



ADDENDUM NO. ONE (1)

project Woodrow Wilson Keeble
Memorial Health Care Center USP Compliance
Sisseton, SD
dsgw project # 022003.00
ihs project # HHSI102201800141
date September 10, 2024
from Ryan Turner DSGW Architecture
to All planholders for above project

The following addendum shall become part of the construction documents for the construction of the above referenced project.

This addendum supersedes and supplements all previous reference to similar items.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am duly a Licensed Architect under the laws of the State of South Dakota.

Signature

Registration #

14817

Date

September 10, 2024

specifications

SECTION	DESCRIPTION
00 01 10	TABLE OF CONTENTS 1. OMIT this section as originally issued and REPLACE with REVISED Section 00 01 10 as included with this Addendum #1.
00 01 15	SCHEDULE OF DRAWINGS 1. OMIT this section as originally issued and REPLACE with REVISED Section 00 01 15 as included with this Addendum #1.
04 20 00	UNIT MASONRY 1. ADD this section as included with this Addendum #1.
04 72 00	CAST STONE MASONRY 1. ADD this section as included with this Addendum # 1.
06 41 00	ARCHITECTURAL WOOD CASEWORK 1. OMIT this section as originally issued and REPLACE with REVISED Section 06 41 00 as included with this Addendum #1.
-----	DOOR/HARDWARE INDEX 1. OMIT this index as originally issued following spec. section 08 71 00 – Door Hardware and REPLACE with the REVISED Door/Hardware Index as included with this Addendum #1.

- 08 80 00 GLAZING**
 - 1. OMIT this section as originally issued and REPLACE with REVISED Section 08 80 00 as included with this Addendum #1.
- 09 21 16 GYPSUM BOARD ASSEMBLIES**
 - 1. OMIT this section as originally issued and REPLACE with REVISED Section 09 21 16 as included with this Addendum #1.
- 09 65 00 RESILIENT FLOORING**
 - 1. OMIT this section as originally issued and REPLACE with REVISED Section 09 65 00 as included with this Addendum #1.
- 10 22 13 WIRE MESH PARTITIONS**
 - 1. ADD this section as included with this Addendum #1.
- 10 28 00 TOILET ACCESSORIES**
 - 1. OMIT this section as originally issued and REPLACE with REVISED Section 10 28 00 as included with this Addendum #1.
- 10 51 00 LOCKERS**
 - 1. OMIT this section as originally issued and REPLACE with REVISED Section 10 51 00 as included with this Addendum #1.

drawings

SECTION	DESCRIPTION
G0.1	TITLE SHEET 1. REISSUED.
G1.1	LIFE SAFETY PLAN & SUMMARY 1. RENUMBERED & REISSUED.
A.1.1	DEMO PLAN – PHASE 1 1. REISSUED.
A1.2	DEMO PLAN – PHASE 1B 1. ADDED sheet.
A1.3	DEMO PLAN – PHASE 2 1. REISSUED.
A2.1	FLOOR PLAN – PHASE 1 1. REISSUED.
A2.2	FLOOR PLAN – PHASE 1B 1. REISSUED.
A2.3	FLOOR PLAN – PHASE 2 1. ADDED sheet.

A3.1 RCP – PHASE 1 AND PHASE 1B

1. REISSUED.

A3.2 RCP – PHASE 2

1. ADDED sheet.

A4.1 SCHEDULES AND TYPES

1. REISSUED.

A7.1 INTERIOR ELEVATIONS

1. REISSUED.

A8.1 DETAILS

1. REISSUED.

mechanical / electrical consultant **EDI-Dolejs’s Mechanical/Electrical Addendum 1, dated 09-10-24, is to be included with this addendum as attached (64 pages)**

- enclosures*
- Spec. Section 00 01 10 – Table of Contents – Revised (3 pages)
 - Spec. Section 00 01 15 – Schedule of Drawings – Revised (2 pages)
 - Spec. Section 04 20 00 – Unit Masonry (7 pages)
 - Spec. Section 04 72 00 – Cast Stone Masonry (3 pages)
 - Spec. Section 06 41 00 – Architectural Wood Casework – Revised (5 pages)
 - Door/Hardware Index – Revised (1 page)
 - Spec. Section 08 80 00 – Glazing – Revised (5 pages)
 - Spec. Section 09 21 16 – Gypsum Board Assemblies – Revised (7 pages)
 - Spec. Section 09 65 00 – Resilient Flooring – Revised (4 pages)
 - Spec. Section 10 22 13 – Wire Mesh Partitions (2 pages)
 - Spec. Section 10 28 00 – Toilet Accessories – Revised (3 pages)
 - Spec. Section 10 51 00 – Lockers – Revised (2 pages)
 - Drawing Sheets – G0.1, G1.1, A1.1, A1.2, A1.3, A2.1, A2.2, A2.3, A3.1, A3.2, A4.1, A7.1, A8.1 (24x36)(13 pages)
 - EDI-Dolejs’s M/E Addendum 1 (30 – 8.5x11; 34 – 24x36)(64 pages)

This addendum shall become part of this bid. The bidder shall insert the addendum number in the space where indicated on the proposal form. Failure to comply may result in the bid being rejected.

