'-0"

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FIRST FLOOR PLAN - PART B - DOMESTIC

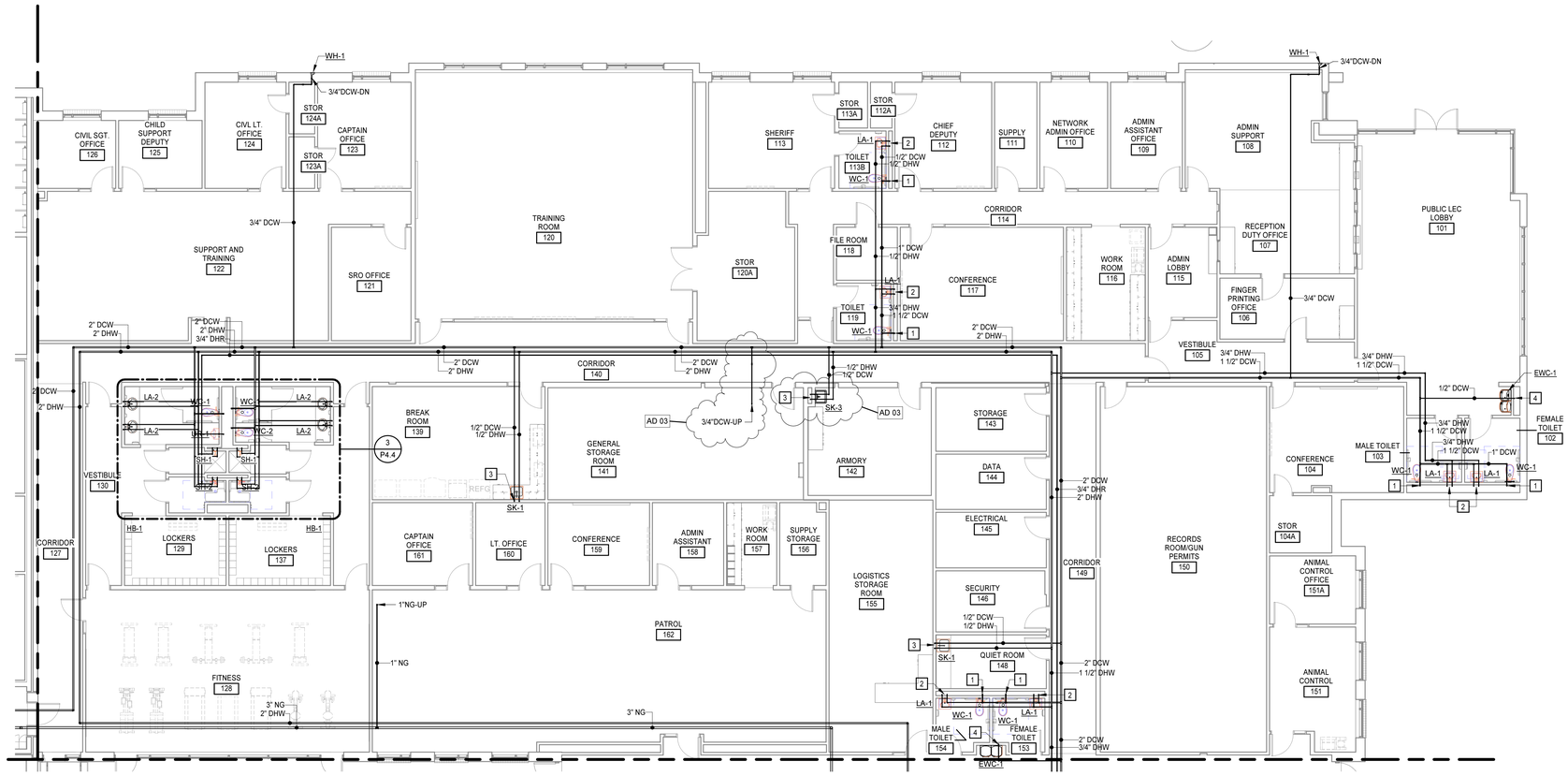
P2.1.6

6/12/2024 9:28:42 AM

KEYNOTES

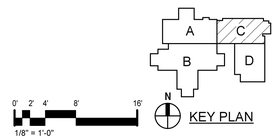
APPLIES TO DRAWINGS P2.1.7
REPRESENTED BY: n

1. 1"DCW-DN TO WATER CLOSET.
2. 1/2"DCW & 1/2"DHW-DN TO LAVATORY.
3. 1/2"DCW & 1/2"DHW-DN TO SINK.
4. 1/2"DCW-DN TO DRINKING FOUNTAIN.



N

FIRST FLOOR PLAN - PART C - DOMESTIC
1/8" = 1'-0"



0' 2' 4' 8' 16'
1/8" = 1'-0"

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PENDER COUNTY, NORTH CAROLINA
OLD SAVANNAH ROAD BURGAW, NC

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FIRST FLOOR PLAN - PART C - DOMESTIC

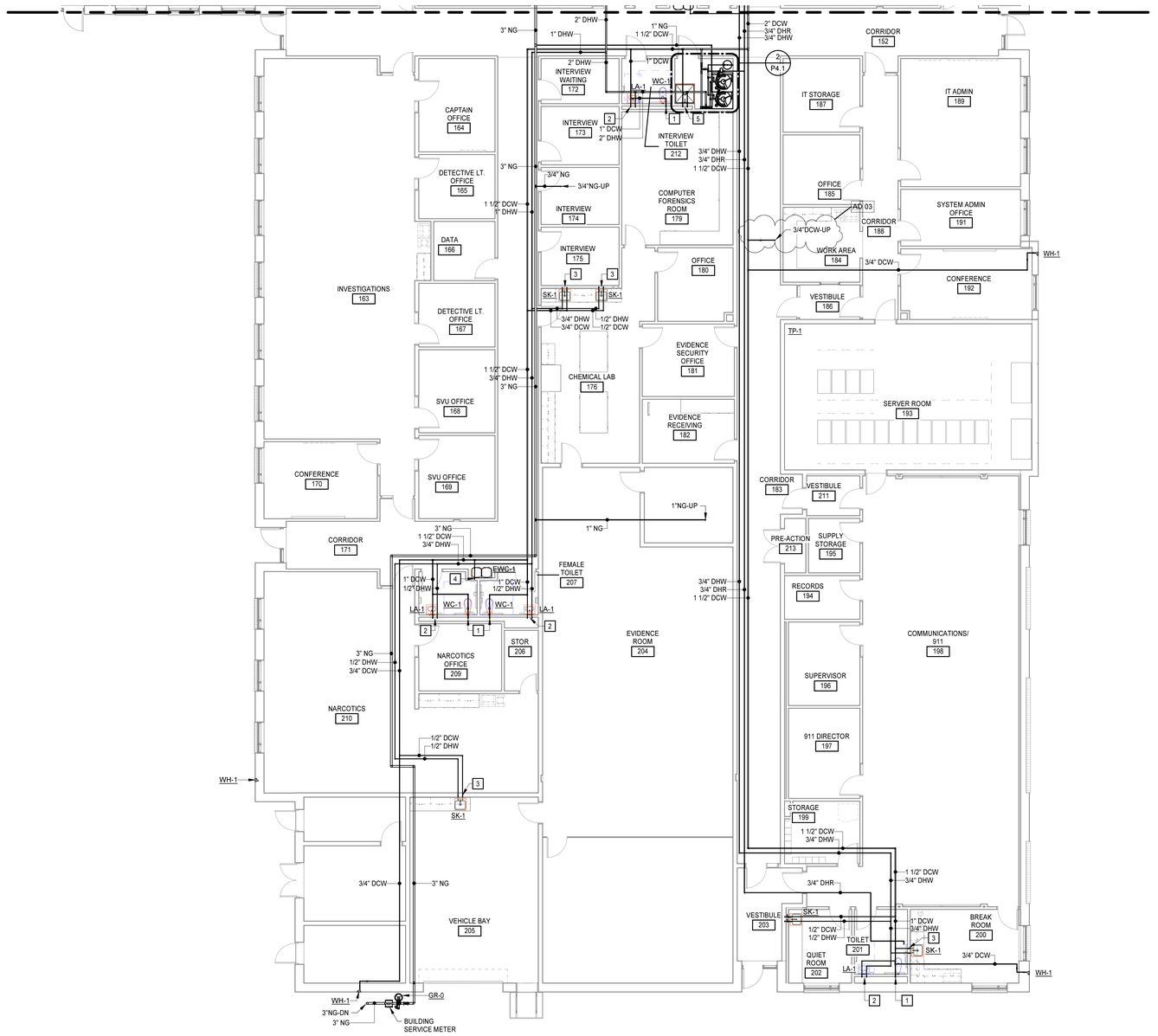
P2.1.7

6/12/2024 9:28:46 AM

KEYNOTES

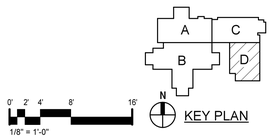
APPLIES TO DRAWINGS P2.1.8
REPRESENTED BY n

1. 1"DCW-DN TO WATER CLOSET.
2. 1/2"DCW & 1/2"DHW-DN TO LAVATORY.
3. 1/2"DCW & 1/2"DHW-DN TO SINK.
4. 1/2"DCW-DN TO DRINKING FOUNTAIN.
5. 3/4"DCW & 3/4"DHW-DN TO MOP BASIN.



N

FIRST FLOOR PLAN - PART D - DOMESTIC
1/8" = 1'-0"



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PENDER COUNTY, NORTH CAROLINA
OLD SAVANNAH ROAD BURGAW, NC

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FIRST FLOOR PLAN - PART D - DOMESTIC

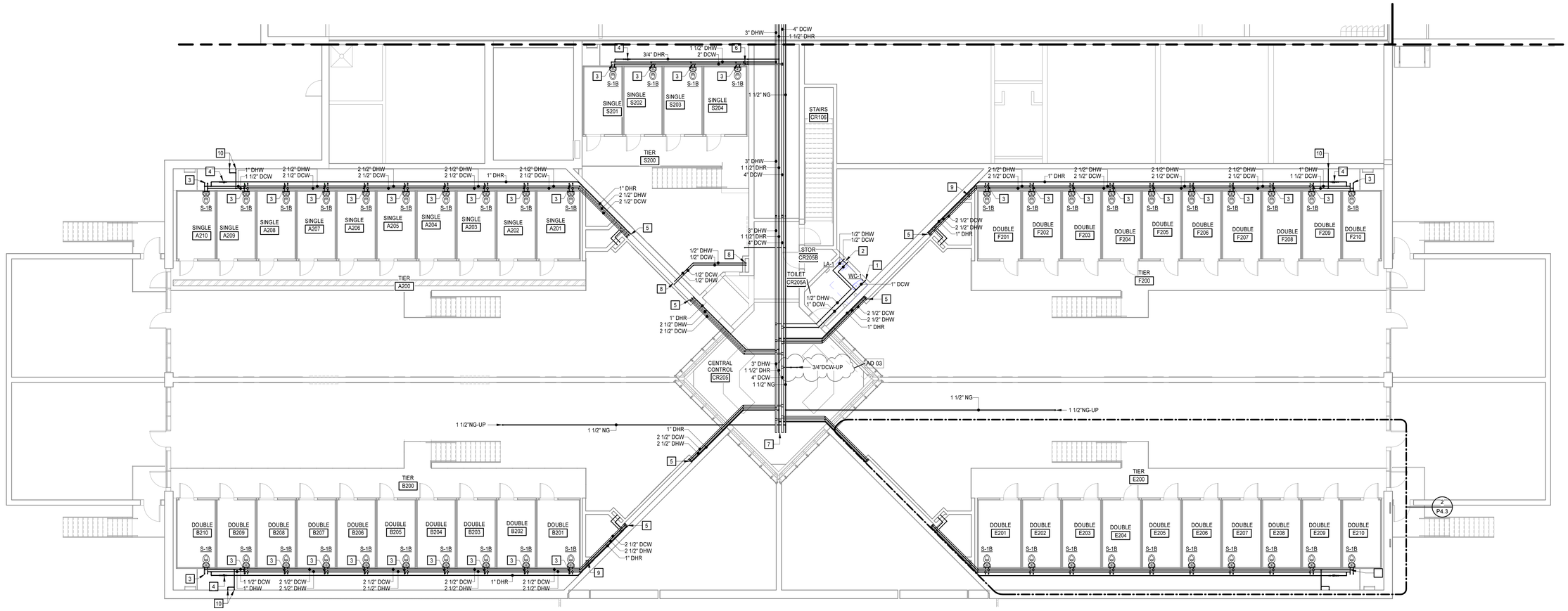
P2.1.8

6/12/2024 9:28:52 AM

KEYNOTES

APPLIES TO DRAWINGS P2.2.2
REPRESENTED BY n

1. 1"DCW-DN TO WATER CLOSET.
2. 1/2"DCW & 1/2"DHW-DN TO LAVATORY.
3. 1 1/2"DCW & 3/4"DHW-DN.
4. PROVIDE THERMOSTATIC BALANCING VALVE STATION. REFER TO HOT WATER RECIRCULATION BRANCH CONNECTION DETAIL.
5. 2 1/2"DCW, 2 1/2"DHW, & 1"DHR-DN.
6. PROVIDE DOMESTIC COLD AND HOT WATER MOTORIZED ISOLATION VALVES. VALVES SHALL BE CONTROLLED BY THE SECURITY ELECTRONICS SYSTEM IN MASTER CONTROL ROOM. RELAY AND VALVE ACTUATOR POWER SHALL BE PROVIDED BY DIVISION 26. COORDINATE WITH SECURITY ELECTRONICS SYSTEM FOR SERCURITY SYSTEM INTERFACE. REFER TO DOMESTIC WATER MOTORIED ISOLATION VALVE DETAIL. ALL ZONE CELLBLOCK MANUAL AN SOLENOID VALVE TO BE LOACED IN CHASE WALLS AND ACCESSIBLE FROM LADDER.
7. DOMESTIC COLD WATER, DOMESTIC HOT WATER, DOMESTIC HOT WATER RETURN, AND NATURAL GAS LINES TO BE VALVED AND CAPPED ABOVE CEILING FOR FUTURE USE.
8. 1/2"DCW & 1/2"DHW-DN.
9. 3/4"DCW & 3/4"DHW-DN TO MOP BASIN.
10. 3/4"DCW-DN.



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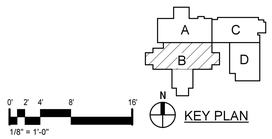
MEZZANINE LEVEL - PART B - DOMESTIC

1/8" = 1'-0"



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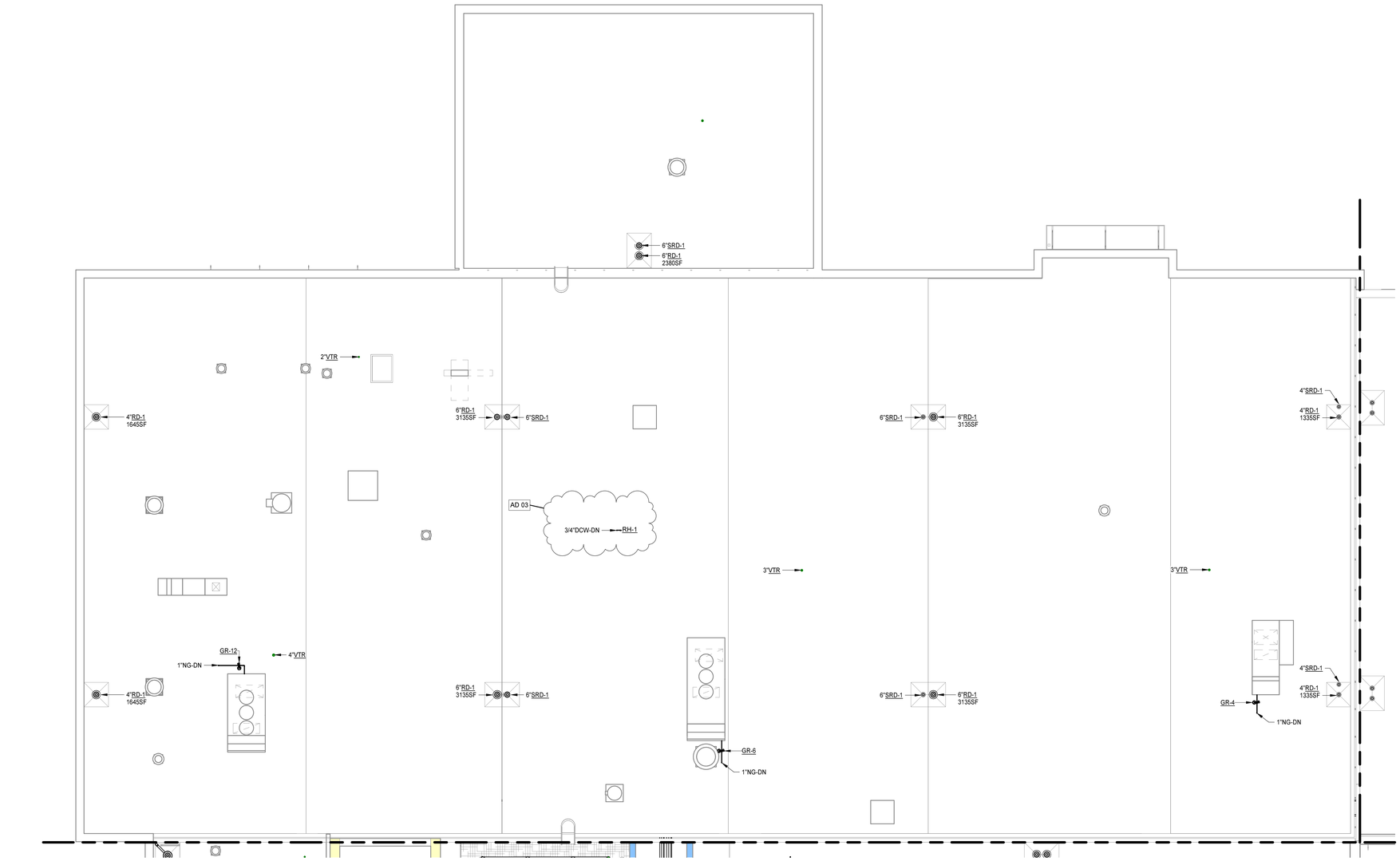
MEZZANINE LEVEL - PART B - DOMESTIC

P2.2.2

6/12/2024 9:28:59 AM



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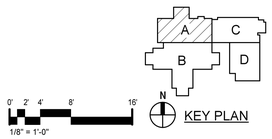
ROOF PLAN - PART A - PLUMBING

1/8" = 1'-0"