END OF ADDENDUM NO. ONE (1)

SECTION 00 01 10
TABLE OF CONTENTS - REVISED

**WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE
SISSETON, SOUTH DAKOTA**

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- 00 31 00 – Available Project Information

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END OF SECTION

SECTION 00 01 15
SCHEDULE OF DRAWINGS - REVISED

**WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE
FLANDREAU, SOUTH DAKOTA**

<u>SHEET</u>	<u>TITLE</u>
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A1.1	Life Safety Plan & Summary Demo Plan – Phase 1
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E2.3	Floor Plan – Phase 2 – Lighting
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E4.2 Schedules – Electrical
E4.3 Schedules - Electrical
E5.1 Details - Electrical

END OF SECTION

SECTION 04 20 00
UNIT MASONRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete Block.
 - 1. Split face CMU.
- B. Mortar and Grout.
- C. Reinforcement and Anchorage.
- D. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 03 20 00 - Concrete Reinforcing: Reinforcing steel for grouted masonry.
- B. Section 03 30 00 - Cast-In-Place Concrete: Concrete for bond beams, grouted cores, etc.
- C. Section 05 50 00 - Structural Steel: Loose steel lintels. Match existing systems as required.
- D. Section 07 84 00 - Firestopping: Firestopping at penetrations of fire-rated masonry and at top of fire-rated walls.
- E. Section 07 90 05 - Joint Sealers: Backing rod and sealant at control and expansion joints.
- F. Section 04

1.03 REFERENCE STANDARDS

- A. ASTM A82/A82M - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement; 2007.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- C. ASTM C62 - Standard Specification for Building Brick (Solid Masonry Units Made from Clay or Shale); 2012.
- D. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units; 2012.
- E. ASTM C129 - Standard Specification for Nonloadbearing Concrete Masonry Units; 2011.
- F. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2011.
- G. ASTM C150/C150M - Standard Specification for Portland Cement; 2012.
- H. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2006 (Reapproved 2011).
- I. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2012.
- J. ASTM C476 - Standard Specification for Grout for Masonry; 2010.
- K. ASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete; 2010.
- L. ASTM D226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2009.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for masonry units, fabricated wire reinforcement, and mortar.
- C. Firestopping System: Where fire rated construction is shown on drawings, this contractor shall be responsible for firestopping the terminations between materials of this section and adjacent materials. Submit proposed firestopping system as per materials listed in Section 07 84 00.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.
- B. Handle and store ceramic glazed masonry units in protective cartons or trays. Do not remove from protective packaging until ready for installation.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Maintain materials and surrounding air temperature to minimum 40 degrees F (5 degrees C) prior to, during, and 48 hours after completion of masonry work.
- B. Cold Weather Requirements: Comply with recommendations of IMIAWC (CW).
- C. Maintain materials and surrounding air temperature to maximum 90 degrees F (32 degrees C) prior to, during, and 48 hours after completion of masonry work.
- D. Hot Weather Requirements: Comply with IMIAWC (HW).

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with referenced standards and as follows: Design intent is to match that of existing condition; split face CMU.
 - 1. Size: Standard units with nominal face dimensions of 16 x 8 inches (400 x 200 mm) and nominal depths as indicated on the drawings for specific locations.
 - 2. Special Shapes: Provide non-standard blocks configured for corners, lintels, headers, and control joint edges.
 - 3. Load-Bearing and Non-Load Bearing Units: ASTM C 90, normal weight, 2,500 psi.
 - a. Hollow block, as indicated.
 - b. Type I - Moisture-controlled; normal weight.
 - 4. Non-Loadbearing Units: ASTM C129.
 - a. Hollow block, as indicated.
 - b. normal weight, 2,500 psi.