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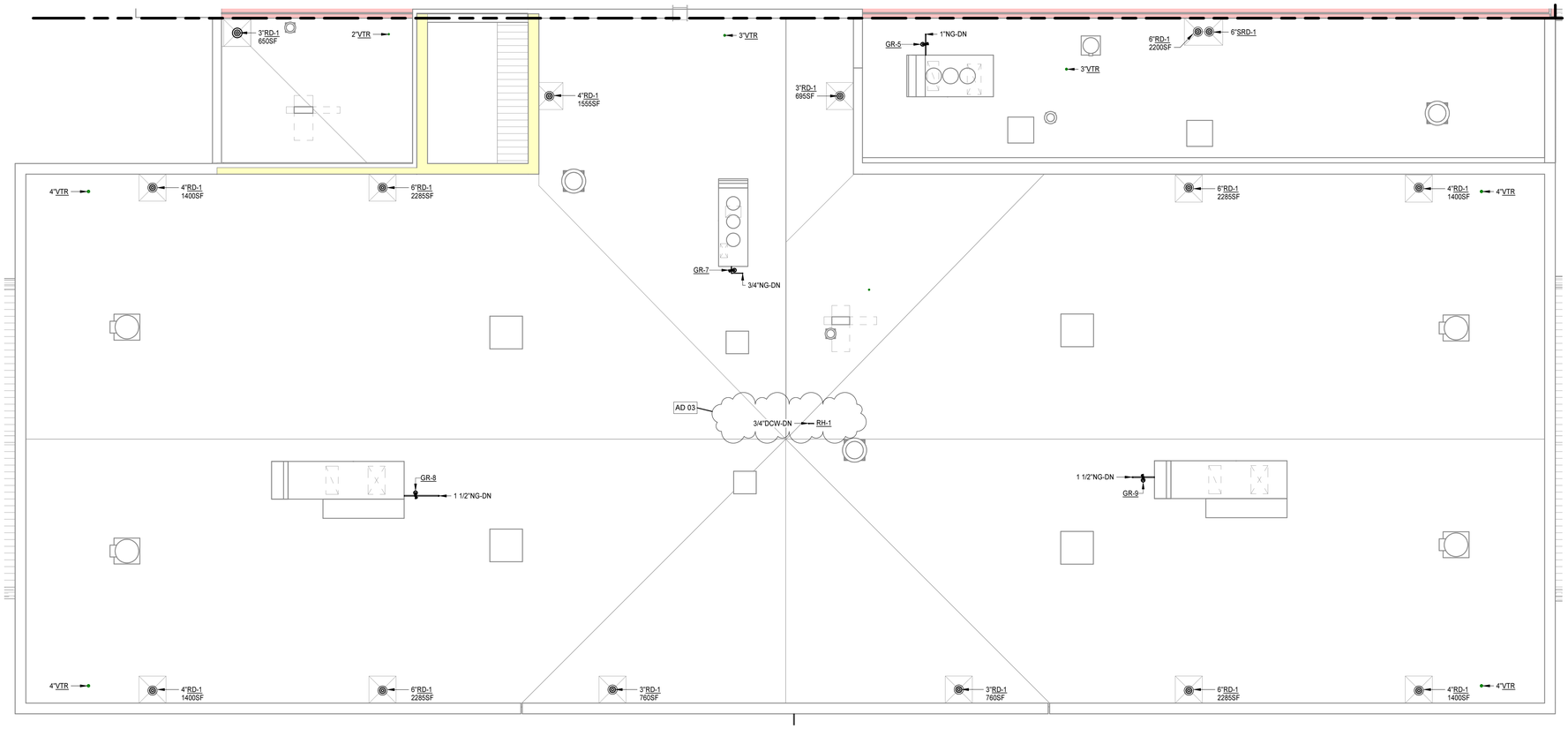
ROOF PLAN - PART A - PLUMBING

P2.3.1

6/12/2024 9:29:03 AM



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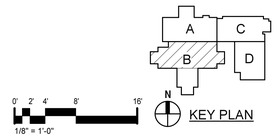
ROOF PLAN - PART B - PLUMBING

1/8" = 1'-0"



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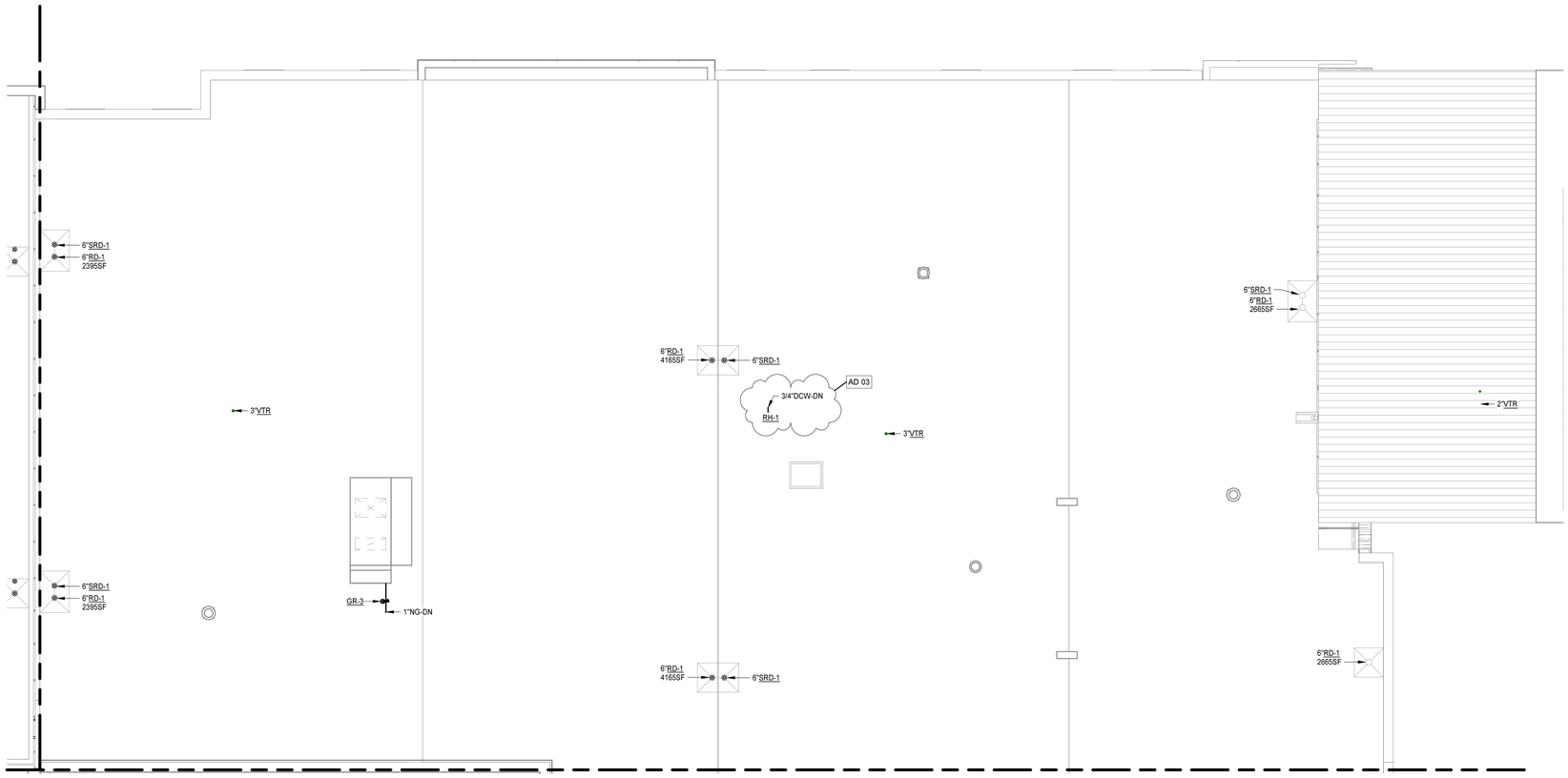
ROOF PLAN - PART B - PLUMBING

P2.3.2

6/12/2024 9:29:07 AM



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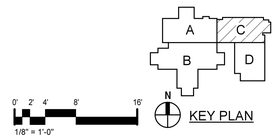
ROOF PLAN - PART C - PLUMBING

1/8" = 1'-0"



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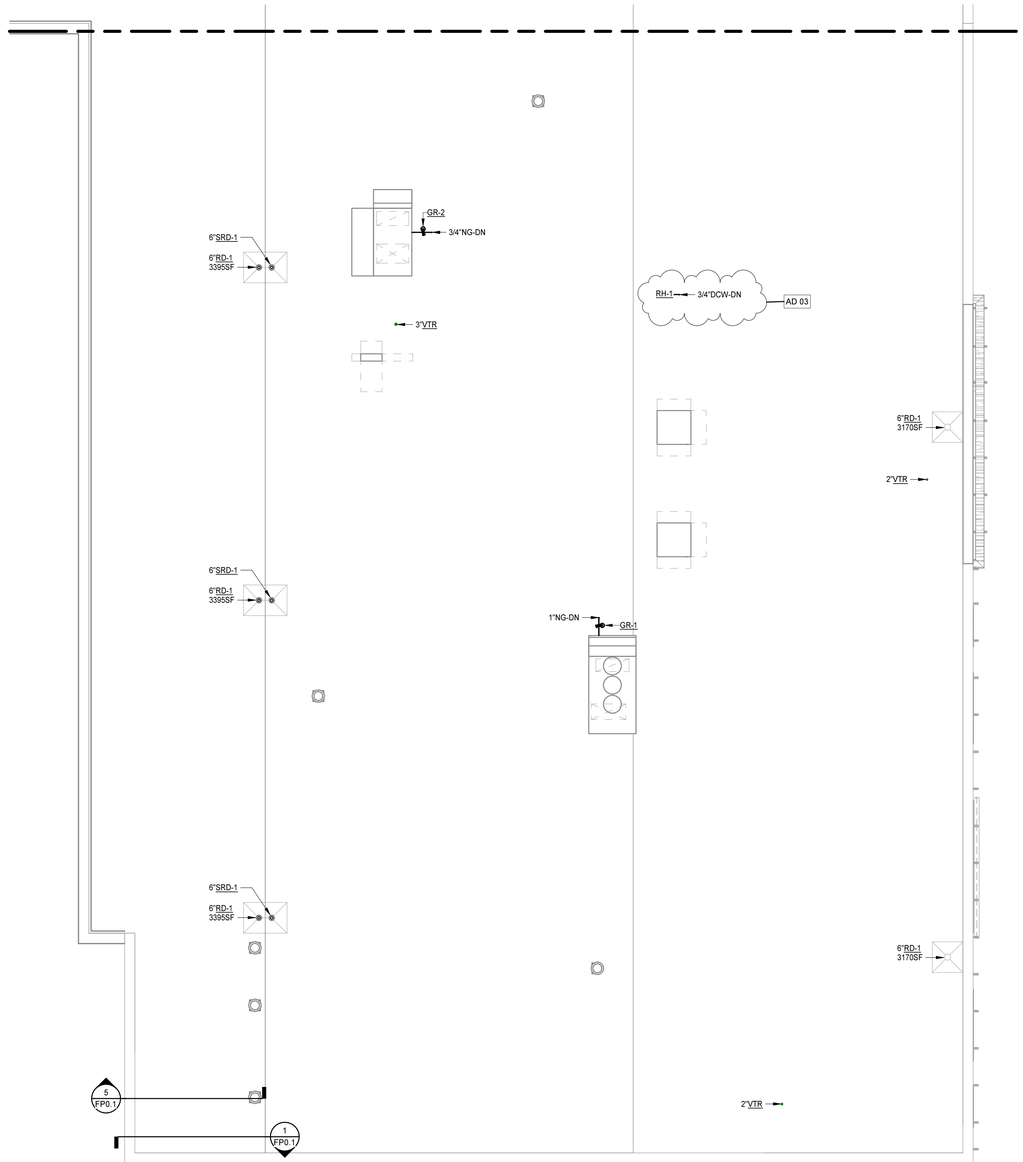
ROOF PLAN - PART C - PLUMBING

P2.3.3

6/12/2024 9:29:08 AM



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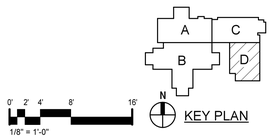
ROOF PLAN - PART D - PLUMBING

1/8" = 1'-0"



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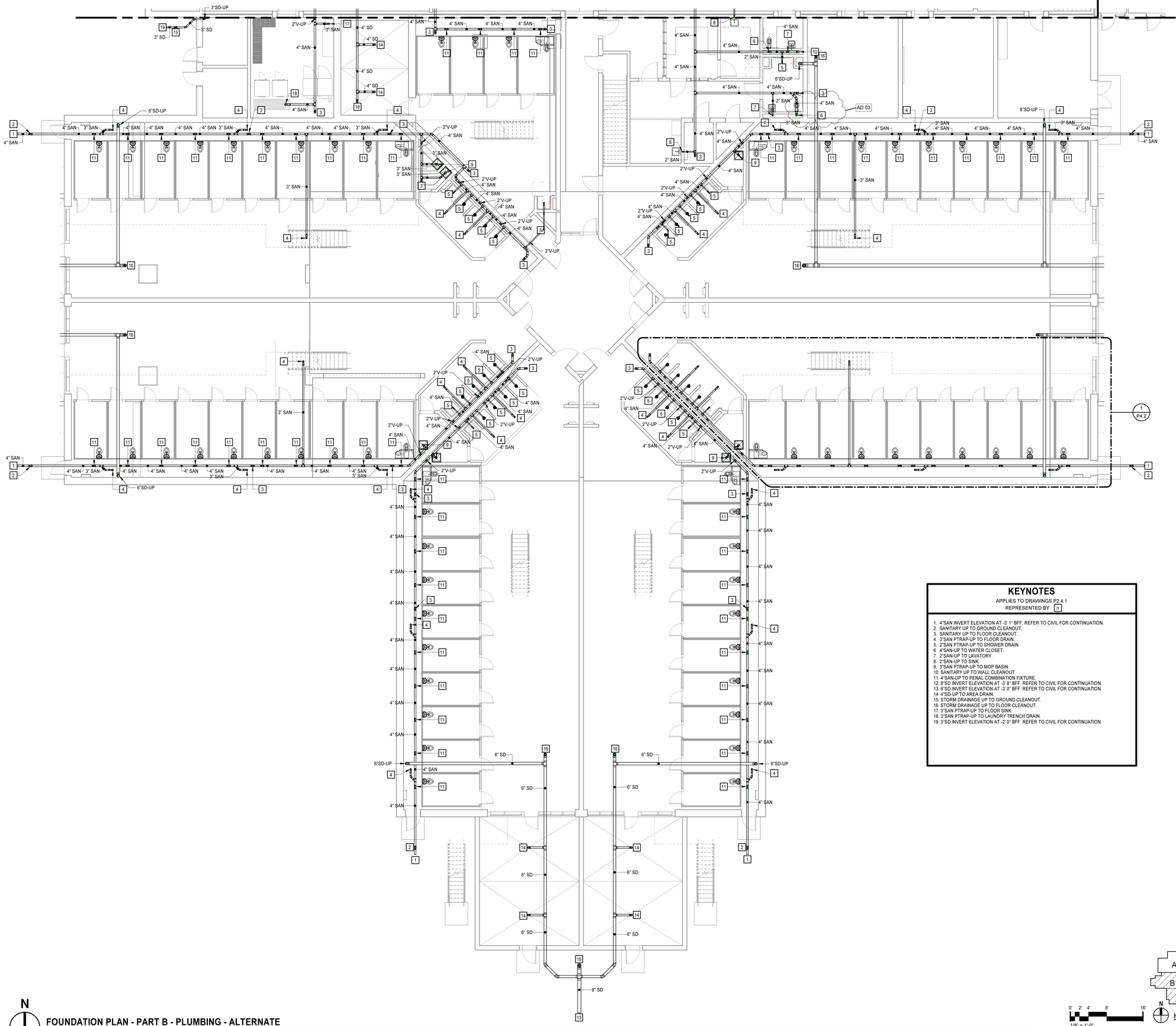
ROOF PLAN - PART D - PLUMBING

P2.3.4

6/12/2024 9:29:11 AM



KEYNOTES

APPLIES TO DRAWINGS P2.4.1
REPRESENTED BY n

1. 4"SAN INVERT ELEVATION AT -3' 1" BFF. REFER TO CIVIL FOR CONTINUATION.
2. SANITARY UP TO GROUND CLEANOUT.
3. SANITARY UP TO FLOOR CLEANOUT.
4. 3"SAN PTRAP-UP TO FLOOR DRAIN.
5. 2"SAN PTRAP-UP TO SHOWER DRAIN.
6. 4"SAN-UP TO WATER CLOSET.
7. 2"SAN-UP TO LAVATORY.
8. 2"SAN-UP TO SINK.
9. 3"SAN PTRAP-UP TO MOP BASIN.
10. SANITARY UP TO WALL CLEANOUT.
11. 4"SAN-UP TO PENAL COMBINATION FIXTURE.
12. 8"SD INVERT ELEVATION AT -3' 8" BFF. REFER TO CIVIL FOR CONTINUATION.
13. 8"SD INVERT ELEVATION AT -3' 0" BFF. REFER TO CIVIL FOR CONTINUATION.
14. 4"SD-UP TO AREA DRAIN.
15. STORM DRAINAGE UP TO GROUND CLEANOUT.
16. STORM DRAINAGE UP TO FLOOR CLEANOUT.
17. 3"SAN PTRAP-UP TO FLOOR SINK.
18. 3"SAN PTRAP-UP TO LAUNDRY TRENCH DRAIN.
19. 3"SD INVERT ELEVATION AT -2' 0" BFF. REFER TO CIVIL FOR CONTINUATION.

N

FOUNDATION PLAN - PART B - PLUMBING - ALTERNATE
1/8" = 1'-0"

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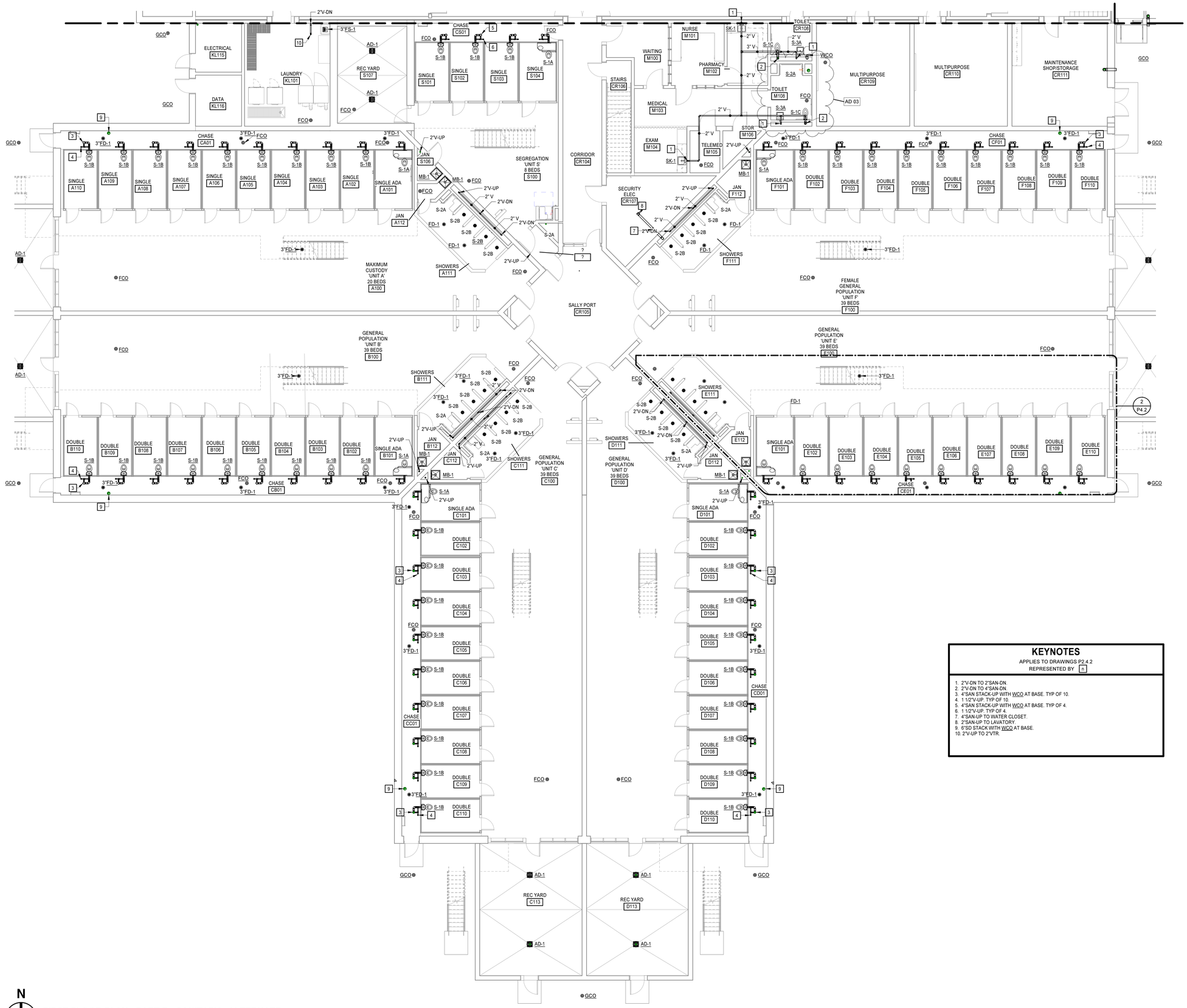
FOUNDATION PLAN - PART B - PLUMBING - ALTERNATE

P2.4.1

6/12/2024 9:29:19 AM



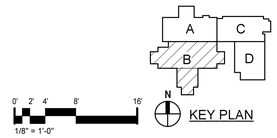
KEYNOTES

APPLIES TO DRAWINGS P2.4.2
REPRESENTED BY n

1. 2"V-DN TO 2"SAN-DN.
2. 2"V-DN TO 4"SAN-DN.
3. 4"SAN STACK-UP WITH WCO AT BASE. TYP OF 10.
4. 1 1/2"V-UP. TYP OF 10.
5. 4"SAN STACK-UP WITH WCO AT BASE. TYP OF 4.
6. 1 1/2"V-UP. TYP OF 4.
7. 4"SAN-UP TO WATER CLOSET.
8. 2"SAN-UP TO LAVATORY.
9. 6"SD STACK WITH WCO AT BASE.
10. 2"V-UP TO 2"VTR.