2.02 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C150, Type I; color as required to produce approved color sample.
 - 1. Hydrated Lime: ASTM C207, Type S.
 - 2. Mortar Aggregate: ASTM C144.
- B. Pigments for Colored Mortar: Iron or chromium oxides with demonstrated stability and colorfastness. Mortar colors shall be as manufactured by one of the following or approved equal:
 - 1. Solomon Colors
 - 2. Prism Pigments
 - 3. Davis Colors
- C. Water: Clean and potable.
- D. Pre-packaged mortar conforming to the above requirements, as manufactured by Spec-Mix is acceptable.

2.03 REINFORCEMENT AND ANCHORAGE

- A. Reinforcing Steel: Type specified in Section 03 20 00; size as indicated on drawings; uncoated finish.
- B. Single Wythe Joint Reinforcement: Truss type; ASTM A 82/A 82M steel wire, hot dip galvanized after fabrication to ASTM A 153/A 153M, Class B; 0.1483 inch (3.8 mm) side rods with 0.1483 inch (3.8 mm) cross rods; width as required to provide not more than 1 inch (25 mm) and not less than 1/2 inch (13 mm) of mortar coverage on each exposure.
 - 1. Manufacturers:
 - a. Dur-O-Wal; Product Truss Type: www.dur-o-wal.com.

- b. Hohmann & Barnard, Inc; Product #120 Truss-Mesh: www.h-b.com.
 - c. Masonry Reinforcing Corporation of America; Product Truss Type Series 300 2-Wire System: www.wirebond.com.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.
- C. Adjustable Multiple Wythe Joint Reinforcement: Truss type with adjustable ties or tabs spaced at 16 in (406 mm) on center and fabricated with moisture drip; ASTM A 82/A 82M steel wire, hot dip galvanized after fabrication to ASTM A 153/153M, Class B; 0.1875 inch (4.8 mm) side rods with 0.1483 inch (3.8 mm) cross rods and adjustable components of 0.1875 inch (4.8 mm) wire; width of components as required to provide not more than 1 inch (25 mm) and not less than 1/2 inch (13 mm) of mortar coverage from each masonry face.
- 1. Vertical adjustment: Not less than 2 inches (50 mm).
 - 2. Seismic Feature: Provide lip, hook, or clip on extended leg of wall ties to engage or enclose not less than one continuous horizontal joint reinforcement wire of 0.1483 inch (3.8 mm) diameter.
 - 3. Manufacturers:
 - a. Dur-O-Wal; Product D/A 370 Dur-O-Eye with D/A 360 S Seismic Ladur-Eye and continuous wire in outer wythe: www.dur-o-wal.com.
 - b. Hohmann & Barnard, Inc; Product #170 Truss Type Lox All, with Seismiclip Interlock System and continuous wire in outer wythe: www.h-b.com.
 - c. Masonry Reinforcing Corporation of America; Product Truss Type with Ties Series 900 Cavity Hook & Eye with Wire Bond clip and continuous wire in outer wythe: www.wirebond.com.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.
- D. Provide special corner and partition tie truss type joint reinforcing at all corners and wall intersections.

2.04 ACCESSORIES

- A. Joint Filler: Closed cell Neoprene; conforming to ASTM D1056, Grade 2A1, with adhesive backing. Provide thickness as required to close the gap to prevent the passage of air and sound.
- 1. Manufacturers:
 - a. Dur-O-Wal; Product DA2010 Rapid Soft Joint: www.dur-o-wal.com.
 - b. Hohmann & Barnard, Inc (including Dur -O-Wal brand); Product NS - Closed Cell Neoprene Sponge: www.h-b.com.
 - c. Substitutions: See Section 01 60 00 - Product Requirements.
 - d. Architect will consider alternate materials for filling gaps at tops of walls and other moving joints in masonry construction, submit proposed system for approval. NOTE: Contractors wishing to use air as the compressible filler shall submit a sample of the air they propose to use along with the system they intend to employ to keep the air contained within the joint.
- B. Building Paper: ASTM D226, Type I ("No.15") asphalt felt.
- C. Weep/Cavity Vents: Polyester mesh.
- 1. Color: Match mortar color.
 - 2. Manufacturer: Mortar Net - Weep Vents.
- D. Louvered Weep Vents: Injection molded flexible PVC with downward facing louvers and compressible flanges at the sides. Weep vent shall have a rectangular closure strip at the top to prevent mortar droppings from clogging the openings.
- 1. Hohmann & Barnard, Inc. - #343 Louvered Weep Hole.
- E. Cellular Weep Vents: Polypropylene conforming to ASTM D2240, D790B, D638 & D1238B, 3/8 inch wide by 3-1/2 inch deep by height of masonry unit, honeycomb configuration in color as selected by Architect.
- 1. Hohmann & Barnard, Inc. - #QV - Quadro Vent
 - 2. Dur-O-Wal - DA1006 Cell Vents