N

FIRST FLOOR PLAN - PART B - SANITARY - ALTERNATE
1/8" = 1'-0"



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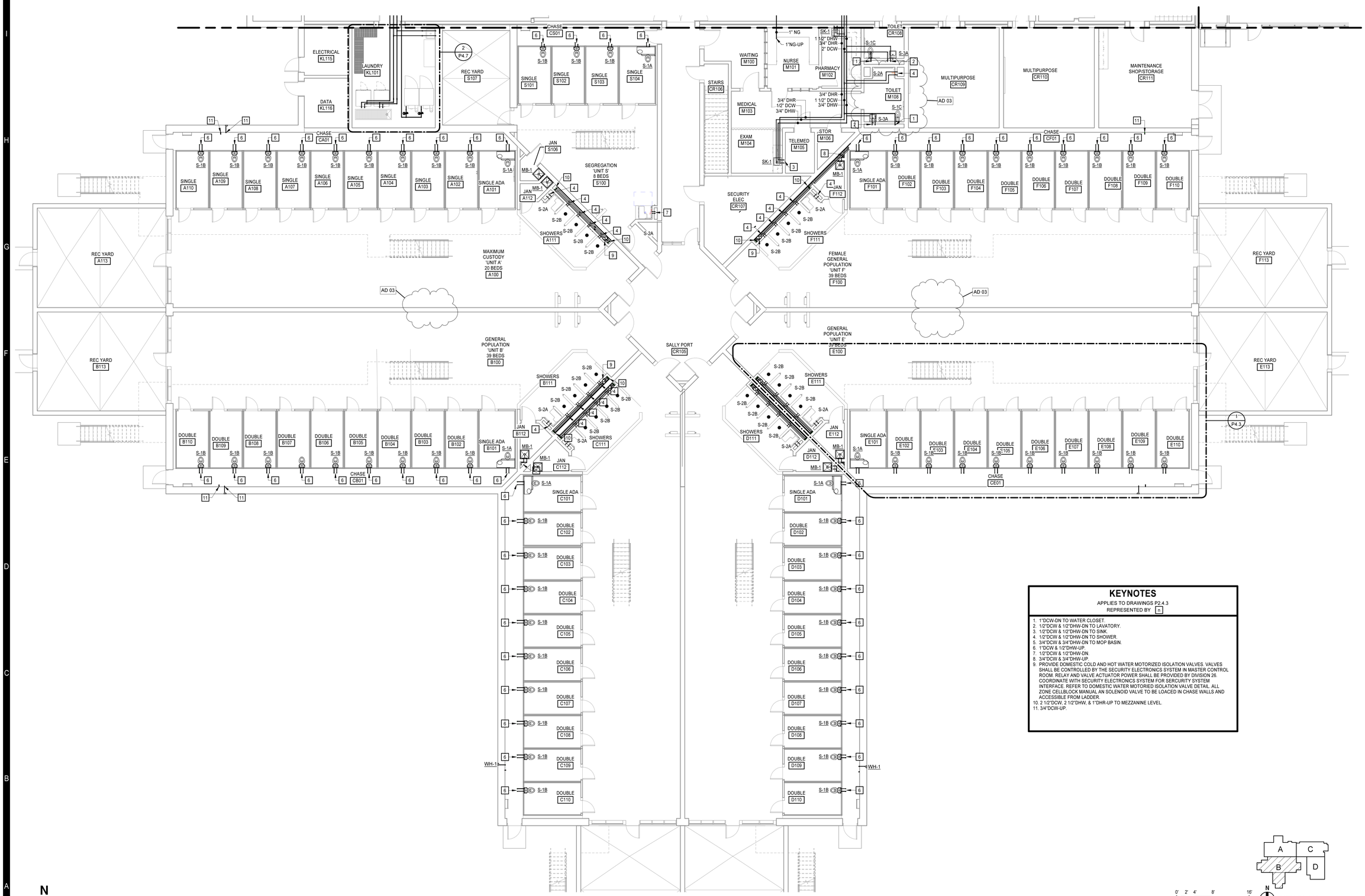
FIRST FLOOR PLAN - PART B - SANITARY - ALTERNATE

P2.4.2

6/12/2024 9:29:30 AM



KEYNOTES

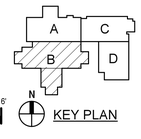
APPLIES TO DRAWINGS P2.4.3
REPRESENTED BY n

1. 1"DCW-DN TO WATER CLOSET.
2. 1/2"DCW & 1/2"DHW-DN TO LAVATORY.
3. 1/2"DCW & 1/2"DHW-DN TO SINK.
4. 1/2"DCW & 1/2"DHW-DN TO SHOWER.
5. 3/4"DCW & 3/4"DHW-DN TO MOP BASIN.
6. 1"DCW & 1/2"DHW-UP.
7. 1/2"DCW & 1/2"DHW-DN.
8. 3/4"DCW & 3/4"DHW-UP.
9. PROVIDE DOMESTIC COLD AND HOT WATER MOTORIZED ISOLATION VALVES. VALVES SHALL BE CONTROLLED BY THE SECURITY ELECTRONICS SYSTEM IN MASTER CONTROL ROOM. RELAY AND VALVE ACTUATOR POWER SHALL BE PROVIDED BY DIVISION 26. COORDINATE WITH SECURITY ELECTRONICS SYSTEM FOR SERCURITY SYSTEM INTERFACE. REFER TO DOMESTIC WATER MOTORIED ISOLATION VALVE DETAIL. ALL ZONE CELLBLOCK MANUAL AN SOLENOID VALVE TO BE LOACED IN CHASE WALLS AND ACCESSIBLE FROM LADDER.
10. 2 1/2"DCW, 2 1/2"DHW, & 1"DHR-UP TO MEZZANINE LEVEL.
11. 3/4"DCW-UP.

N

FIRST FLOOR PLAN - PART B - DOMESTIC - ALTERNATE

1/8" = 1'-0"



0' 2' 4' 8' 16'
1/8" = 1'-0"

KEY PLAN

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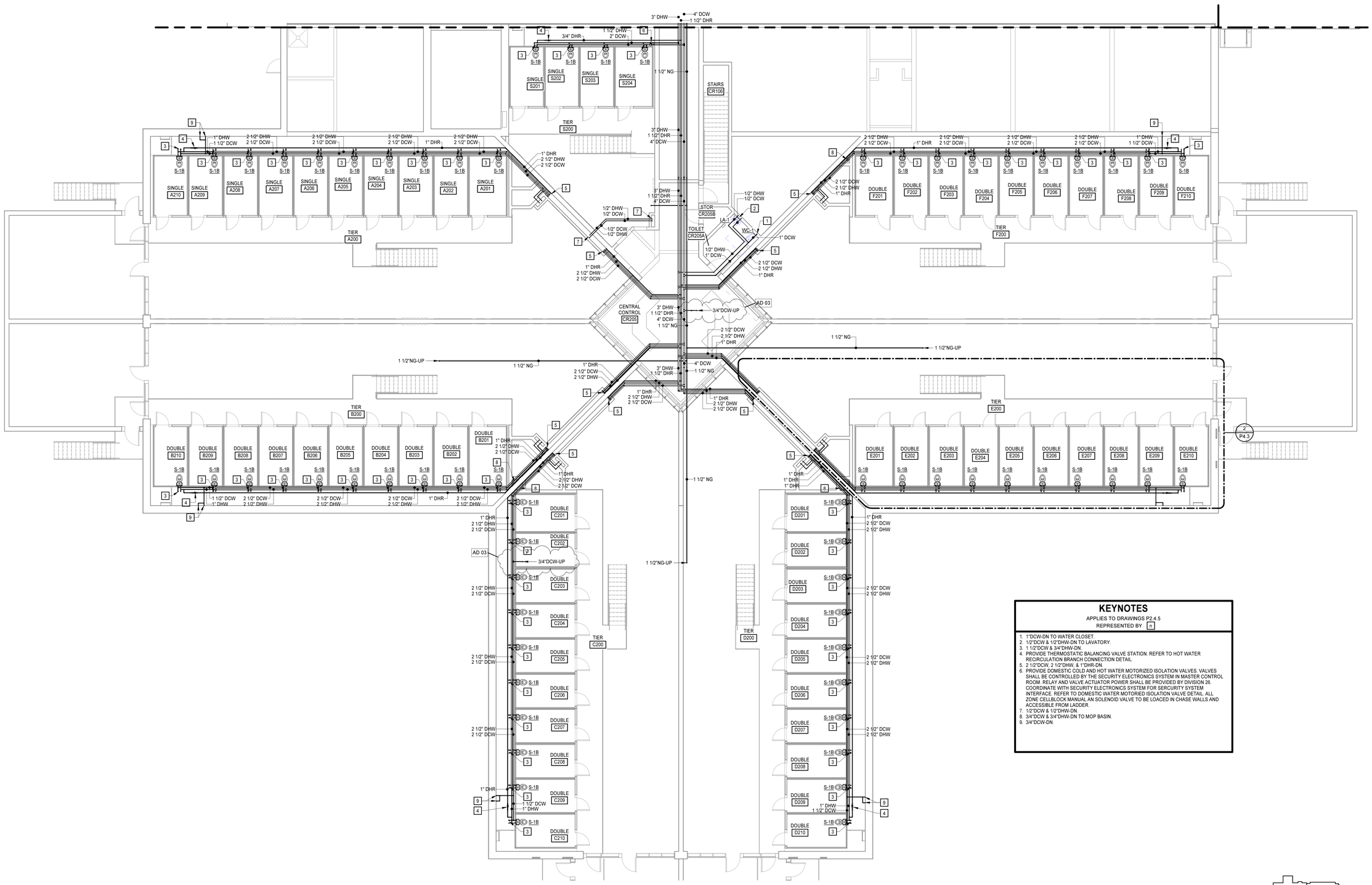
FIRST FLOOR PLAN - PART B - DOMESTIC - ALTERNATE

P2.4.3

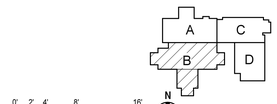
6/12/2024 9:29:39 AM



KEYNOTES

APPLIES TO DRAWINGS P2.4.5
REPRESENTED BY: A

1. 1"DCW-DN TO WATER CLOSET.
2. 1/2"DCW & 1/2"DHW-DN TO LAVATORY.
3. 1 1/2"DCW & 3/4"DHW-DN.
4. PROVIDE THERMOSTATIC BALANCING VALVE STATION. REFER TO HOT WATER RECIRCULATION BRANCH CONNECTION DETAIL.
5. 2 1/2"DCW, 2 1/2"DHW, & 1"DHR-DN.
6. PROVIDE DOMESTIC COLD AND HOT WATER MOTORIZED ISOLATION VALVES. VALVES SHALL BE CONTROLLED BY THE SECURITY ELECTRONICS SYSTEM IN MASTER CONTROL ROOM. RELAY AND VALVE ACTUATOR POWER SHALL BE PROVIDED BY DIVISION 26. COORDINATE WITH SECURITY ELECTRONICS SYSTEM FOR SERCURITY SYSTEM INTERFACE. REFER TO DOMESTIC WATER MOTORIED ISOLATION VALVE DETAIL. ALL ZONE CELLBLOCK MANUAL AN SOLENOID VALVE TO BE LOACED IN CHASE WALLS AND ACCESSIBLE FROM LADDER.
7. 1/2"DCW & 1/2"DHW-DN.
8. 3/4"DCW & 3/4"DHW-DN TO MOP BASIN.
9. 3/4"DCW-DN.



N

MEZZANINE LEVEL - PART B - DOMESTIC - ALTERNATE

1/8" = 1'-0"

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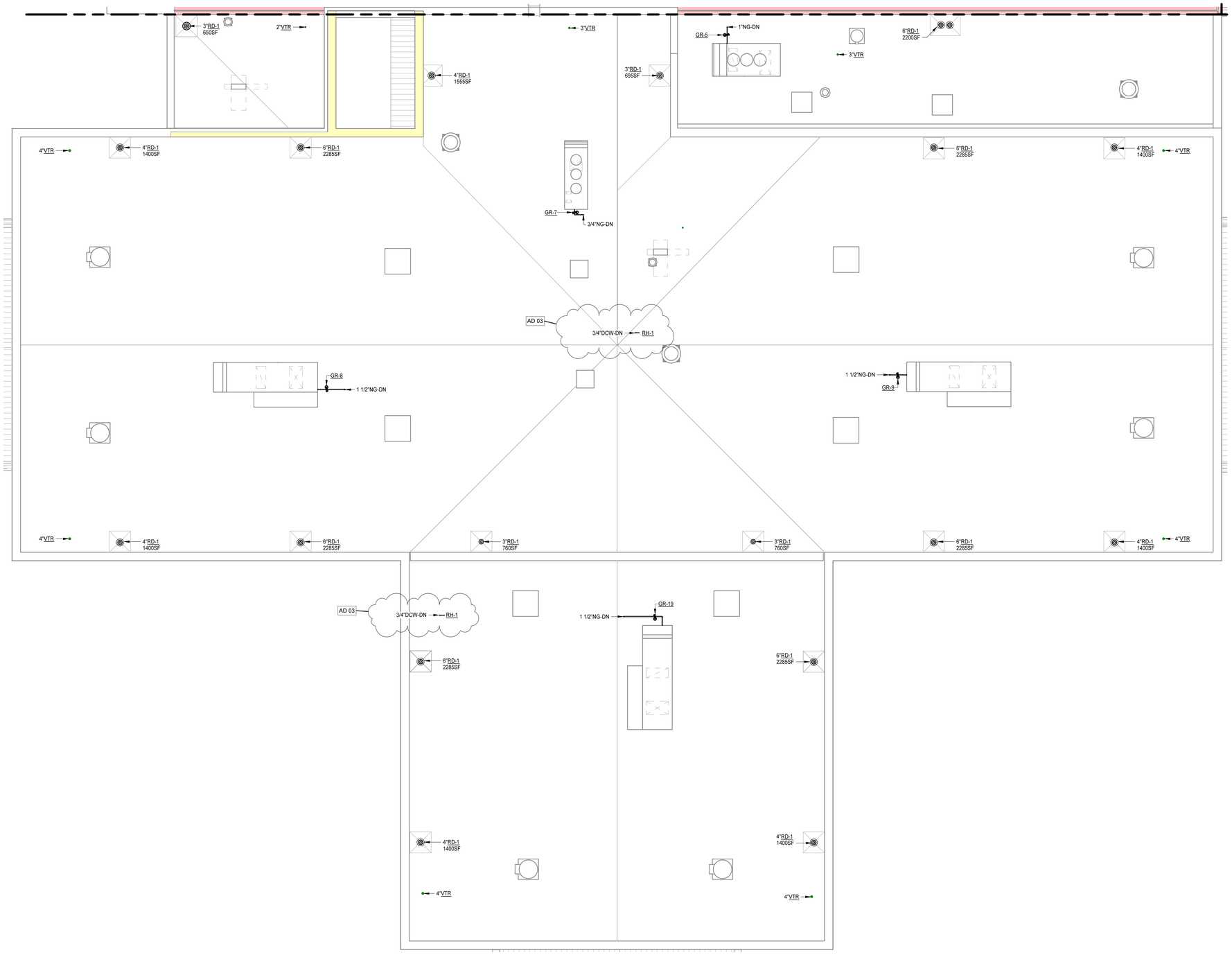
MEZZANINE LEVEL - PART B - DOMESTIC - ALTERNATE

P2.4.5

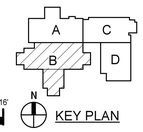
6/12/2024 9:29:48 AM



N

ROOF PLAN - PART B - ALTERNATE - PLUMBING

1/8" = 1'-0"



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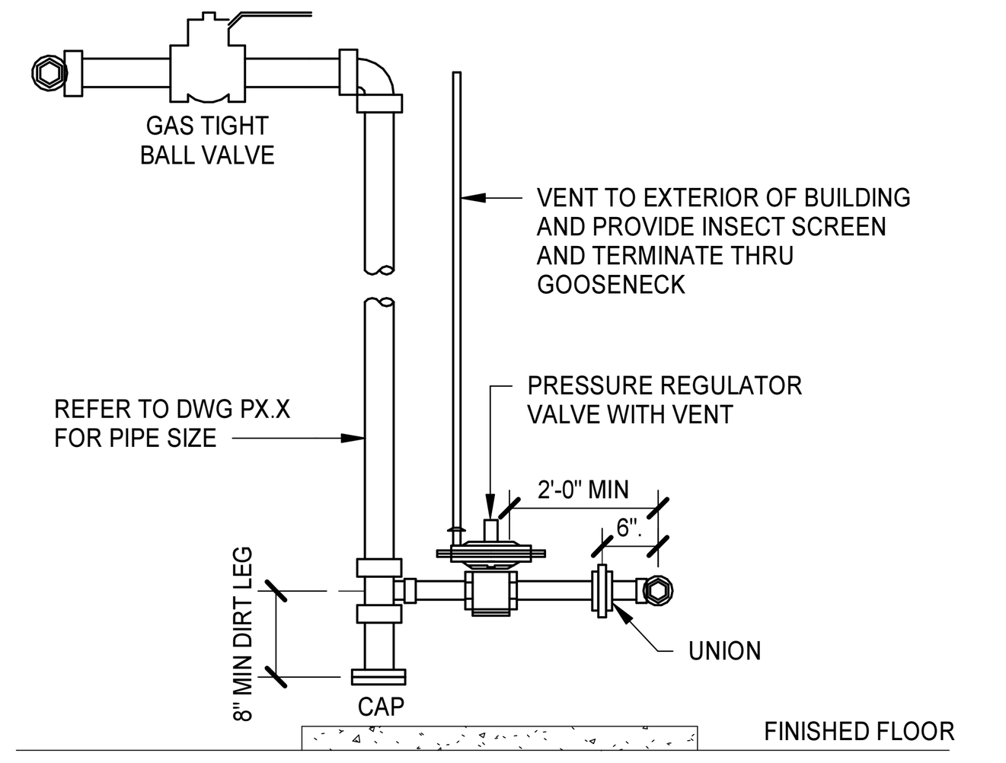
ROOF PLAN - PART B - PLUMBING - ALTERNATE

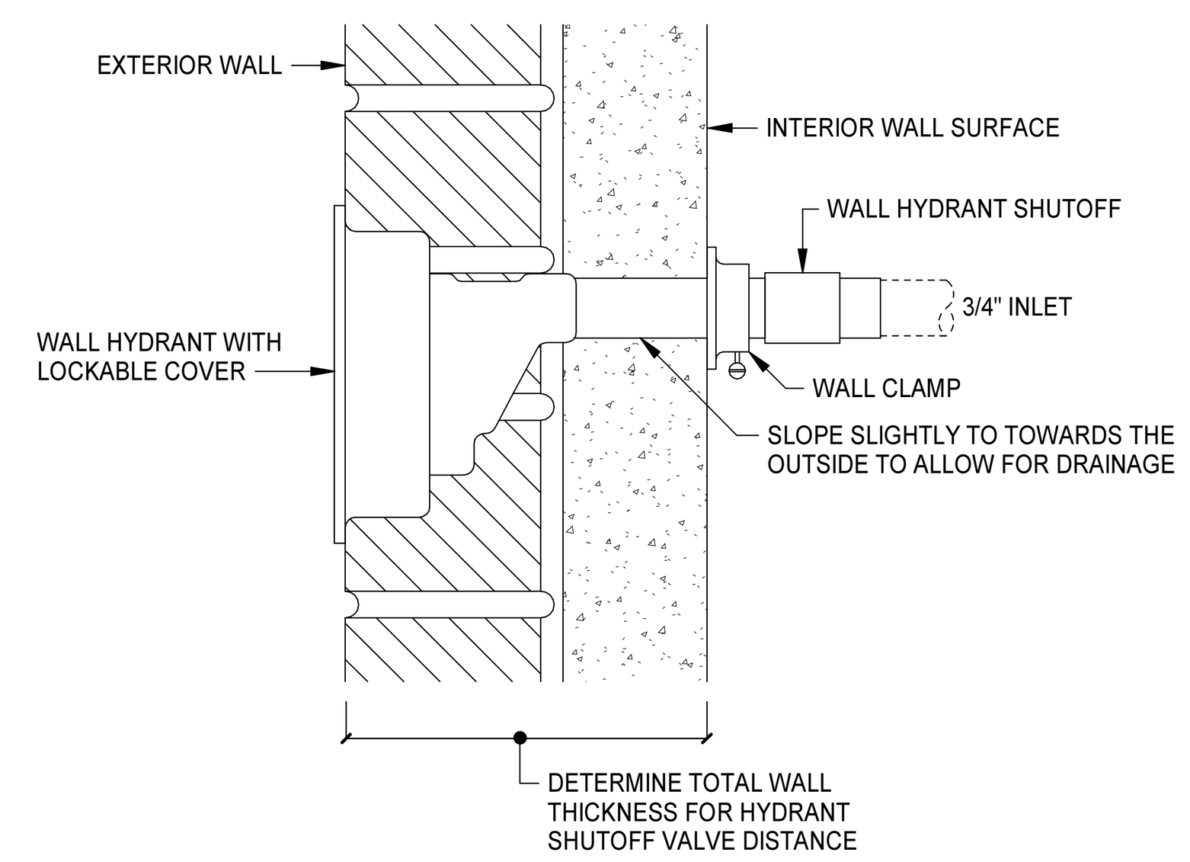
P2.4.6

6/12/2024 9:29:52 AM

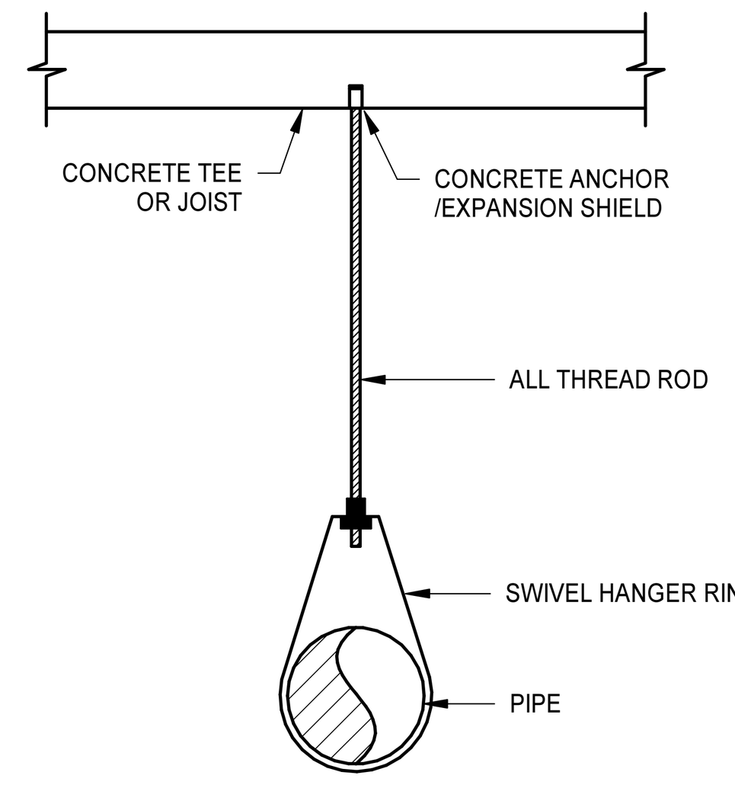


NOTES:
1. REGULATOR AND GAS PIPING FROM DIRT LEG TO EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
2. REGULATOR SHALL MEET EQUIPMENT MANUFACTURER PRESSURE AND FLOW REQUIREMENTS.
3. ALL REGULATOR VENTS SHALL TERMINATE A MINIMUM OF 10'-0" AWAY FROM ALL OUTSIDE AND FRESH AIR INTAKES AND OPERABLE DOORS AND WINDOWS.