- F. Cavity Vent System: High impact polystyrene manufactured into a rigid 3/16 inch intermittent corrugated pattern, 6 inches wide by 25 foot rolls to create 4 vent holes every 9-1/2 inches on center. Cavity vent shall be installed in the bed joint above masonry flashings.
 - 1. Masonry Technology Inc. - Cavity Vent CV 5010.
- G. Cavity Mortar Diverter: Semi-rigid polyethylene or polyester mesh blocks, sized to fill bottom of wall cavity and suspend mortar droppings above weep/cavity vents to allow cavity drainage. Provide system manufactured by Mortar Net.
- H. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.
- I. Sealer for Burnished Concrete Masonry Units shall be a blend of 100% methyl methacrylate polymers to seal and protect the blocks surface. Sealer shall be Bright Seal as manufactured by TK Products or approved equal.

2.05 MORTAR AND GROUT MIXES

- A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.
 - 1. Masonry below grade and in contact with earth: Type M.
 - 2. All load bearing above grade masonry: Type S.
 - 3. Exterior, non-loadbearing masonry: Type N.
 - 4. Interior, non-load bearing masonry: Type N.
- B. Colored Mortar: Proportion selected pigments and other ingredients to match Architect's sample, without exceeding manufacturer's recommended pigment-to-cement ratio.
- C. Grout: ASTM C476. Consistency required to fill completely volumes indicated for grouting; fine grout for spaces with smallest horizontal dimension of 2 inches (50 mm) or less; coarse grout for spaces with smallest horizontal dimension greater than 2 inches (50 mm).
- D. 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.
- C. Install work to match that of existing conditions/systems as required.

3.03 COURSING

- 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.
- C. Concrete Masonry Units:
 - 1. Bond: Running.
 - 2. Coursing: One unit and one mortar joint to equal 8 inches (200 mm).
 - 3. Mortar Joints: Concave, except for walls to receive waterproofing, where fluid applied air/vapor retarder is installed, or where a base of another material will be applied to the wall, which shall be flush cut.
- D. Brick Units:
 - 1. Bond: Running.
 - 2. Coursing: Three units and Three mortar joints to equal 8 inches (200 mm).
 - 3. Mortar Joints: Concave.

3.04 PLACING AND BONDING

- A. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.
- B. Lay hollow masonry units with face shell bedding on head and bed joints.
- C. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.
- D. Remove excess mortar and mortar smears as work progresses.
- E. Interlock intersections and external corners.
- F. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- G. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.
- H. Cut mortar joints flush where wall tile is scheduled or resilient base is scheduled, or where waterproofing is to be applied.
- I. Isolate masonry partitions from vertical structural framing members with a control joint as indicated.
- J. Isolate top joint of masonry partitions from horizontal structural framing members and slabs or decks with compressible joint filler and sealant as specified in Section 07 90 05 each side of partition.
- K. Firestop all rated walls at top as sides where masonry abuts another material as per Section 07 84 00.

3.05 WEEPS/CAVITY VENTS

- A. Brick Veneer Weeping System: Install weep/cavity vents in veneer and cavity walls at 32 inches on center horizontally above through-wall flashing.
- B. Block Veneer Weeping System: Install cavity weep venting system continuously at the base of the wall cavity and at all other flashing locations, just above the through wall flashing, and prior to the installation of the mortar diverter. Weep system provides weeping through premanufactured holes in the corrugated polypropylene material. Install in accordance with manufacturer's instructions with weeps projecting beyond the wall surface. Weep system projecting beyond the wall surface shall be scored with a utility knife and broken off flush with the face of the wall.
- C. Cavity Wall Venting: Provide venting for cavity walls at the upper most mortar joint not covered by coping flashing. Provide weep/vents 32 inches on center. Install in the head joint of brick constructions and at the top of the head joint in block construction.
- D. 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.

3.06 CAVITY MORTAR CONTROL

- A. Do not permit mortar to drop or accumulate into cavity air space or to plug weep/cavity vents.
- B. Special precautions must be taken to achieve smooth faces on the inside of the cavity space and to ensure that the bottom of the cavity is clean and free of mortar droppings. Use a smooth mortar bed for the exterior wythe and bevel the mortar joint away from the cavity so that a smooth upper surface inclined down toward the cavity results. Trowel flat and smooth any mortar fins on the cavity face of either width which may result. Use temporary wood, metal or fiber strips laid on the continuous wall reinforcing and carefully lift them out as the work progresses before the next layer of reinforcement is placed.
- C. For cavity walls, build inner wythe ahead of outer wythe to accommodate accessories.