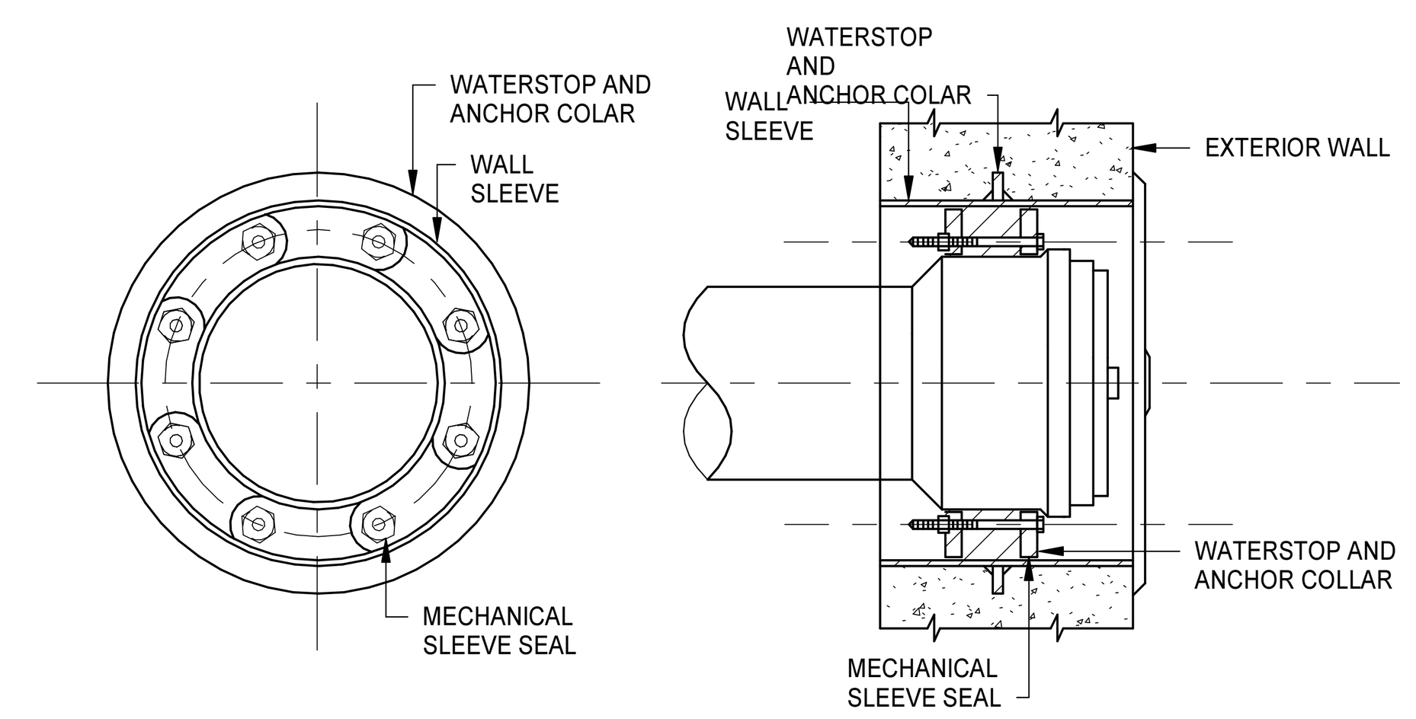
GAS PIPE CONNECTION DETAIL
NO SCALE



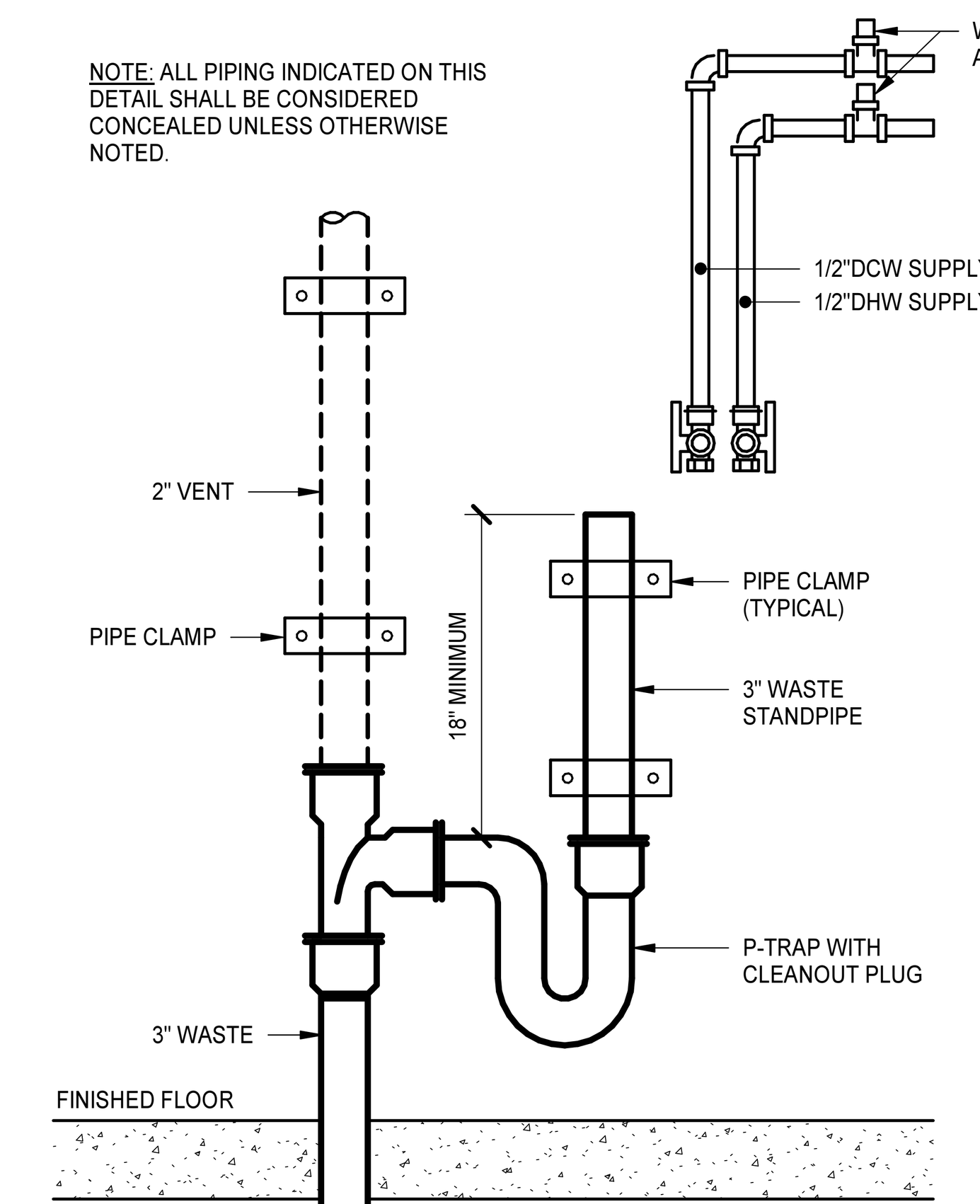
EXTERIOR WALL HYDRANT DETAIL
NO SCALE



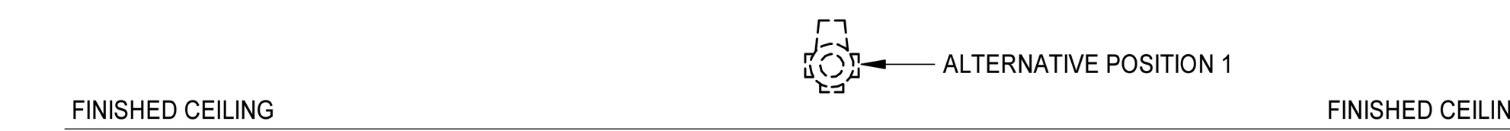
TYPICAL HANGER IN CONCRETE
NO SCALE



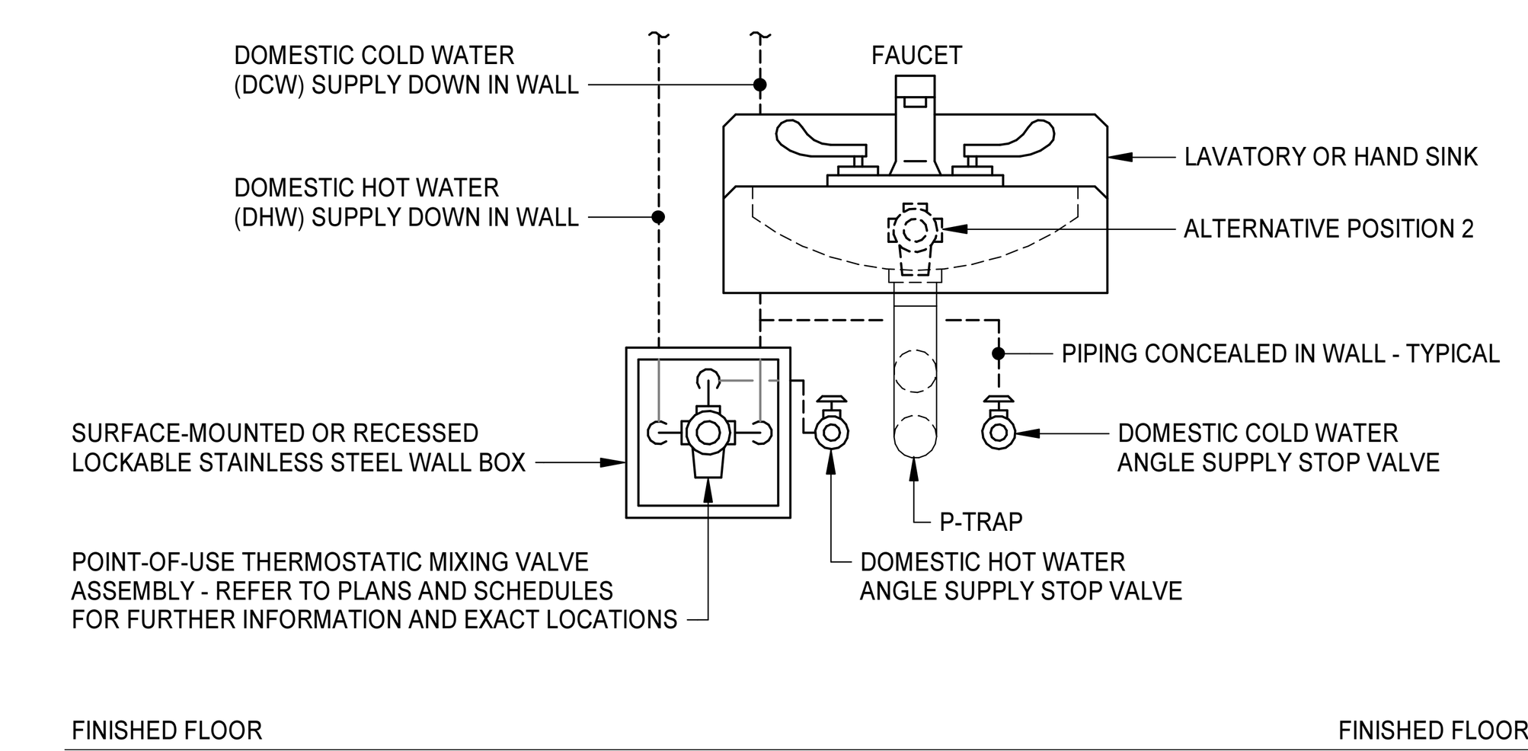
MECHANICAL SLEEVE SEAL DETAIL
NO SCALE



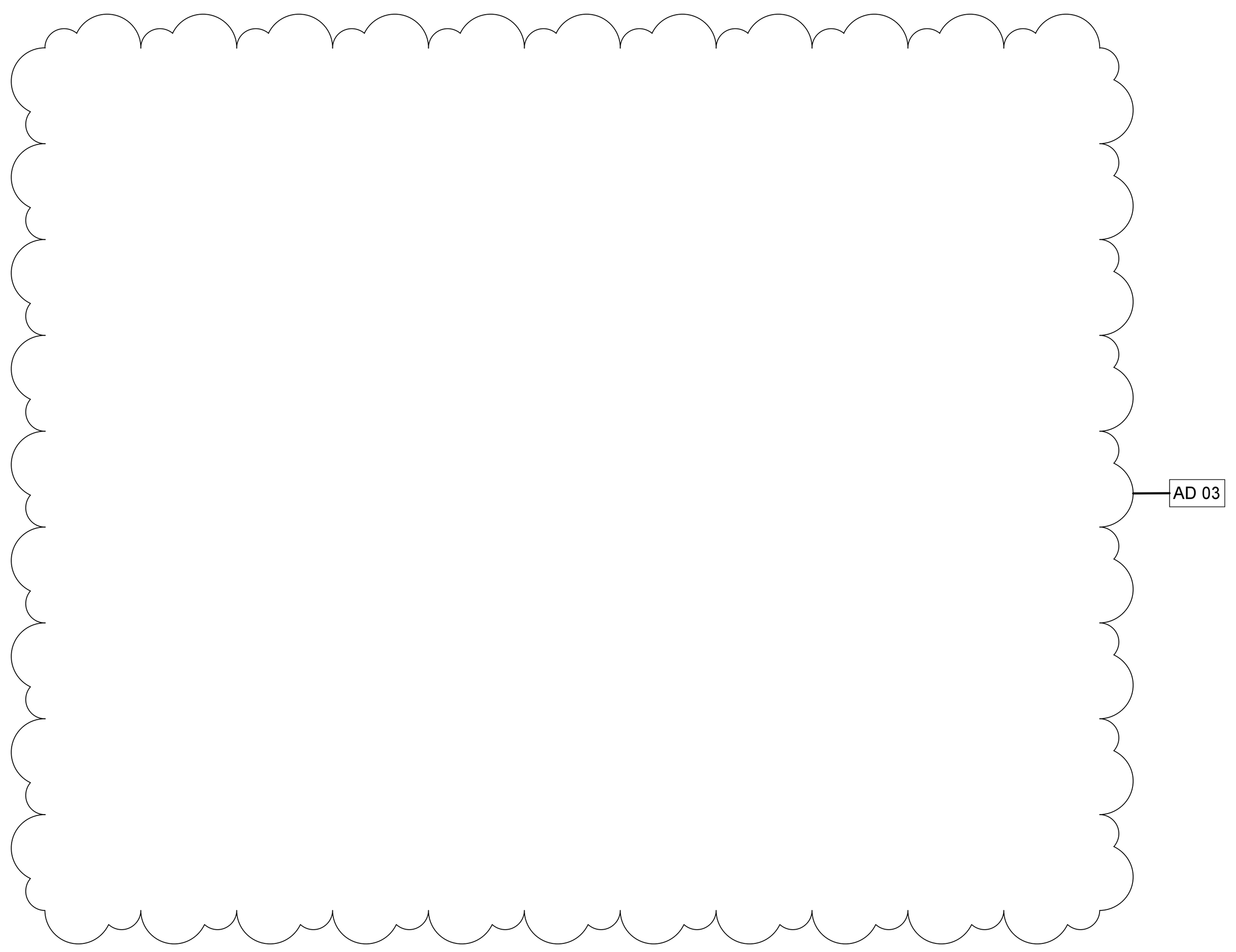
WASHING MACHINE STANDPIPE DRAIN DETAIL
NO SCALE

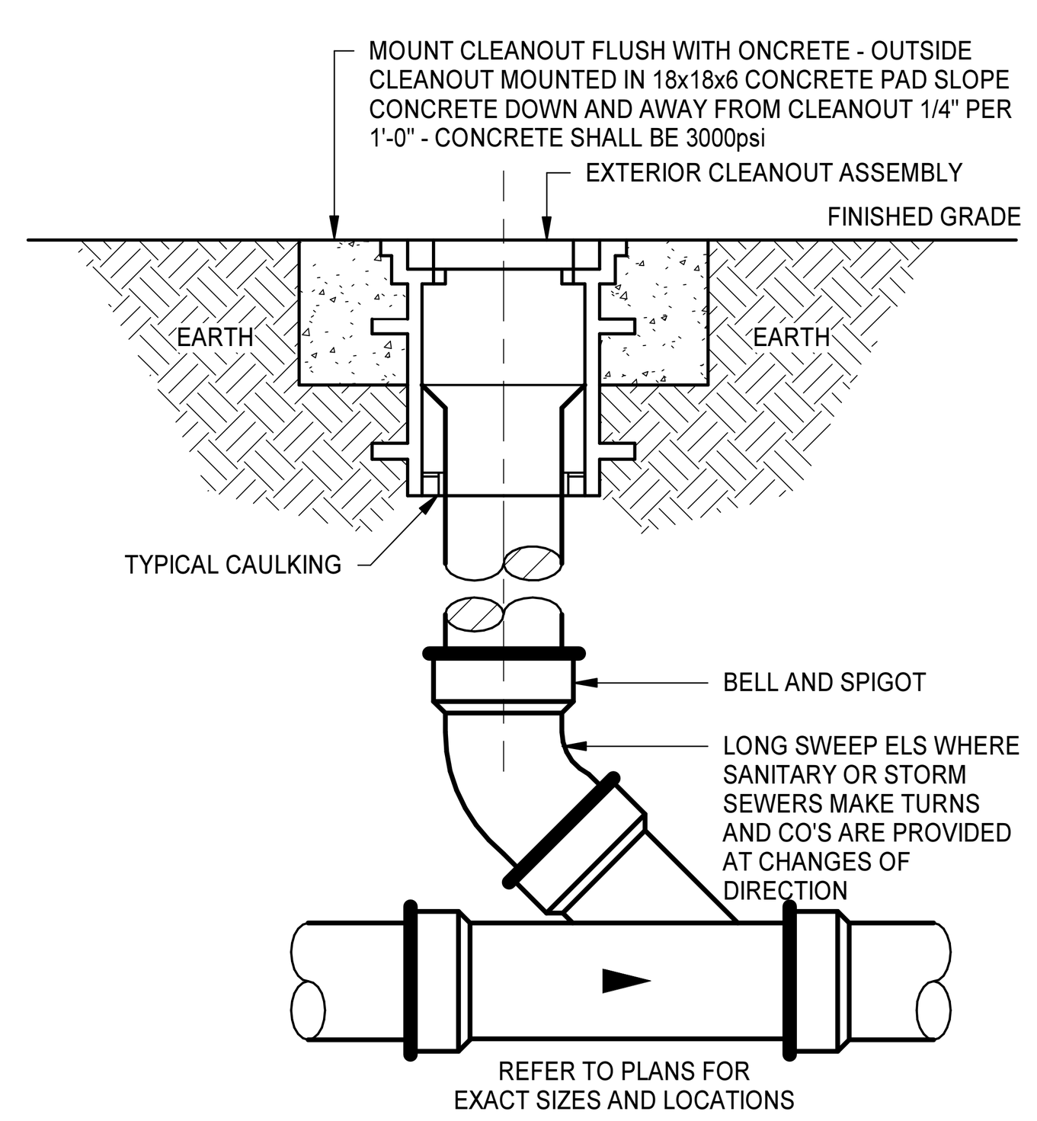


NOTES:
1. PIPING DOWNSTREAM OF SUPPLY STOPS NOT SHOWN FOR CLARITY. ALL REQUIRED FIXTURE AND EQUIPMENT CLEARANCES AND ACCESS SHALL BE MAINTAINED.
2. PRIMARY POSITION SHALL BE USED UNLESS OTHERWISE APPROVED. ALTERNATE POSITION 1 MAY BE USED WHERE CEILING HEIGHT DOES NOT EXCEED 10'. ALTERNATE POSITION 2 REQUIRES DETAILED EXAMPLE AND PRIOR APPROVAL.
3. PRIMARY POSITION (AS INDICATED): LOCATE VALVE IN SURFACE-MOUNTED OR RECESSED LOCKABLE STAINLESS STEEL WALL BOX WITH ALL PIPING PRIOR TO SUPPLY STOPS CONCEALED IN WALL. BOX POSITION SHALL BE LOCATED COMPLETELY UNDER FIXTURE WHENEVER POSSIBLE.
4. ALTERNATIVE POSITION 1 (CONCEALED ABOVE CEILING): LOCATE VALVE ABOVE CEILING AND PROVIDE ACCESS PANEL FOR NON-ACCESSIBLE CEILINGS.
5. ALTERNATIVE POSITION 2 (EXPOSED TUCKED HIGH UNDER FIXTURE): LOCATE VALVE HIGH BELOW FIXTURE OUT OF SIGHT AND PROVIDE WITH MOUNTING BRACKET TO ENSURE VALVE STAYS IN-PLACE.

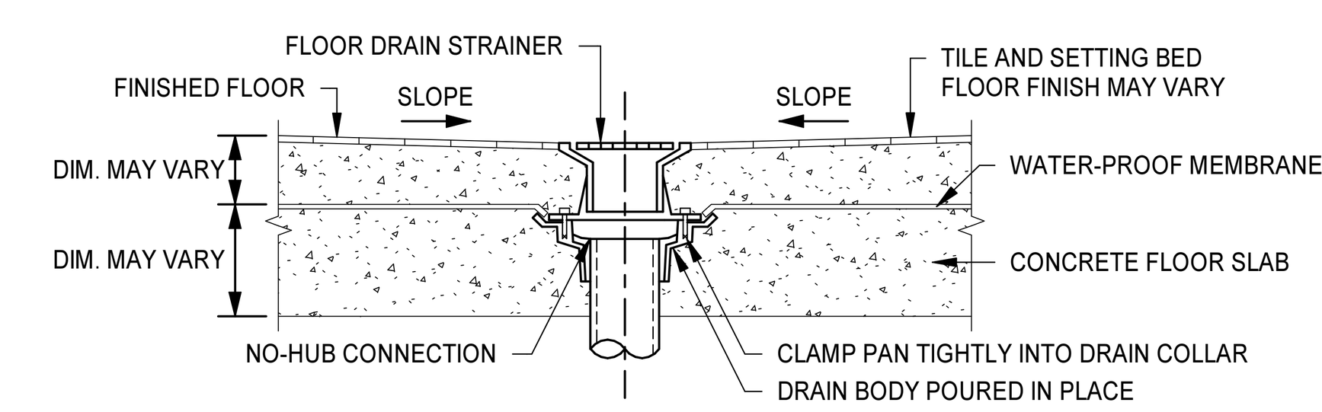


ASSE-1070 POINT-OF-USE VALVE DETAIL
NO SCALE

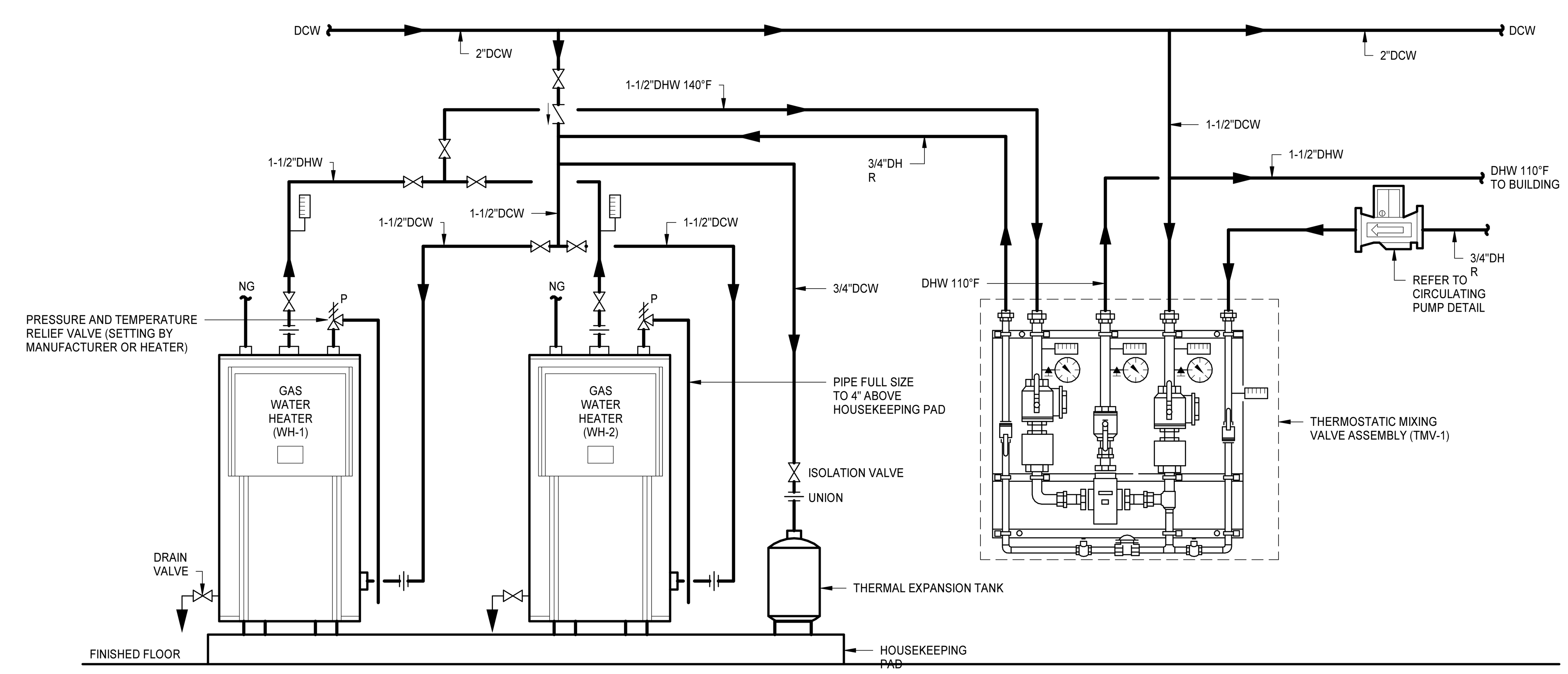




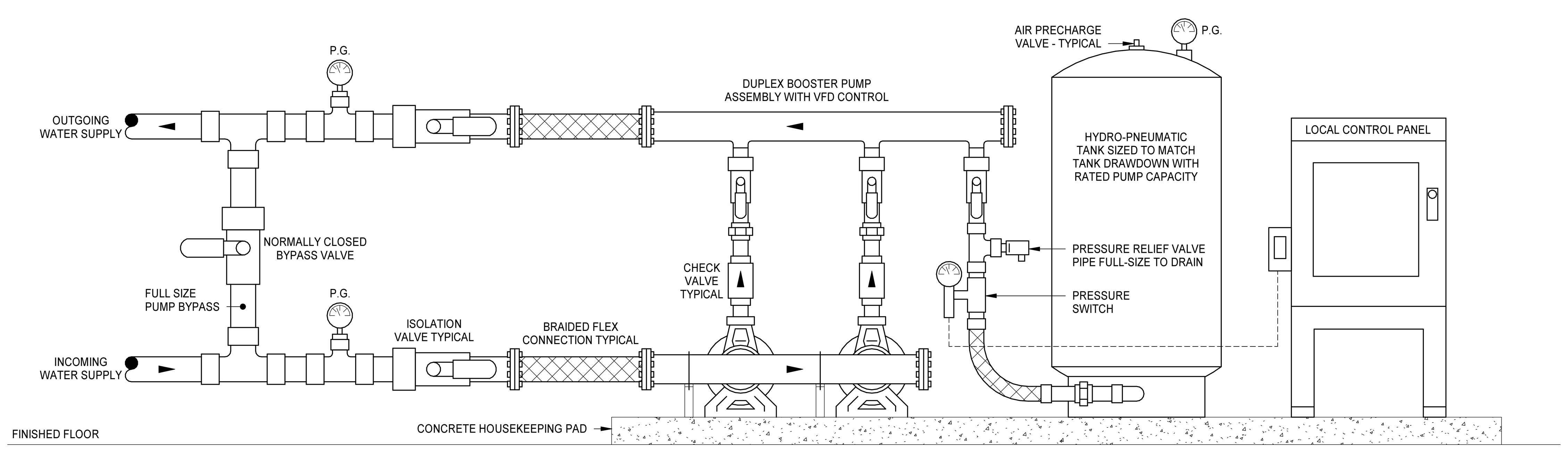
EXTERIOR YARD CLEANOUT DETAIL
NO SCALE



FLOOR DRAIN IN OPEN AREA DETAIL
NO SCALE



NOTES:
1. REFER TO GAS CONNECTION AND GAS PIPE CONNECTION DETAILS AND MANUFACTURER'S RECOMMENDATIONS FOR FINAL GAS EQUIPMENT CONNECTIONS, PRESSURE REQUIREMENTS, AND FLOW REQUIREMENTS.
2. WHERE WATER HEATERS ARE MANIFOLDED TOGETHER IN PARALLEL, REFER TO MANUFACTURER'S RECOMMENDED INSTALLATION PIPING ARRANGEMENTS AND PROVIDE EQUAL LEG PIPING FOR INLET AND OUTLET MANIFOLD PIPING OR ALTERNATIVE APPROVED METHOD FOR BALANCING FLOW AND PRESSURE TO AND FROM EACH HEATER.



DUPLEX DOMESTIC BOOSTER PUMP DETAIL
NO SCALE

DOMESTIC WATER HEATER DETAIL
NO SCALE

6/12/2024 9:29:54 AM

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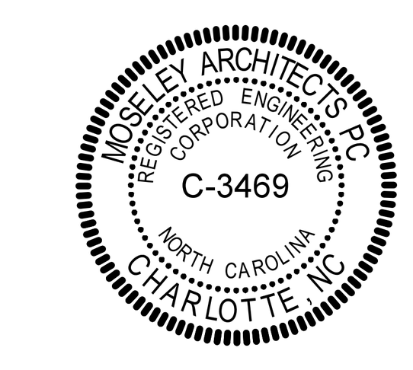


PENDER COUNTY LEC
PENDER COUNTY, NORTH CAROLINA
OLD SAVANNAH ROAD BURGAW, NC

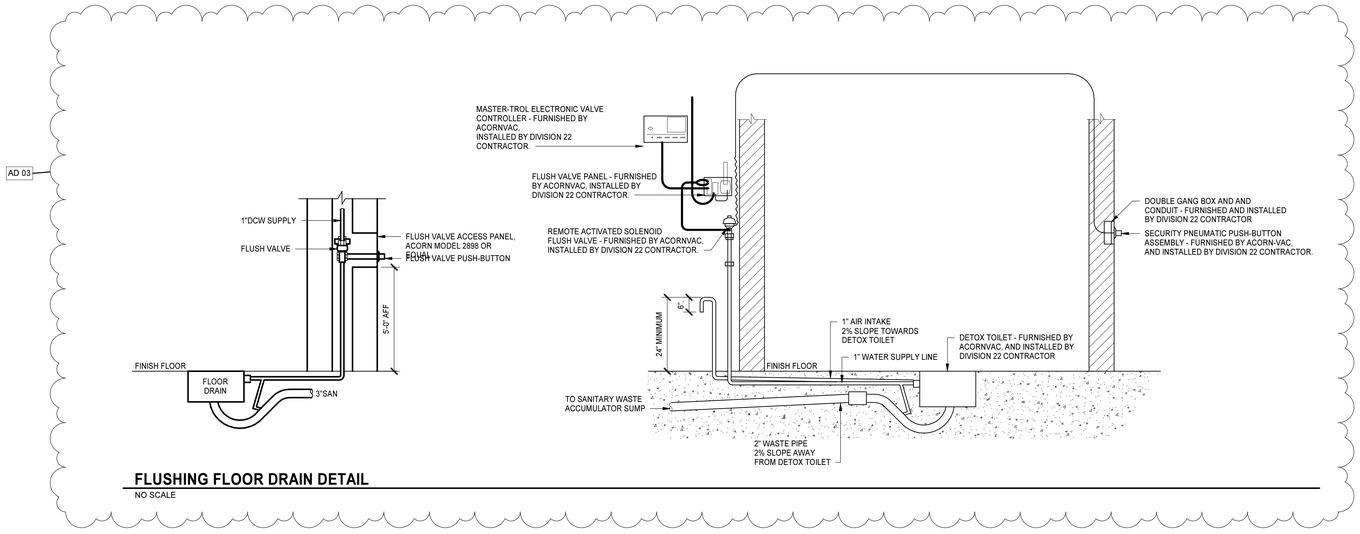
PROJECT NO:	611888
DATE:	MAY 1, 2024

REVISIONS

DATE	DESCRIPTION
06/12/2024	AD 03

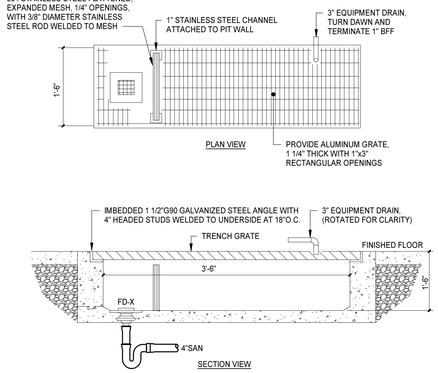
PLUMBING DETAILS

P5.3



FLUSHING FLOOR DRAIN DETAIL

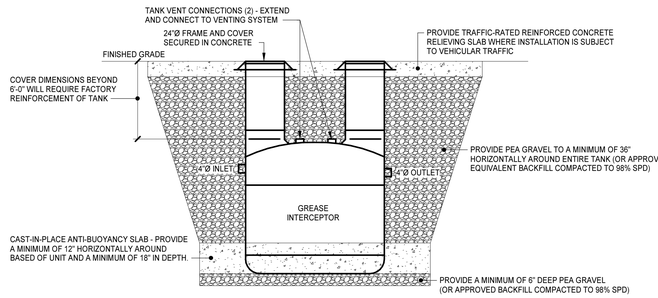
NO SCALE



LAUNDRY EXTRACTOR TRENCH DRAIN DETAIL

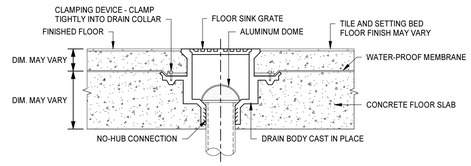
NO SCALE

NOTES:
1. REFER TO MANUFACTURER'S WRITTEN INSTALLATION PROCEDURES AND RECOMMENDATIONS AND CHECKLIST.
2. INTERCEPTORS MUST BE INSTALLED IN ACCORDANCE WITH ALL RELEVANT FEDERAL, PROVINCIAL/STATE, AND LOCAL CODES, INCLUDING LOCAL PLUMBING CODE.



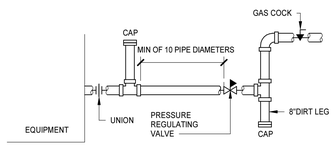
GREASE INTERCEPTER DETAIL

NO SCALE



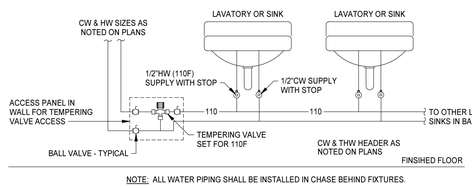
FLOOR SINK DETAIL - FLUSH

NO SCALE



GAS CONNECTION DETAIL

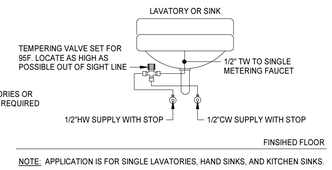
NO SCALE



NOTE: ALL WATER PIPING SHALL BE INSTALLED IN CHASE BEHIND FIXTURES.