3.07 REINFORCEMENT AND ANCHORAGE - GENERAL

- A. Unless otherwise indicated on drawings or specified under specific wall type, install horizontal joint reinforcement 16 inches (400 mm) on center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches (400 mm) each side of opening.
- C. Place continuous joint reinforcement in first and second joint below top of walls.
- D. Lap joint reinforcement ends minimum 6 inches (150 mm).
- E. 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 16 inches horizontally and 16 inches (400 mm) vertically.

3.08 REINFORCEMENT AND ANCHORAGE - SINGLE WYTHE MASONRY

- A. Install horizontal joint reinforcement 16 inches (400 mm) on center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches (400 mm) each side of opening.
- C. Lap joint reinforcement ends minimum 6 inches (150 mm).

3.09 LINTELS

- A. Install loose steel lintels over openings.
- B. Install reinforced unit masonry lintels over openings where steel or precast concrete lintels are not scheduled.

3.10 GROUTED COMPONENTS

- A. Reinforce bond beams with 2, No. 5 (16 mm) bars, 1 inch (25 mm) from bottom web.
- B. Lap splices minimum 24 bar diameters.
- C. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch (13 mm) of dimensioned position.
- D. Place and consolidate grout fill without displacing reinforcing.
- E. At bearing locations, fill masonry cores with grout for a minimum 12 inches (300 mm) either side of opening.
- F. Concrete block foundation walls shall be completely filled with grout.

3.11 CONTROL AND EXPANSION JOINTS

- A. Do not continue horizontal joint reinforcement through control and expansion joints.
- B. Control joints shall be formed in the veneer portion of the wall with no mortar in the head joint. Joint shall be backed with foam rod stock and caulked as specified in Section 07 90 05.

3.12 BUILT-IN WORK

- A. As work progresses, install built-in metal door frames 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 and glazed frames in adjacent mortar joints. Fill frame voids solid with grout.
 - 1. Fill adjacent masonry cores with grout minimum 12 inches (300 mm) from framed openings.
- D. Do not build into masonry construction organic materials that are subject to deterioration.

3.13 TOLERANCES

- A. Maximum Variation from Unit to Adjacent Unit: 1/16 inch (1.6 mm).
- B. Maximum Variation from Plane of Wall: 1/4 inch in 10 ft (6 mm/3 m) and 1/2 inch in 20 ft (13 mm/6 m) or more.

- C. Maximum Variation from Plumb: 1/4 inch (6 mm) per story non-cumulative; 1/2 inch (13 mm) in two stories or more.
- D. Maximum Variation from Level Coursing: 1/8 inch in 3 ft (3 mm/m) and 1/4 inch in 10 ft (6 mm/3 m); 1/2 inch in 30 ft (13 mm/9 m).
- E. Maximum Variation of Joint Thickness: 1/8 inch in 3 ft (3 mm/m).
- F. Maximum Variation from Cross Sectional Thickness of Walls: 1/4 inch (6 mm).

3.14 CUTTING AND FITTING

- A. Cut and fit for chases. 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.

3.15 CLEANING

- A. Remove excess mortar and mortar droppings.
- B. Replace defective mortar. Match adjacent work.
- C. Clean soiled surfaces with cleaning solution.

3.16 PROTECTION

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

END OF SECTION

SECTION 04 72 00
CAST STONE MASONRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Architectural cast stone.
- B. Units required are:
 - 1. Exterior wall units, including wall caps, coping, and sills.

1.02 RELATED REQUIREMENTS

- A. Section 04 20 00 & 04 20 01 - Unit Masonry/Veneer: Installation of cast stone in conjunction with masonry.
- B. Section 07 90 05 - Joint Sealers: Materials and execution methods for sealing soft joints in cast stone work.

1.03 REFERENCE STANDARDS

- A. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; American Concrete Institute International; 2011.
- B. ASTM A185/A185M - Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete; 2007.
- C. ASTM A615/A615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2012.
- D. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2011a.
- E. ASTM C150/C150M - Standard Specification for Portland Cement; 2012.
- F. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2012.
- G. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2012.
- H. ASTM C642 - Standard Test Method for Density, Absorption, and Voids in Hardened Concrete; 2006.
- I. ASTM C1364 - Standard Specification for Architectural Cast Stone; 2010b.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Manufacturer's Qualification Data: Documentation showing compliance with specified requirements.
- C. Product Data: Test results of cast stone components made previously by the manufacturer.
- D. Shop Drawings: Include elevations, dimensions, layouts, profiles, cross sections, reinforcement, exposed faces, arrangement of joints, anchoring methods, anchors, and piece numbers.
- E. Mortar Color Selection Samples.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A current producer member of the Cast Stone Institute with a minimum of 5 years of experience in producing cast stone of the types required for project and:
 - 1. Adequate plant capacity to furnish quality, sizes, and quantity of cast stone required without delaying progress of the work.
 - 2. Products previously produced by plant and exposed to weather that exhibit satisfactory appearance.
- B. Source Quality Control: Test compressive strength and absorption of specimens selected at random from plant production.
 - 1. Test in accordance with ASTM C642.

2. Select specimens at rate of 3 per 500 cubic feet (3 per 14 cubic m), with a minimum of 3 per production week.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver cast stone components secured to shipping pallets and protected from damage and discoloration. Protect corners from damage.
- B. Number each piece individually to match shop drawings and schedule.
- C. Store cast stone components and installation materials in accordance with manufacturer's instructions.
- D. Store cast stone components on pallets with nonstaining, waterproof covers. Ventilate under covers to prevent condensation. Prevent contact with dirt.
- E. Protect cast stone components during handling and installation to prevent chipping, cracking, or other damage.
- F. Store mortar materials where contamination can be avoided.
- G. Schedule and coordinate production and delivery of cast stone components with unit masonry work to optimize on-site inventory and to avoid delaying the work.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Architectural Cast Stone: Design intent is to match that of existing conditions/systems.
 1. Any current producer member of the Cast Stone Institute.
 2. American Artstone.
 3. Edward Cast Stone
 4. Stoneworks Architectural Precast.
 5. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 ARCHITECTURAL CAST STONE

- A. Cast Stone: Architectural concrete product manufactured to simulate appearance of natural granite, complying with ASTM C1364.
 1. Compressive Strength: As specified in ASTM C1364; calculate strength of pieces to be field cut at 80 percent of uncut piece.
 2. Freeze-Thaw Resistance: Demonstrated by field experience.
 3. Surface Texture: Fine grained texture, with no bugholes, air voids, or other surface blemishes visible from distance of 20 feet (6 meters).
 4. Remove cement film from exposed surfaces before packaging for shipment.
- B. Shapes: Provide shapes indicated on drawings.
 1. Variation from Any Dimension, Including Bow, Camber, and Twist: Maximum of plus/minus 1/8 inch (3 mm) or length divided by 360, whichever is greater, but not more than 1/4 inch (6 mm).
 2. Unless otherwise indicated on drawings, provide:
 - a. Wash or slope of 1:12 on exterior horizontal surfaces.
 - b. Drips on projecting components, wherever possible.
 - c. Raised fillets at back of sills and at ends to be built in.
- C. Reinforcement: Provide reinforcement as required to withstand handling and structural stresses; comply with ACI 318.

2.03 MATERIALS

- A. Portland Cement: ASTM C150.
 1. For Mortar: Type I or II, except Type III may be used in cold weather.
- B. Coarse Aggregate: ASTM C33, except for gradation; granite, quartz, or limestone.
- C. Fine Aggregate: ASTM C33, except for gradation; natural or manufactured sands.
- D. Admixtures: ASTM C494/C494M.

- E. Water: Potable.
- F. Reinforcing Bars: ASTM A615/A615M deformed bars, galvanized or epoxy coated.
- G. Steel Welded Wire Reinforcement: ASTM A185/A185M, galvanized or epoxy coated.
- H. Embedded Anchors, Dowels, and Inserts: Type 304 stainless steel, of type and size as required for conditions.
- I. Mortar: Portland cement-lime, ASTM C270, Type N; do not use masonry cement.
- J. Sealant: As specified in Section 07 90 05.
- K. Cleaner: General-purpose cleaner designed for removing mortar and grout stains, efflorescence, and other construction stains from new masonry surfaces without discoloring or damaging masonry surfaces; approved for intended use by cast stone manufacturer and by cleaner manufacturer for use on cast stone and adjacent masonry materials.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine construction to receive cast stone components. Notify Architect if construction is not acceptable.
- B. Do not begin installation until unacceptable conditions have been corrected.