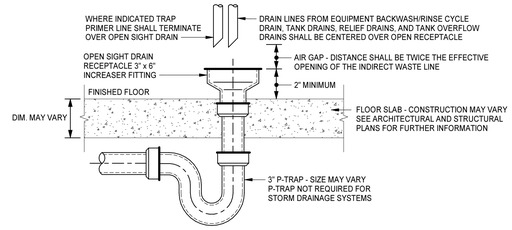
LAVATORY SUPPLY DETAIL

NO SCALE



NOTE: APPLICATION IS FOR SINGLE LAVATORIES, HAND SINKS, AND KITCHEN SINKS.

NOTE:
FOR 4" OPEN SIGHT DRAINS THE OPEN SIGHT DRAIN RECEPTACLE SHALL BE 4" x 8" INCREASER FITTING.
FOR 6" OPEN SIGHT DRAINS THE OPEN SIGHT DRAIN RECEPTACLE SHALL BE 6" x 12" INCREASER FITTING.
FOR 8" OPEN SIGHT DRAINS THE OPEN SIGHT DRAIN RECEPTACLE SHALL BE 8" x 15" INCREASER FITTING.



OPEN SIGHT DRAIN DETAIL

NO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 043951 ENGINEER BRITTON T WHITE

MOSELEY ARCHITECTS PROFESSIONAL CORPORATION C-3469 NORTH CAROLINA CHARLOTTE, NC

PENDER COUNTY LEC

PENDER COUNTY, NORTH CAROLINA
OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: MAY 1, 2024

REVISIONS

DATE	DESCRIPTION
06/12/2024	AD 03

PLUMBING DETAILS

P5.4

6/12/2024 9:29:55 AM

AD 03

DRAIN AND CLEANOUT SCHEDULE

TAG	BASIS OF DESIGN		STRAINER/GRATE	NOTES
	MANUFACTURER	MODEL		
AD-1	JOSAM	23506-2-VP-X	14" x 14"	2, 3
DSN-1	JOSAM	25010-BS	DOWNSPOUT NOZZLE	
FCO	JOSAM	55000-SS-SD-41-VP-Z	FLOOR CLEANOUT	<varies>
FD-1	JOSAM	30000-6S-PD-2-VP-X	6" ROUND	<varies>
FD-2	JOSAM	32100-50-81-VP	9" ROUND	2, 3
FS-1	JOSAM	49344A-VP-33-35-X	10" x 10"	HALF GRATE
GCO	JOSAM	5500-1-SD-41-VP-Z	GROUND CLEANOUT	<varies>
RD-1	JOSAM	21500-3022-VP-X	15" ROUND	3
SRD-1	JOSAM	21500-3-16-22-VP-X	15" ROUND	<varies>
TD-1	JOSAM	76004-7	69" x 6"	
WCO	JOSAM	58910-19	WALL CLEANOUT	

NOTES:
1. PROVIDE EMERGENCY SECONDARY DRAIN WITH 2" INTEGRAL WATER DAM.
2. PROVIDE ALL FLOOR DRAINS CONNECTED TO THE SANITARY SEWER SYSTEM WITH TRAP GUARD INSERTS UNLESS OTHERWISE NOTED.
3. ALL ROOF DRAINS, SANITARY DRAINS AND CLEANOUTS TO HAVE ADJUSTABLE HEIGHT TOP.

PLUMBING FIXTURE SCHEDULE

AD 03

TAG	FIXTURE	HEIGHT A.F.F.	BASIS OF DESIGN	PIPE SIZE					NOTES
				COLD WATER	TEPID WATER	HOT WATER	VENT	SOIL WASTE	
EEWS-1	COMBINATION EMERGENCY EYEWASH/SHOWER STATION	FLOOR MOUNTED	FIXTURE: BRADLEY S19314BFPB VALVE: BRADLEY S19-2100 EFX20	1/2"		1/2"	1 1/2"	1 1/2"	
EWC-1	BI-LEVEL WATER COOLER (ACCESSIBLE) w/ BOTTLE STATION	TOP OF BUBBLER AT 34", TRAY AT 34 7/16" A.F.F.	FIXTURE: ELKAY LSTL8WSSP	1/2"			1 1/2"	1 1/2"	1
HB-1	HOSE BIBB	CENTERLINE OF OUTLET AT 18"	FIXTURE: ZURN Z1341-XL	3/4"					
LA-1	WALL-HUNG LAVATORY (ACCESSIBLE) WITH MANUALLY-OPERATED FAUCET	RIM AT 34"	FIXTURE: ZURN Z5310 FAUCET: ZURN 81101XL-G-HCT-25M	1/2"		1/2"	1 1/2"	1 1/2"	1, 3
LA-2	COUNTER MOUNTED LAVATORY (ACCESSIBLE) WITH MANUALLY-OPERATED FAUCET	COUNTER MOUNTED REFER TO ARCH DRAWINGS	FIXTURE: ZURN Z5110 FAUCET: ZURN 81101XL-G-HCT-25M	1/2"		1/2"	1 1/2"	1 1/2"	1, 3
MB-1	MOP BASIN (36" x 36")	RIM AT 12"	FIXTURE: FIAT TSB3002 FAUCET: ZURN Z843M1-XL-CS-HCT	3/4"		3/4"	2"	3"	
RH-1	ROOF HYDRANT (FREEZE-RESISTANT)	ROOF DECK	FIXTURE: ZURN Z1388XL-AC-VB	3/4"					
SH-1	INDIVIDUAL SHOWER (ACCESSIBLE)	CONTROLS AT 42", SHOWERHEAD AT 72"	VALVE: ZURN Z7301-SS-MT-DV2P-HW-H9-S9	1/2"		1/2"	2"	2"	1, 4
SH-2	INDIVIDUAL SHOWER (ACCESSIBLE)	CONTROLS AT 42", SHOWERHEAD AT 72"	VALVE: ZURN Z7301-SS-MT-DV2P-HW-H9-S9	1/2"		1/2"	2"	2"	1, 4
SH-3	INDIVIDUAL SHOWER	CONTROLS AT 42", SHOWERHEAD AT 78"	VALVE: ZURN Z7301-SS-MT-DV2P-HW-H9-S9	1/2"		1/2"	2"	2"	1, 4
SK-1	SINK - SINGLE BASIN	COUNTER MOUNTED REFER TO ARCH DWGS	FIXTURE: ELKAY LRAD-221955 FAUCET: ZURN Z82300-XL-CP4-3M	1/2"		1/2"	1 1/2"	1 1/2"	1, 3
SK-2	UTILITY SINK	RIM AT 30"	FIXTURE: ELKAY WNSF81302 FAUCET: ZURN Z842HA-XL-HCT-3F	1/2"		1/2"	1 1/2"	1 1/2"	1, 3
SK-3	ARMORY SINK	RIM AT 28"	FIXTURE: ELKAY ESSW2118C FAUCET: ZURN Z843M4-XL-CS-HCT	1/2"		1/2"	1 1/2"	1 1/2"	1, 3
UR-1	URINAL (ACCESSIBLE)	RIM AT 17"	FIXTURE: ZURN Z5755 VALVE: ZURN Z6003AV-ULF	3/4"			2"	2"	1
WC-1	FLOOR MOUNTED WATER CLOSET (ACCESSIBLE)	TOP OF SEAT 17"	FIXTURE: ZURN Z5665-BWL1-AM VALVE: ZURN Z6000AV-HET	1"			2"	4"	1, 2
WC-2	FLOOR MOUNTED WATER CLOSET	TOP OF SEAT 15"	FIXTURE: ZURN Z5655-BWL1-AM VALVE: ZURN Z6000AV-HET	1"			2"	4"	2
WH-1	WALL HYDRANT	CENTERLINE OF OUTLET AT 18"	FIXTURE: ZURN Z1320XL-CL-WC	3/4"					
WSB-1	ICE MAKER OUTLET BOX	BOTTOM AT 8"		1/2"					

AD 03

NOTES:
1. THIS ACCESSIBLE FIXTURE, ACCESSORIES, AND INSTALLATION SHALL CONFORM TO THE USBC AND ASAD ADA STANDARDS FOR ACCESSIBLE DESIGN.
2. LOCATE FLUSH ACTUATORS ON WIDE SIDE OF STALLS OR APPROACH AREAS.
3. PROVIDE ASSE-1070 CERTIFIED MIXING VALVE IN STAINLESS STEEL WALL CABINET, ABOVE CEILING, OR BELOW FIXTURE ACCESSIBLE BUT CONCEALED FROM VIEW.
4. PROVIDE ASSE-1016 CERTIFIED MIXING VALVE.
5. PROVIDE ASSE-1071 CERTIFIED EMERGENCY MIXING VALVE IN STAINLESS STEEL WALL CABINET.
6. PROVIDE DISHWASHER HOOK-UP WHERE DISHWASHER IS PRESENT, CONNECT HW IN SINK BASE AND CONNECT SANITARY THRU AIR GAP FITTING OR HIGH LOOP HOSE DRAIN INTO DISHWASHER TAIL PIECE SINK DRAIN.

GAS WATER HEATER SCHEDULE

TAG	BASIS OF DESIGN		LOCATION	CAPACITY (GALLONS)	RECOVERY RATE (GPH)	TEMPERATURE RISE (°F)	TEMPERATURE SETTING (°F)	FUEL DATA			ELECTRICAL DATA			NOTES
	MANUFACTURER	MODEL						TYPE	INPUT RATE (BTUH)	MAX. INLET PRESSURE (INCHES W.C.)	VOLTAGE	PHASE	HERTZ	
GWH-1	A.O. SMITH	CYCLONE LARGE VOLUME BTHL-250	MECHANICAL KL111	250	285	100	160	NATURAL GAS	250,000	14.00	120	1	60	1
GWH-2	A.O. SMITH	CYCLONE LARGE VOLUME BTHL-250	MECHANICAL KL111	250	285	100	160	NATURAL GAS	250,000	14.00	120	1	60	1
GWH-3	A.O. SMITH	CYCLONE LARGE VOLUME BTHL-250	MECHANICAL KL111	250	285	100	160	NATURAL GAS	250,000	14.00	120	1	60	1
GWH-4	A.O. SMITH	CYCLONE LARGE VOLUME BTHL-250	MECHANICAL KL111	250	285	100	160	NATURAL GAS	250,000	14.00	120	1	60	1
GWH-5	A.O. SMITH	CYCLONE MXi BTH-150A	JAN 177	100	223	80	140	NATURAL GAS	150,000	14.00	120	1	60	1
GWH-6	A.O. SMITH	CYCLONE MXi BTH-150A	JAN 177	100	223	80	140	NATURAL GAS	150,000	14.00	120	1	60	1

1. PROVIDE PARALLEL INSTALLATIONS WITH PRECISION CUT EQUAL LEG PIPING, REVERSE-RETURN MANIFOLD PIPING, OR MANUFACTURER'S MANIFOLD INSTALLATION KIT. REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS AND RECOMMENDATIONS.

TANK SCHEDULE

TAG	BASIS OF DESIGN		LOCATION	SYSTEM TYPE	TANK TYPE	OPERATING DATA			ASME CODE CONSTRUCTION (YES / NO)	CONNECTION SIZE		NOTES
	MANUFACTURER	MODEL				CAPACITY (GAL)	ACCEPTANCE (GAL)	AIR PRE-CHARGE PRESSURE (PSI)		INLET (IN)	OUTLET (IN)	
ET-1	AMTROL	THERM-X-TROL ST-120V-C	MECHANICAL KL111	DHW	EXPANSION	68.00	35.00	55.00	YES	1 1/4"	1 1/4"	1
ET-2	AMTROL	THERM-X-TROL ST-30VC-DD	JAN 177	DHW	EXPANSION	14.00	9.00	55.00	YES	3/4"	3/4"	1

1. REFER TO MANUFACTURERS RECOMMENDATIONS FOR FINAL PIPING ARRANGEMENT.

ELECTRIC WATER HEATER SCHEDULE

AD 03

TAG	BASIS OF DESIGN		LOCATION	CAPACITY (GALLONS)	RECOVERY RATE (GPH)	TEMPERATURE RISE (°F)	TEMPERATURE SETTING (°F)	ELECTRICAL DATA				NOTES
	MANUFACTURER	MODEL						INPUT RATE (kW)	VOLTAGE	PHASE	HERTZ	
EWH-1	AO SMITH	DEN-40	SRT STORAGE W103	40	24	100	140	6	480	3	60	

SECURITY PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE	HEIGHT A.F.F.	BASIS OF DESIGN	PIPE SIZE				NOTES
				COLD WATER	HOT WATER	VENT	SOIL WASTE	
S-1A	PENAL COMBINATION FIXTURE (ACCESSIBLE)	TOP OF SEAT AT 17"-19"	FIXTURE: WILLOUGHBY 4896 SERIES	1/2"	1/2"	2"	4"	<varies>
S-1B	PENAL COMBINATION FIXTURE	TOP OF SEAT AT 15"	FIXTURE: WILLOUGHBY 1546 SERIES	1/2"	1/2"	2"	4"	<varies>
S-1C	FLOOR MOUNTED PENAL WATER CLOSET (ACCESSIBLE)	TOP OF SEAT AT 17"-19"	FIXTURE: WILLOUGHBY ETW-1490-FM	1"		2"	4"	<varies>
S-1D	PENAL COMBINATION FIXTURE (ACCESSIBLE)	TOP OF SEAT AT 17"-19"	FIXTURE: WILLOUGHBY 1545 SERIES	1/2"	1/2"	2"	1 1/2"	<varies>
S-2A	SHOWER (ACCESSIBLE)	CONTROLS AT 42", SHOWERHEAD AT 72"	FIXTURE: WILLOUGHBY WRS-FA-ADA-WH SERIES	1/2"	1/2"	1 1/2"	2"	1, 3, 4
S-2B	SHOWER	CONTROLS AT 42", SHOWERHEAD AT 72"	FIXTURE: WILLOUGHBY WRS-FA SERIES	1/2"	1/2"	1 1/2"	2"	3, 4
S-3A	WALL MOUNTED PENAL LAVATORY FIXTURE (ACCESSIBLE)	RIM AT 33"	FIXTURE: WILLOUGHBY ES-1015-HC	1/2"	1/2"	1 1/2"	1 1/2"	<varies>
S-DT1	IN FLOOR REMORE FLUSH DETOX TOILET	FLOOR MOUNTED	FIXTURE: WILLOUGHBY FD-1400	1 1/2"		2"	3"	

NOTES:
1. THIS ACCESSIBLE FIXTURE, ACCESSORIES, AND INSTALLATION SHALL CONFORM TO THE USBC AND ASAD ADA STANDARDS FOR ACCESSIBLE DESIGN.
2. PROVIDE PNEUMATIC CONCEALED ACCESSIBLE PUSH-BUTTON WATER CLOSET FLUSH VALVE. PROVIE WHA-A FOR EACH CELL FIXTURE.
3. PROVIDE PNEUMATIC METEREING VALVE ASSEMBLY WITH LIGATURE-RESISITANT PUSH BUTTONS - COORDINATE EXACT LOCATIONS WITH PLANS AND SCHEDULES.
4. PROVIDE ASSE 1060 CERTIFIED MIXING VALVE.

INERCEPTOR AND SEPERATOR SCHEDULE

TAG	BASIS OF DESIGN		LOCATION	OPERATING DATA			ELECTRICAL DATA			CONNECTION SIZE		NOTES
	MANUFACTURER	MODEL		FLOW (GPM)	CAPACITY (GALLONS)	CONTAMINATE RETENTION VOLUME (GAL)	VOLTAGE	PHASE	HERTZ	INLET (IN)	OUTLET (IN)	
GI-1	SCHIER	GB-1000	BELOW GRADE	100	1000	789	120	1	60	4"	4"	
OI-1	STRIEM	OS-50	BELOW GRADE	50	57	40	120	1	60	4"	4"	

NOTES:
1. PROVIDE GREASE INTERCEPTOR UNIT WITH FOGS MONITORING ALARM SYSTEM WITH REMOTE LOCATED PANEL.
2. PROVIDE INTERCEPTOR WITH CONCRETE ANCHORING PAD, DEADMAN ANCHORS, OR MANUFACTURER RECOMMENDED ANCHORING METHOD AND ALL ASSOCIATED INSTALLATION ACCESSORIES.
3. PROVIDE INTERCEPTOR WITH CONCRETE RELIEVING SLAB AND TRAFFIC-RATED COVERS AND ACCESSORIES FOR INSTALLATIONS SUBJECT TO VEHICULAR TRAFFIC.
4. PROVIDE INTERCEPTOR WITH PUMPED REMOTE DRAWOFF, VERIFY FINAL INSTALLATION DOES NOT EXCEED RISE AND RUN LIMITATIONS OF PUMPED REMOTE DRAWOFF SYSTEM.

INSULATION SCHEDULE

SERVICE	LOCATION	TEMPERATURE	INSULATION	JACKETING	WEATHERPROOFING	MINIMUM INSULATION THICKNESS		NOTES
						PIPES SIZE (IN)	THICKNESS (IN)	
DOMESTIC COLD WATER	INDOORS	40°F - 60°F	ELASTOMERIC	ASJ	NONE	0.50-4.00	1.00	
DOMESTIC HOT WATER AND HOT WATER RETURN	INDOORS	100°F - 200°F	MOLDED FIBERGLASS	ASJ	NONE	0.50-1.00	1.00	
						1.25-1.50	1.50	
						2.00-4.00	2.00	
TEPID WATER AND TEPID WATER RETURN	INDOORS	60°F - 90°F	MOLDED FIBERGLASS	ASJ	NONE	0.50-1.00	1.00	
						1.25-1.50	1.50	
						2.00-4.00	2.00	
STORM DRAINAGE	INDOORS	40°F - 60°F	MOLDED FIBERGLASS	ASJ	NONENONE	2.00-12.00	1.00	1
EXTERIOR DOMESTIC COLD WATER	OUTDOORS	40°F - 60°F	MOLDED FIBERGLASS	ASJ	ALUMINUM JACKET	0.50-4.00	2.00	2
HEAT EXCHANGER	INDOORS	250°F	CALCIUM SILICATE	ALUMINUM JACKET	NONE	N/A	N/A	3

1. PROVIDE INSULATION FOR INDOOR HORIZONTAL STORM DRAINAGE PIPING INCLUDING DRAIN BODY AND OVERFLOW SECONDARY STORM PIPING.
2. PROVIDE OUTDOOR PIPING, EXPOSED TO FREEZE CONDITIONS, TO RECEIVE HEAT TRACING, INSULATION, AND ALUMINUM JACKETING.
3. REFER TO SPECIFICATIONS FOR FIELD APPLIED INSULATION.

THERMOSTATIC MIXING VALVE SCHEDULE

TAG	BASIS OF DESIGN		DESIGN FLOW (GPM)	FLOW RANGE (GPM)	MAX. P.D. AT DESIGN FLOW	HW SYSTEM TEMPERATURES		CONNECTION SIZES		NOTES
	MANUFACTURER	MODEL				INLET	OUTLET	INLET	OUTLET	
TMV-1	POWERS	LFSH1434TV-AEQ0	100	0.5 - 400	10 PSI	160°F	120°F	2.5	4	2
TMV-2	POWERS	LFSH1435	50	0.5 - 201	10 PSI	160°F	140°F	2	2	2
TMV-3	BRADLEY	S19-2250-RS (EFX50)	5.1 - 22.0	3.0 - 27.0	10 PSI	120°F	85°F	1.5	1.5	1
TMV-4	POWERS	LFSH1434	28	0.5 - 42	5 PSI	160°F	120°F	0.75	0.75	2

1. PROVIDE THERMOSTATIC MIXING VALVE ASSEMBLY WITH LOCKABLE, STAINLESS STEEL, RECESSED WALL MOUNTED CABINET AND T/P GAUGES ON INLETS AND OUTLET.
2. INSTALL THERMOSTATIC MIXING VALVE ASSEMBLY ON WALL MOUNTED STEEL SUPPORT RACK.