3.02 INSTALLATION

- A. Install cast stone components in conjunction with masonry, complying with requirements of Section 04 20 00.
- B. Mechanically anchor cast stone units indicated; set remainder in mortar.
- C. Setting:
 - 1. Drench cast stone components with clear, running water immediately before installation.
 - 2. Set units in a full bed of mortar unless otherwise indicated.
 - 3. Fill vertical joints with mortar.
 - 4. Fill dowel holes and anchor slots completely with mortar or non-shrink grout.
- D. Joints: Make all joints 3/8 inch (9.5 mm), except as otherwise detailed.
 - 1. Rake mortar joints 3/4 inch (19 mm) for pointing.
 - 2. Remove excess mortar from face of stone before pointing joints.
 - 3. Point joints with mortar in layers 3/8 inch (9.5 mm) thick and tool to a slight concave profile.
 - 4. Leave the following joints open for sealant:
 - a. Head joints in top courses, including copings, parapets, cornices, sills, and steps.
 - b. Joints in projecting units.
 - c. Joints between rigidly anchored units, including soffits, panels, and column covers.
 - d. Joints below lugged sills and stair treads.
 - e. Joints below ledge and relieving angles.
 - f. Joints labeled "expansion joint".
- E. Sealant Joints: Install sealants as specified in Section 07 90 05.
- F. Repairs: Repair chips and other surface damage noticeable when viewed in direct daylight at 20 feet (6 m).
 - 1. Repair with matching touchup material provided by the manufacturer and in accordance with manufacturer's instructions.
 - 2. Repair methods and results subject to Architect 's approval.

END OF SECTION

SECTION 06 41 00
ARCHITECTURAL WOOD CASEWORK - REVISED

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Specially fabricated cabinet units.
- B. Countertops & window sills.
- C. Cabinet Hardware.
- D. Solid Surface Fabrications

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Support framing, grounds, and concealed blocking.
- B. Section 06 20 00 - Finish Carpentry: Related work.

1.03 REFERENCE STANDARDS

- A. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards, U.S. Version 3.1 2017, with Errata (2019).
- B. BHMA A156.9 - American National Standard for Cabinet Hardware 2015.
- C. GSA CID A-A-1936 - Adhesive, Contact, Neoprene Rubber 1996a (Validated 2013).
- D. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood 2016.
- E. NEMA LD 3 - High-Pressure Decorative Laminates 2005.

1.04 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.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles and elevations, assembly methods, joint details, fastening methods, accessory listings, hardware location and schedule of finishes.
- C. Product Data: Provide data for hardware accessories.

1.06 QUALITY ASSURANCE

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.
- B. Perform work in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, Custom quality, unless other quality is indicated for specific items.

1.07 MOCK-UP

- A. Provide mock-up of typical base cabinet, wall cabinet, and countertop, including hardware, finishes, and plumbing accessories.
- B. Locate where directed.
- C. Mock-up may remain as part of the Work.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Protect units from moisture damage.

1.09 FIELD CONDITIONS

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

PART 2 PRODUCTS

2.01 CABINETS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Plastic Laminate Faced Cabinets: Custom grade.
- C. Wood Veneer Faced Cabinets with Flush Door/Drawer Panels & Stile and Rail Wood Cabinets:
 - 1. Finish - Exposed Exterior Surfaces: Wood.
 - 2. Finish - Exposed Interior Surfaces: Wood.
 - 3. Finish - Concealed Surfaces: Wood.
 - 4. Door and Drawer Front Edge Profiles:
 - a. Wood Veneer Faced Flush Cabinets: Square edge with 1/8" applied solid wood edge-banding.
 - b. Wood Stile and Rail Cabinets: Profiles as indicated in schedule.
 - 5. Casework Construction Type: Type A - Frameless.
 - 6. Adjustable Shelf Loading: 50 lbs. per sq. ft.
 - a. Deflection: L/144.
 - 7. Cabinet Style: Flush overlay.
 - 8. Cabinet Doors and Drawer Fronts:
 - a. Wood Veneer Faced Flush Cabinets: Flush Style.
 - b. Wood Stile and Rail Cabinets: Profiles as indicated in schedule.
 - 9. Drawer Side Construction: Multiple-dovetailed.
 - 10. Drawer Construction Technique: Dovetail joints.

2.02 WOOD-BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.

2.03 PANEL MATERIALS

- A. Medium Density Fiberboard (MDF): ANSI A208.2; type as specified in AWI/AWMAC Architectural Woodwork Quality Standards Illustrated; composed of wood fibers pressure bonded with moisture resistant adhesive to suit application; sanded faces; thickness as required.
- B. Particleboard: ANSI A208.1; type as specified in AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, composed of wood chips, medium density, made with moisture resistant; of grade to suit application; sanded faces.