PUMP SCHEDULE

TAG	BASIS OF DESIGN		LOCATION	SYSTEM TYPE	AREA SERVED	PUMP TYPE	OPERATING DATA					ELECTRICAL DATA			CONNECTION SIZE		NOTES
	MANUFACTURER	MODEL					FLOW (GPM)	MAX DISCHARGE PSI	EFFICIENCY/ ENCLOSURE	POWER (HP)	SPEED (RPM)	VOLTS	PHASE	HERTZ	INLET (IN)	OUTLET (IN)	
DWP-1	HYFAB	MVP-850-460	KL111 MECHANICAL	DOMESTIC WATER	MAIN BUILDING	BOOSTER	240	165	ODP	5.00 (X2)	3500	460	3	60	4.00	4.00	1
RCP-1	GRUNDFOS	MAGNA3 40-80 F N	KL111 MECHANICAL	HOT WATER (120F) RECIRCULATION	MAIN BUILDING	CIRCULATION	25.00	20.00	16%	0.389	VARI	120	1	60	1.25	1.25	
RCP-2	GRUNDFOS	MAGNA3 40-80 F N	KL111 MECHANICAL	HOT WATER (140F) RECIRCULATION	KITCHEN / LAUNDRY	CIRCULATION	5.00	6.11	16%	0.389	VARI	120	1	60	0.75	0.75	
RCP-3	GRUNDFOS	MAGNA3 40-80 F N	JAN 177	HOT WATER (120F) RECIRCULATION	911 AREA	CIRCULATION	25.00	20.00	16%	0.389	VARI	120	1	60	0.75	0.75	

1. PROVIDE PACKAGED DUPLEX VARIABLE SPEED DOMESTIC WATER BOOSTER PUMP ASSEMBLY WITH EACH PUMP SIZED FOR 100% OF THE INDICATED OPERATING FLOW WITH VFD CONTROL. EACH PUMP SIZED FOR 262 GPM AT 78' TDH 20PSI BOOST WITH AN OUTLET PRESSURE SETTING OF 80PSI MAXIMUM TO THE BUILDING DOMESTIC WATER SYSTEM.

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PENDER COUNTY LEC

PENDER COUNTY, NORTH CAROLINA
OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: MAY 1, 2024

REVISIONS	
DATE	DESCRIPTION
06/12/2024	AD 03

SCHEDULES

6/12/2024 9:30:03 AM

PACKAGED OUTSIDE AIR UNIT SCHEDULE

				SUPPLY FAN(S)								EXHAUST FAN(S)						ENTHALPY WHEEL																		DX COOLING COIL						GAS-FIRED HEAT EXCHANGER				ELECTRIC DATA						
						FAN WHEEL								FAN WHEEL				OUTDOOR AIR									EXHAUST AIR											EAT		LAT						UNIT DATA			SERVICE			
																			SUMMER				WINTER					SUMMER				WINTER																				
TAG	MANUFACTURER	MODEL NUMBER	SERVING	DESIGN AIRFLOW (CFM)	ESP (IN WC)	DIA (IN)	TYPE	FAN SPEED (RPM)	MOTOR SIZE (HP)	OUTSIDE AIR DESIGN AIRFLOW (CFM)	SPD (CFM)	DESIGN AIRFLOW (CFM)	ESP (IN WC)	DIA (IN)	TYPE	FAN SPEED (RPM)	MOTOR SIZE (HP)	DESIGN AIRFLOW (CFM)	EAT (°F DB)	EAT (°F WB)	LAT (°F DB)	LAT (°F WB)	EAT (°F DB)	EAT (°F WB)	LAT (°F DB)	LAT (°F WB)	DESIGN AIRFLOW (CFM)	EAT (°F DB)	EAT (°F WB)	LAT (°F DB)	LAT (°F WB)	EAT (°F DB)	EAT (°F WB)	LAT (°F DB)	LAT (°F WB)	GROSS TOTAL CAPACITY (BTUH)	GROSS SENSIBLE CAPACITY (BTUH)	(°F DB)	(°F WB)	(°F DB)	(°F WB)	INPUT (BTUH)	OUTPUT (BTUH)	EAT (°F)	LAT (°F)	UNIT FLA (A)	UNIT MCA (A)	UNIT MOCP (A)	(V)	(PH)	(HZ)	WEIGHT (LBS)
OAU-1	TRANE	OAN360	UNIT A & UNIT B - PART B	5,840	1.50	20	PLENUM	1736	5	5,840	500	5,340	1.50	20	PLENUM	1633	5	5,840	83.9	77.8	78.4	71.2	24.7	20.0	54.7	46.2	5,340	76.0	66.0	81.9	73.9	69.0	60.0	35.6	32.9	342,700	163,500	78.4	71.2	53.2	53.0	400,000	320,000	54.7	105.2	69.5	75.3	90.0	480	3	60	7,900
OAU-2	TRANE	OAN360	UNIT E & UNIT F - PART B	5,840	1.50	20	PLENUM	1736	5	5,840	500	5,340	1.50	20	PLENUM	1633	5	5,840	83.9	77.8	78.4	71.2	24.7	20.0	54.7	46.2	5,340	76.0	66.0	81.9	73.9	69.0	60.0	35.6	32.9	342,700	163,500	78.4	71.2	53.2	53.0	400,000	320,000	54.7	105.2	69.5	75.3	90.0	480	3	60	7,900
OAU-3	TRANE	OAB060	UNIT S - PART B	1,080	1.50	0	PLENUM	2001		1,080	140	940	1.50		PLENUM	1922	6	1,080	83.9	77.8	78.6	70.7	24.7	20.0	53.7	48.0	940	76.0	66.0	82.1	74.8	69.0	60.0	34.6	32.6	62,000	30,800	78.6	70.7	52.9	52.7	75,000	60,000	53.7	104.9	25.6	27.7	35.0	480	3	60	2,000
OAU-4	TRANE	OAG144	INTAKE AREA - PART A	2,600	1.50	0	PLENUM	1906		2,600	300	2,300	1.50		PLENUM	1706	6	2,600	83.9	77.8	78.2	70.0	24.7	20.0	55.8	49.9	2,300	76.0	66.0	82.4	75.3	69.0	60.0	33.1	30.6	141,500	72,900	78.2	70.0	52.9	52.9	150,000	120,000	55.8	98.4	39.0	41.5	50.0	480	3	60	4,400
OAU-5	TRANE	OAN360	UNIT C & UNIT D - PART B	5,840	1.50	20	PLENUM	1736	5	5,840	500	5,340	1.50	20	PLENUM	1633	5	5,840	83.9	77.8	78.4	71.2	24.7	20.0	54.7	46.2	5,340	76.0	66.0	81.9	73.9	69.0	60.0	35.6	32.9	342,700	163,500	78.4	71.2	53.2	53.0	400,000	320,000	54.7	105.2	69.5	75.3	90.0	480	3	60	7,900

NOTES:
1. ECONOMIZER, ROOF CURB, SINGLE POINT POWER CONNECTION WITH UNIT MOUNTED DISCONNECT BY FACTORY (THROUGH THE BASE ELECTRICAL). PROVIDE LEVEL A SECURITY BARS IN DUCTWORK AT EACH ROOF PENETRATION. UNIT TO BE ELECTRIC COOL/GAS HEAT (FURNACE), ENERGY RECOVERY WHEEL, HOT GAS REHEAT / DEHUMIDIFICATION, LON OR BACNET INTERFACE.
2. RETURN/EXHAUST AIR DUCT SMOKE DETECTOR FACTORY INSTALLED.
3. 18" TALL ROOF CURB.

PACKAGED ROOFTOP UNIT WITH EXHAUST FAN SCHEDULE

				SUPPLY FAN(S)								EXHAUST FAN(S)							DX COOLING COIL						GAS-FIRED HEAT EXCHANGER				ELECTRIC DATA						
						FAN WHEEL								FAN WHEEL							EAT		LAT						UNIT DATA		SERVICE				
TAG	MANUFACTURER	MODEL NUMBER	SERVING	DESIGN AIRFLOW (CFM)	ESP (IN WC)	DIA (IN)	TYPE	FAN SPEED (RPM)	NUMBER OF FANS	MOTOR SIZE EACH (HP)	OUTSIDE AIR DESIGN AIRFLOW (CFM)	DESIGN AIRFLOW (CFM)	ESP (IN WC)	DIA (IN)	TYPE	FAN SPEED (RPM)	NUMBER OF FANS	MOTOR SIZE EACH (HP)	GROSS TOTAL CAPACITY (BTUH)	GROSS SENSIBLE CAPACITY (BTUH)	(°F DB)	(°F WB)	(°F DB)	(°F WB)	INPUT (BTUH)	OUTPUT (BTUH)	EAT (°F)	LAT (°F)	UNIT MCA (A)	UNIT MOCP (A)	(V)	(PH)	(HZ)	WEIGHT (LBS)	NOTES
RTU-1	TRANE	YCD360C4M	PART C	9,100	1.50	20	PLENUM	2231	1	10	2,700	8,000	0.75	20	PLENUM	1777	1	5	355,870	245,810	79.3	66.1	52.0	51.9	350,000	284,000	46.0	75.0	86.0	100.0	480	3	60	5,310	-
RTU-2	TRANE	YHJ180A4	PART D	6,000	1.50	20	PLENUM	1690	2	3	2,500	5,500	0.75	20	PLENUM	1297	1	3	187,680	146,000	79.7	66.5	56.7	56.4	250,000	202,500	46.4	77.2	45.0	50.0	480	3	60	2,412	-
RTU-3	TRANE	YHJ120A4	LOBBY/ADMIN - PART A	3,200	1.25	16	PLENUM	1667	1	5	650	2,500	0.75	20	PLENUM	1777	1	3	124,600	84,600	81.6	69.1	57.5	56.9	150,000	121,500	24.7	59.5	33.0	45.0	480	3	60	1,201	-
RTU-4	TRANE	YHJ090A4	CLASSROOMS/MEDICAL - PART B	2,000	1.00	16	PLENUM	1599	1	3	1,150	1,600	0.75	20	PLENUM	1350	1	3	93,560	62,000	81.6	69.1	56.3	55.9	120,000	97,200	46.4	85.9	24.0	30.0	480	3	60	1,367	-
RTU-5	TRANE	YHJ150B4	KITCHEN - PART A	4,900	1.50	20	PLENUM	1599	1	5	1,500	4,000	0.75	20	PLENUM	1350	1	3	145,750	112,000	80.0	67.0	58.9	57.5	150,000	121,500	55.0	77.3	35.0	45.0	480	3	60	1,481	1
RTU-6	TRANE	YHJ072A4	911 CALL CENTER - PART D	1,750	1.00	16	PLENUM	1599	2	1.5	325	1,400	0.75	20	PLENUM	1350	2	1	72,680	50,000	80.0	67.0	53.7	53.4	80,000	64,800	49.2	83.8	22.0	25.0	480	3	60	797	1, 2

GENERAL NOTES
A. ECONOMIZER, ROOF CURB, UNIT MOUNTED DISCONNECT BY FACTORY, NATURAL GAS HEAT, HIGH STATIC. THROUGH THE BASE ELECTRICAL, GAS PIPING AND CONDENSATE. PROVIDE LEVEL A SECURITY BARS IN DUCTWORK AT EACH ROOF PENETRATION. LON OR BACNET INTERFACE.
B. OUTSIDE AIRFLOW MONITOR, BUILDING PRESSURE CONTROL, ECONOMIZER, ROOF CURB. UNIT MOUNTED DISCONNECT BY FACTORY. NATURAL GAS HEATING 2:1 FURNACE. LON OR BACNET INTERFACE. DIRECT DRIVE PLENUM FAN(S).
NOTES:
1. PROVIDE WITH HOT GAS REHEAT.
2. PROVIDE WITH (2) SUPPLY FANS FOR REDUNDANCY.

FAN SCHEDULE

											ELECTRICAL DATA				
TAG	MANUFACTURER	MODEL NUMBER	SERVING	AIRFLOW (CFM)	ESP (IN WC)	FAN WHEEL (RPM)	DRIVE TYPE	SONES	CONTROL METHOD	MOTOR (HP)	(V)	(PH)	(HZ)	WEIGHT (LBS)	NOTES
EF-DISH	GREENHECK	CUE-110	DISHWASHER	1,000	0.50	1200	DIRECT	8.4	INTERLOCK WITH DISHWASHER	1	120	1	60	43	5
F-1	GREENHECK	AER-24	WAREHOUSE	6,000	0.50	1463	DIRECT	22	THERMOSTAT AND SENSORS	3/4	120	1	60	80	9
F-2	GREENHECK	AER-20	WAREHOUSE	300	0.10	558	DIRECT	2.5	THERMOSTAT	1/4	120	1	60	71	9
F-3	GREENHECK	SQ-100	WAREHOUSE	750	0.25	1140	DIRECT	6.1	BAS	1/6	120	1	60	56	5,6
F-11	GREENHECK	CUE-110	216 LS ELEC	200	0.25	1300	DIRECT	8.4	THERMOSTAT	1/10	120	2	60	43	5,6
F-12	GREENHECK	CUE-110	217 ELEC	200	0.25	1300	DIRECT	8.4	THERMOSTAT	1/10	120	1	60	43	5,6
F-13	GREENHECK	CUE-110	218 MECH	200	0.25	1300	DIRECT	8.4	THERMOSTAT	1/10	120	1	60	43	5,6
F-14	GREENHECK	CUE-110	KL113 ELECTRICAL	200	0.25	1300	DIRECT	8.4	THERMOSTAT	1/10	120	1	60	43	5,6
F-15	GREENHECK	CUE-110	KL112 ELECTRICAL	200	0.25	1300	DIRECT	8.4	THERMOSTAT	1/10	120	1	60	43	5,6
F-16	GREENHECK	CUE-110	KL111 MECHANICAL	200	0.25	1300	DIRECT	8.4	THERMOSTAT	1/10	120	1	60	43	5,6
F-17	GREENHECK	CUE-110	KL115 ELECTRICAL	200	0.25	1300	DIRECT	8.4	THERMOSTAT	1/10	120	1	60	43	5,6
F-18	GREENHECK	CUE-110	146 ELECTRICAL	200	0.50	1000	DIRECT	8.4	THERMOSTAT	1/4	120	1	60	43	5,6
F-19	GREENHECK	CUE-70	PART D GENERAL EXHAUST	175	0.25	1300	DIRECT	2.6	BAS	1/60	120	1	60	18	1,2
F-20	GREENHECK	CUE-70	PART D GENERAL EXHAUST	200	0.25	1550	DIRECT	4.4	BAS	1/30	120	1	60	18	1,2
F-21	GREENHECK	CUE-70	PART D GENERAL EXHAUST	250	0.25	1550	DIRECT	4.6	BAS	1/30	120	1	60	18	1,2
F-22	GREENHECK	CUE-90	PART C GENERAL EXHAUST	525	0.50	1550	DIRECT	7.4	BAS	1/15	120	1	60	30	1,2
F-23	GREENHECK	CUE-70	PART C GENERAL EXHAUST	200	0.25	1550	DIRECT	4.4	BAS	1/30	120	1	60	18	1,2
F-24	GREENHECK	CUE-95	PART C GENERAL EXHAUST	630	0.50	1700	DIRECT	8.6	BAS	1/10	120	1	60	27	1,2
F-25	GREENHECK	CUE-95	PART A GENERAL EXHAUST	700	0.50	1550	DIRECT	8.1	BAS	1/8	120	1	60	27	1,2
F-26	GREENHECK	CUE-70	PART A GENERAL EXHAUST	220	0.25	1550	DIRECT	4.5	BAS	1/30	120	1	60	18	1,2
F-27	GREENHECK	CUE-80	PART B GENERAL EXHAUST	300	0.25	1725	DIRECT	5.6	BAS	1/15	120	1	60	18	1,2
F-28	GREENHECK	CUE-60	TIER LEVEL PART B GENERAL EXHAUST	100	0.15	1300	DIRECT	2.5	BAS	1/10	120	1	60	18	1,2,6
F-101	GREENHECK	G-163	IP100 VEHICLE SALLYPORT	3,000	0.25	1140	DIRECT	14.5	BAS	1	208	1	60	88	1,2,6
KEF-1	GREENHECK	CUBE-180HP	KITCHEN HOOD	2,000	0.75	1500	BELT	13	INTERLOCK WITH HOOD	2	480	3	60	124	4,9
KEF-2	GREENHECK	CUBE-180HP	KITCHEN HOOD	1,925	0.75	1500	BELT	13	INTERLOCK WITH HOOD	2	480	3	60	124	4,9
SEF-1	GREENHECK	TBI-FS-4H36	UNIT A SMOKE CONTROL EXHAUST	15,400	1.50	1358	BELT	59	FIRE ALARM	10	480	3	60	849	1,2,4
SEF-2	GREENHECK	TBI-FS-4H36	UNIT B SMOKE CONTROL EXHAUST	14,120	1.50	1358	BELT	59	FIRE ALARM	10	480	3	60	849	1,2,4
SEF-3	GREENHECK	TBI-FS-4H36	UNIT F SMOKE CONTROL EXHAUST	14,120	1.50	1358	BELT	59	FIRE ALARM	10	480	3	60	849	1,2,4
SEF-4	GREENHECK	TBI-FS-4H36	UNIT E SMOKE CONTROL EXHAUST	14,120	1.50	1358	BELT	59	FIRE ALARM	10	480	3	60	849	1,2,4
SEF-5	GREENHECK	CUBE-220HP	UNIT S SMOKE CONTROL EXHAUST	4,680	1.50	1134	BELT	21	FIRE ALARM	5	480	3	60	171	1,2,4
SEF-6	GREENHECK	TBI-FS-4H36	UNIT C SMOKE CONTROL EXHAUST	14,120	1.50	1358	BELT	59	FIRE ALARM	10	480	3	60	849	1,2,4,8
SEF-7	GREENHECK	TBI-FS-4H36	UNIT D SMOKE CONTROL EXHAUST	14,120	1.50	1358	BELT	59	FIRE ALARM	10	480	3	60	849	1,2,4,8
SEF-8	GREENHECK	CUBE-220HP	CLASSROOM SMOKE CONTROL EXHAUST	2,660	1.50	1171	BELT	23	FIRE ALARM	5	480	3	60	171	1,2,4
SEF-9	GREENHECK	TBI-FS-4H24	MEDICAL AREA SMOKE CONTROL EXHAUST	3,555	1.50	2063	BELT	65	FIRE ALARM	7 1/2	480	3	60	489	1,2,4
SEF-10	GREENHECK	TBI-FS-4H24	CORRIDORS SMOKE CONTROL EXHAUST	3,450	1.50	2040	BELT	63	FIRE ALARM	5	480	3	60	489	1,2,4
SEF-11	GREENHECK	CUBE-300	INTAKE SMOKE CONTROL EXHAUST	4,490	1.50	1498	BELT	20	FIRE ALARM	5	480	3	60	245	1,2,4
SEF-12	GREENHECK	TBI-FS-4H36	KITCHEN SMOKE CONTROL EXHAUST	4,870	1.50	1675	BELT	62	FIRE ALARM	7 1/2	480	3	60	696	1,2,4
SEF-13	GREENHECK	CUBE-220HP	CENTRAL CONTROL SMOKE CONTROL EXHAUST	2,250	1.50	1134	BELT	21	FIRE ALARM	5	480	3	60	171	1,2,4
SSF-1	GREENHECK	RSFP-200	UNIT A SMOKE CONTROL SUPPLY	12,750	1.25	722	BELT	28	FIRE ALARM	10	480	3	60	615	2,3,4
SSF-2	GREENHECK	RSFP-200	UNIT B SMOKE CONTROL SUPPLY	12,750	1.25	722	BELT	28	FIRE ALARM	10	480	3	60	615	2,3,4
SSF-3	GREENHECK	RSFP-200	UINT F SMOKE CONTROL SUPPLY	12,850	1.25	722	BELT	28	FIRE ALARM	10	480	3	60	615	2,3,4
SSF-4	GREENHECK	RSFP-200	UNIT E SMOKE CONTROL SUPPLY	12,750	1.25	722	BELT	28	FIRE ALARM	10	480	3	60	615	2,3,4
SSF-5	GREENHECK	RSFP-120	UNIT S SMOKE CONTROL SUPPLY	4,200	1.25	1099	BELT	20	FIRE ALARM	3	480	3	60	237	2,3,4
SSF-6	GREENHECK	RSFP-200	UNIT C SMOKE CONTROL SUPPLY	12,750	1.25	722	BELT	28	FIRE ALARM	10	480	3	60	615	2,3,4,8
SSF-7	GREENHECK	RSFP-200	UNIT D SMOKE CONTROL SUPPLY	12,850	1.25	722	BELT	28	FIRE ALARM	10	480	3	60	615	2,3,4,8
SSF-8	GREENHECK	RSFP-150	CLASSROOM SMOKE CONTROL SUPPLY	4,500	1.25	841	BELT	20	FIRE ALARM	3	480	3	60	313	2,3,4
SSF-9	GREENHECK	RSFP-150	MEDICAL AREA SMOKE CONTROL SUPPLY	2,400	1.25	915	BELT	20	FIRE ALARM	5	480	3	60	313	2,3,4
SSF-10	GREENHECK	RSFP-150	CORRIDORS SMOKE CONTROL SUPPLY	5,900	1.25	915	BELT	20	FIRE ALARM	5	480	3	60	313	2,3,4
SSF-11	GREENHECK	RSFP-150	INTAKE SMOKE CONTROL SUPPLY	2,700	1.25	1267	BELT	19	FIRE ALARM	2	480	3	60	313	2,3,4
SSF-12	GREENHECK	RSFP-200	KITCHEN SMOKE CONTROL SUPPLY	3,250	1.25	615	BELT	19	FIRE ALARM	5	480	3	60	615	2,3,4
SSF-13	GREENHECK	RSFP-120	CENTRAL CONTROL SMOKE CONTROL SUPPLY	1,850	1.25	1099	BELT	20	FIRE ALARM	3	480	3	60	237	2,3,4

NOTES:
1. FAN SHALL BE LISTED IN UL DIRECTORY UNDER "POWER VENTILATORS FOR SMOKE CONTROL SYSTEM, "WITH MOTORIZED DAMPER. COORDINATE POSITION MONITORING OF MOTORIZED DAMPER WITH DIV 26.
2. FAN SHALL INCLUDE MINIMUM OF 1.5 TIMES NUMBER OF BELTS REQUIRED, MINIMUM OF TWO.
3. PROVIDE 120V/1PH/60HZ MOTORIZED SMOKE CONTROL DAMPER IN CURB WITH SPRING FAIL OPEN ACTUATORS AND POSITION END SWITCHES.
4. PROVIDE LEVEL A SECURITY BARS IN DUCTWORK AT ROOF PENETRATION.
5. PROVIDE MOTORIZED BACKDRAFT DAMPER.
6. PROVIDE ECM MOTOR WITH SPEED CONTROLLER.
7. PROVIDE GRAVITY BACKDRAFT DAMPER.
8. PROVIDE EQUIPMENT ONLY IF ALTERNATE IS ACCEPTED.
9. FACTORY DISCONNECT SWITCH, BUILT IN THERMAL OVERLOAD PROTECTION, ROOF CURB, GREASE CUP/COLLECTOR, TEMPERATURE CONTROL INTERLOCK. VARIABLE SPEED FAN, VFD'S IN KITCHEN HOOD CONTROL PACKAGE.

GAS UNIT HEATER SCHEDULE

								ELECTRICAL DATA				
TAG	MANUFACTURER	MODEL NUMBER	LOCATION	TYPE	MAXIMUM INPUT (BTUH)	MAXIMUM OUTPUT (BTUH)	AIRFLOW (CFM)	(V)	(PH)	(HZ)	WEIGHT (LBS)	NOTES
GUH-1	TRANE	GANE-100	VEHICLE SALLYPORT	CEILING	100,000	83,000	1600	120	1	60	200	1, 2
GUH-2	TRANE	GANE-100	VEHICLE SALLYPORT	CEILING	100,000	83,000	1600	120	1	60	200	1, 2

NOTES:
1. DISCONNECT BY DIV 26, WALL HANGING BRACKET, MODULATING HEAT CONTROL WITH BAS TEMPERATURE SENSOR INPUT.
2. HORIZONTAL CONCENTRIC VENT KIT FOR SIDEWALL TERMINATIONS..

ELECTRIC UNIT HEATER SCHEDULE

							ELECTRICAL DATA				
TAG	MANUFACTURER	MODEL NUMBER	LOCATION	TYPE	HEATING CAPACITY (KW)	AIRFLOW (CFM)	(V)	(PH)	(HZ)	WEIGHT (LBS)	NOTES
EUH-1	QMARK	MUH-07-4	WAREHOUSE	CEILING	7.5	650	208	2	60	38	2
EUH-2	QMARK	MUH-07-4	WAREHOUSE	CEILING	7.5	650	208	2	60	38	2
EUH-3	QMARK	MUH-07-4	WAREHOUSE	CEILING	7.5	650	208	2	60	38	2
EUH-4	QMARK	MUH-07-4	WAREHOUSE	CEILING	7.5	650	208	2	60	38	2
EUH-5	QMARK	MUH-03-71	216 LS ELEC	CEILING	3.0	350	277	1	60	27	2
EUH-6	QMARK	MUH-03-71	217 ELEC	CEILING	3.0	350	277	1	60	27	2
EUH-7	QMARK	MUH-03-71	218 MECH	CEILING	3.0	350	277	1	60	27	2
EUH-8	QMARK	MUH-03-71	KL113 ELECTRICAL	CEILING	3.0	350	277	1	60	27	2
EUH-9	QMARK	MUH-03-71	KL112 ELECTRICAL	CEILING	3.0	350	277	1	60	27	2
EUH-10	QMARK	MUH-03-71	KL100 MECHANICAL	CEILING	3.0	350	277	1	60	27	2
EUH-11	QMARK	MUH-03-71	KL115 ELECTRICAL	CEILING	3.0	350	277	1	60	27	2
EUH-12	MARKEL	F3452T	CR103 SALLYPORT	RECESSED WALL	2.0	175	277	1	60	55	1,3
EUH-13	MARKEL	F3452T	KL114 LOADING	RECESSED WALL	2.0	175	277	1	60	55	1,3
EUH-14	MARKEL	F3452T	AD100 VESTIBULE	RECESSED WALL	2.0	175	277	1	60	55	1
EUH-15	MARKEL	F3452T	152 CORRIDOR (E)	RECESSED WALL	2.0	175	277	1	60	55	1
EUH-16	MARKEL	F3452T	203 VESTIBULE	RECESSED WALL	2.0	175	277	1	60	55	1
EUH-17	MARKEL	F3452T	205 VEHICLE BAY	RECESSED WALL	2.0	175	277	1	60	55	1
EUH-18	MARKEL	F3452T	171 CORRIDOR	RECESSED WALL	2.0	175	277	1	60	55	1
EUH-19	MARKEL	F3452T	152 CORRIDOR (W)	RECESSED WALL	2.0	175	277	1	60	55	1
EUH-20	MARKEL	F3452T	127 CORRIDOR	RECESSED WALL	2.0	175	277	1	60	55	1

NOTES:
1. WALL MOUNTED RECESSED UNIT HEATER OR CEILING MOUNTED HEATER, BUILT IN THERMOSTAT AND DISCONNECT BY MANUFACTURER, SET THERMOSTAT TO 70 DEGREES F.
2. DISCONNECT BY MANUFACTURER, CEILING HANGING BRACKET, 24V CONTROL TRANSFORMER.
3. PROVIDE SECURITY GRADE HEATER.

ELECTRIC DUCT HEATER SCHEDULE

							ELECTRICAL DATA				
									SERVICE		
TAG	MFR	MODEL NUMBER	SERVING	DUCT SIZE	HEATING CAPACITY (KW)	AIRFLOW (CFM)	MCA (A)	MOCP (A)	(V)	(PH)	(HZ)
EDH-1	MARKEL	CHMS-3-F	INMATE RECEIVING	12x12	4.0	550	20.0	25	277	1	60

MAKE-UP AIR UNIT SCHEDULE(GAS)

										DIRECT GAS BURNER					ELECTRICAL DATA				
															SERVICE				
TAG	MANUFACTURER	MODEL	SERVING	AIR FLOW (CFM)	FAN SPEED (RPM)	MOTOR (HP)	ESP (IN WC)	DRIVE TYPE	SONES	EAT (°F)	LAT (°F)	INPUT CAPACITY (BTUH)	OUTPUT CAPACITY (BTUH)	CONTROLLED BY	(V)	(PH)	(HZ)	WEIGHT (LBS)	NOTES
MAU-1	CAPTIVEAIRE	A1-D.250-G10	HOOD	3,175	1385	3	0.50	BELT	12.8	24	74	225,000	189,000	HOOD	480	3	60	850	1, 2

NOTES:
1. FUSED FACTORY DISCONNECT SWITCH, 2" WASHABLE FILTERS, NATURAL GAS BURNER, CONTROLLED BY HOOD PANEL (FAN STARTER IN HOOD), BACKDRAFT DAMPER.
2. PROVIDE LEVEL A SECURITY BARS IN DUCTWORK AT ROOF PENETRATION.

FAN POWERED TERMINAL UNIT SCHEDULE

			AIR VALVE				FAN				COIL				ELECTRICAL DATA						
																		SERVICE			
TAG	MANUFACTURER	MODEL NUMBER	INLET DIAMETER (IN)	MAXIMUM AIR FLOW (CFM)	MINIMUM AIR FLOW (CFM)	APD AT MAXIMUM AIR FLOW (IN WC)	FAN SIZE	MOTOR (HP)	AIRFLOW (CFM)	ESP (IN WC)	DESIGN AIRFLOW (CFM)	CAPACITY (KW)	EAT (°F)	LAT (°F)	FLA (A)	MCA (A)	MOCP (A)	(V)	(PH)	(HZ)	WEIGHT (LBS)
TU1-01	TRANE	VSEF	12	1670	255	0.15	06SQ	1	1670	0.25	1670	11.0	67.7	88.4	18.3	22.9	25	480	3	60	136
TU1-05	TRANE	VSEF	6	430	70	0.35	03SQ	1/3	430	0.25	430	2.5	67.6	85.9	11.4	14.3	15	277	1	60	105
TU1-06	TRANE	VSEF	8	500	120	0.16	03SQ	1/3	500	0.25	500	3.0	66.4	85.3	13.2	16.5	20	277	1	60	105
TU1-07	TRANE	VSEF	6	290	60	0.14	03SQ	1/3	290	0.25	290	2.0	66.9	88.6	9.6	12.0	15	277	1	60	105
TU1-08	TRANE	VSEF	14	2210	675	0.26	06SQ	1	2210	0.25	2210	14.0	65.4	85.4	21.9	27.4	30	480	3	60	137
TU1-09	TRANE	VSEF	8	640	140	0.26	03SQ	1/3	640	0.25	640	4.0	66.7	86.4	16.8	21.0	25	277	1	60	106
TU1-11	TRANE	VSEF	6	300	300	0.16	03SQ	1/3	300	0.25	300	3.0	55.0	86.5	13.2	16.5	20	277	1	60	106
TU1-12	TRANE	VSEF	10	1130	350	0.34	04SQ	1/2	1130	0.25	1130	7.5	65.4	86.2	12.5	15.6	20	480	3	60	120
TU1-16	TRANE	VSEF	10	900	185	0.26	03SQ	1/3	900	0.25	900	6.0	66.9	87.9	9.6	12.0	15	480	3	60	106
TU1-18	TRANE	VSEF	6	395	90	0.29	03SQ	1/3	395	0.25	395	2.5	66.6	86.5	11.4	14.3	15	277	1	60	105
TU2-01	TRANE	VSEF	10	1085	165	0.32	04SQ	1/2	1085	0.25	1085	6.0	67.7	85.1	10.7	13.4	15	480	3	60	109
TU2-03	TRANE	VSEF	8	570	135	0.21	03SQ	1/3	570	0.25	570	4.0	66.5	88.5	16.8	21.0	25	277	1	60	105
TU2-04	TRANE	VSEF	8	600	150	0.23	03SQ	1/3	600	0.25	600	4.5	66.3	89.9	18.7	23.4	25	277	1	60	105
TU2-06	TRANE	VSEF	8	490	300	0.16	03SQ	1/3	490	0.25	490	4.0	60.8	86.5	16.8	21.0	25	277	1	60	105
TU2-08	TRANE	VSEF	6	470	170	0.39	03SQ	1/3	470	0.25	470	3.5	64.6	88.0	16.1	20.1	25	277	1	60	105
TU2-09	TRANE	VSEF	8	830	140	0.37	03SQ	1/3	830	0.25	830	5.0	67.5	86.4	9.6	12.0	15	480	1	60	106
TU2-10	TRANE	VSEF	6	410	65	0.31	03SQ	1/3	410	0.25	410	2.5	67.6	86.8	11.4	14.3	15	277	1	60	105
TU2-11	TRANE	VSEF	6	260	85	0.11	03SQ	1/3	260	0.25	260	2.0	65.1	89.3	9.6	12.0	15	277	1	60	105
TU2-13	TRANE	VSEF	6	340	75	0.21	03SQ	1/3	340	0.25	340	2.5	66.7	89.8	11.4	14.3	15	277	1	60	105
TU3-01	TRANE	VSEF	10	920	270	0.27	03SQ	1/3	920	0.25	920	7.0	65.6	89.6	10.8	13.5	15	480	3	60	106
TU3-03	TRANE	VSEF	8	510	370	0.17	03SQ	1/3	510	0.25	510	4.5	59.1	86.9	18.7	23.4	25	277	1	60	105
TU6-02	TRANE	VSEF	10	930	190	0.23	04SQ	1/2	930	0.25	930	5.5	66.9	85.6	10.1	12.6	15	480	1	60	106
TU6-04	TRANE	VSEF	8	495	125	0.16	03SQ	1/3	495	0.25	495	3.0	66.2	85.3	13.2	16.5	20	277	1	60	106

TERMINAL UNIT SCHEDULE

			AIR VALVE				COIL				ELECTRICAL DATA						
														SERVICE			
TAG	MANUFACTURER	MODEL NUMBER	INLET DIAMETER (IN)	MAXIMUM AIRFLOW (CFM)	MINIMUM AIRFLOW (CFM)	APD AT MAX AIR FLOW (IN-WC)	DESIGN AIRFLOW (CFM)	CAPACITY (KW)	EAT (°F)	LAT (°F)	FLA (A)	MCA (A)	MOCP (A)	V	PH	HZ	WEIGHT (LBS)
TU1-02	TRANE	VCEF	5	290	125	0.02	125	1.5	55	92.8	5.4	6.8	15	277	1	60	38
TU1-03	TRANE	VCEF	5	390	125	0.02	125	1.5	55	92.8	5.4	6.8	15	277	1	60	38
TU1-04	TRANE	VCEF	5	320	140	0.02	140	1.5	55	88.7	5.4	6.8	15	277	1	60	38
TU1-10	TRANE	VCEF	6	465	125	0.14	125	1.5	55	92.8	5.4	6.8	15	277	1	60	38
TU1-13	TRANE	VCEF	5	330	125	0.02	125	1.5	55	92.8	5.4	6.8	15	277	1	60	38
TU1-14	TRANE	VCEF	4	190	100	0.02	100	1.0	55	86.5	3.6	4.5	15	277	1	60	38
TU1-15	TRANE	VCEF	4	160	100	0.02	100	1.0	55	86.5	3.6	4.5	15	277	1	60	38
TU1-17	TRANE	VCEF	6	575	230	0.22	230	2.5	55	90.8	9.0	11.3	15	277	1	60	38
TU2-02	TRANE	VCEF	5	320	85	0.02	100	1.5	55	86.5	5.4	6.8	15	277	1	60	38
TU2-05	TRANE	VCEF	5	255	125	0.02	125	1.5	55	92.8	5.4	6.8	15	277	1	60	38
TU2-07	TRANE	VCEF	5	210	50	0.02	125	1.5	55	92.8	5.4	6.8	15	277	1	60	38
TU2-12	TRANE	VCEF	5	250	50	0.02	125	1.5	55	92.8	5.4	6.8	15	277	1	60	38
TU3-02	TRANE	VCEF	5	530	390	0.04	390	4.5	55	91.3	16.2	20.3	15	277	1	60	38
TU3-04	TRANE	VCEF	6	410	100	0.02	125	1.5	55	92.7	5.4	6.8	15	277	1	60	38
TU3-05	TRANE	VCEF	5	190	100	0.01	100	1.5	55	86.5	5.4	6.8	15	277	1	60	38
TU3-06	TRANE	VCEF	5	365	80	0.02	125	1.5	55	92.8	5.4	6.8	15	277	1	60	38
TU3-07	TRANE	VCEF	6	350	125	0.18	125	1.5	55	92.8	5.4	6.8	15	277	1	60	38
TU4-01	TRANE	VCEF	6	500	160	0.14	160	2.0	55	86.5	7.2	9.0	15	277	1	60	38
TU4-02	TRANE	VCEF	6	505	180	0.04	150	2.0	55	90.0	7.2	9.0	15	277	1	60	38
TU4-03	TRANE	VCEF	6	380	345	0.13	345	3.5	55	87.0	12.6	15.8	20	277	1	60	38
TU4-04	TRANE	VCEF	6	380	345	0.13	345	3.5	55	87.0	12.6	15.8	20	277	1	60	38
TU4-05	TRANE	VCEF	5	380	100	0.13	240	3.0	55	94.3	10.8	13.5	15	277	1	60	38
TU4-06	TRANE	VCEF	5	240	75	0.02	125	1.5	55	92.8	5.4	6.8	15	277	1	60	38
TU6-01	TRANE	VCEF	5	350	125	0.02	125	1.5	55	92.8	5.4	6.8	15	277	1	60	38
TU6-03	TRANE	VCEF	5	220	50	0.01	125	1.5	55	86.5	5.4	6.8	15	277	1	60	38

GRILLE, REGISTER, & DIFFUSER SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	MOUNTING STYLE	SECURITY	NECK SIZE	FACE SIZE	MAX NC LEVEL
S1	PRICE	ASCD	LAY-IN	N/A	6ø	24x24	30
S2	PRICE	ASCD	LAY-IN	N/A	8ø	24x24	30
S3	PRICE	ASCDA	LAY-IN	N/A	10ø	24x24	30
S4	PRICE	ASCDA	LAY-IN	N/A	6ø	12x12	30
S5	PRICE	620	DUCT-MOUNTED	N/A	12x8	14x10	30
S11	PRICE	MSPG	SURFACE	MAXIMUM	8x8	12x12	30
S12	PRICE	500	SURFACE	N/A	14x6	16x8	30
S21	PRICE	SDGE	DUCT-MOUNTED	N/A	N/A	12x6	30
S33	PRICE	MSD	LAY-IN	MAXIMUM	18x18	24x24	30
S34	PRICE	MSD	SURFACE	MAXIMUM	6ø	12x12	30
M1	PRICE	MSLP	LAY-IN	MAXIMUM	18x18	24x24	30
R1	PRICE	635-TB-L	LAY-IN	N/A	22x22	24x24	30
R2	PRICE	635-F-L	SURFACE	N/A	10x14	12x16	30
R31	PRICE	MSLP	LAY-IN	MAXIMUM	22x22	24x24	30
S64	PRICE	MSPG	LAY-IN	MAXIMUM	12x12	24x24	30
E1	PRICE	MSPG	SURFACE	MAXIMUM	8x8	12x12	30
E2	PRICE	630-TB-L	SURFACE	N/A	12x12	24x24	30
E5	PRICE	MSLP	LAY-IN	MAXIMUM	18x18	24x24	30
E6	PRICE	630-TB-L	LAY-IN	N/A	10x6	12x8	30
E7	PRICE	630-TB-L	LAY-IN	N/A	12x12	14x14	30
E11	PRICE	630-TB-L	SURFACE	N/A	8x8	12x12	30
E57	PRICE	MSLP	LAY-IN	MAXIMUM	14x14	24x24	30

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NORTH CAROLINA PROFESSIONAL ENGINEER
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5/1/2024

PENDER COUNTY LEC

PENDER COUNTY, NORTH CAROLINA
OLD SAVANNAH ROAD BURGAW, NC

PROJECT NO: 611888
DATE: MAY 01, 2024

REVISIONS	
DATE	DESCRIPTION
6/12/24	AD3

SCHEDULES

M0.2