2.04 LAMINATE MATERIALS

- A. Manufacturers:
 - 1. Arborite; ColorEdge: www.arborite.com/#sle.
 - 2. Formica Corporation: www.formica.com/#sle.
 - 3. Panolam Industries International, Inc; Nevamar Standard HPL: www.panolam.com/#sle.
 - 4. Wilsonart LLC: www.wilsonart.com/#sle.
 - 5. Substitutions: See Section 01 60 00 - Product Requirements.
- B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.
- C. Provide specific types as indicated.
 - 1. Horizontal Surfaces: HGS, 0.048 inch nominal thickness, through color, colors as indicated, finish as indicated.
 - 2. Vertical Surfaces: VGS, 0.028 inch nominal thickness, through color, colors as indicated, finish as indicated.
 - 3. Flame Retardant Surfaces: HGF, 0.048 inch nominal thickness, through color, colors as indicated, finish as indicated.

4. Cabinet Liner: CLS, 0.020 inch nominal thickness, through color, colors as indicated, finish as indicated, undecorated; for application to concealed backside of panels faced with high pressure decorative laminate.

2.05 COUNTERTOPS

- A. Quality Standards: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) OR AWMAC/WI.
- ~~B. Plastic Laminate Countertops: Medium density fiberboard substrate covered with HPDL, conventionally fabricated with 3mm PVC edge banding.~~
- Ⓒ B. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
 1. Flat Sheet Thickness 1/2" (12 mm).
 2. Solid Surfacing Sheet & Plastic Resin Castings: Complying with ISFA 201 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.
 - a. Finish on Exposed Surfaces: Matte, gloss rating of 5 to 20.
 4. Other Components Thickness: 1/2" minimum.
 5. Edges, Backs and End Splashes: Same sheet material, square top, minimum 4 inches high.
 6. Fabricator and installer must follow the DuPont Corian Solid Surface Commercial Food Service Technical Bulletin where applicable.

2.06 ACCESSORIES

- A. Adhesive: Type recommended by fabricator to suit application.
 1. GSA CID A-A-1936 contact adhesive.
- B. 3mm PVC banding, machine applied with waterproof hot melt adhesive with external edges and outside corners of doors and drawer fronts, and countertops, machine profiled to 1/8" radius for safety.
- 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. Grommets: plastic material for cut-outs. Outwater Plastics #35-3 or equal, 3 inch diameter grommet.
- E. Steel Angle Support for wide openings in countertops shall be 3/4 x 3/4 x 1/8 inch steel angles.
- F. Counter Support Brackets: Metal angle support brackets with 3" x 3" x 45 degree notch at the wall for wall cleat and wire run clearance. Brackets shall be fabricated from 1/8 inch thick steel and shall be 24 x 29 inches, finished in a textured powder coat, color as selected by Architect from manufacturer's standard line of colors. Counter Support Brackets shall be as manufactured by Wizard Products; 800-286-5471.
- G. Shelf Standards & Brackets:
 1. Standards - shelving standards shall be fabricated from 12 gauge steel, 7/8" wide x 11/16" high with 2" increment adjusting furnished in lengths required as shown on the drawings. Shelving standards shall have an anochrome finish. Shelving standards shall be Knappe & Vogt - 87 ANO Extra Heavy Duty Standards or equal.
 2. Brackets - shelving brackets shall be fabricated from 12 gauge steel with an anochrome finish, depth as shown on the drawings. Shelving brackets shall be Knappe & Vogt - 187LL ANO Extra Heavy Duty Brackets in lengths as shown on drawings or equal.
- H. Fasteners: Size and type to suit application.
- I. Concealed Joint Fasteners: Threaded steel.

2.07 HARDWARE

- A. Shelf Brackets: 1/8" diameter steel pins that fit into predrilled holes in the cabinet sides. Pins to have a flattened exposed surface to support the shelf.
- B. Cabinet Locks: Keyed cylinder, two keys per lock, master keyed, black finish locks at wood cabinets, chrome finish locks at plam cabinets.
- C. Catches: Magnetic.
- D. Drawer Slides:
 - 1. Type: Full extension.
 - 2. Static Load Capacity: Commercial grade.
 - 3. Mounting: Side mounted.
 - 4. Stops: Integral type.
 - 5. Features: Provide self-closing/stay closed type.
- E. Hinges: Concealed European style, steel with chrome finish, soft-close.
- F. Fire Hanger Hardware: Fabricators standard hardware for front to back hanging files.
- G. Floating Shelf Hardware: Knappe and Vogt Floating Shelf Kit or similar.
- H. Metal Coat Rod: Fabricators standard chrome metal rod with receiver ends.
- I. Trash Drawer: HDL Rev-A-Shelf TWC Series Pullout Waste Bins or similar.
- J. Door/Drawer Pulls:

2.08 FABRICATION

- A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.
- B. All casework shall conform to the standards of the Architectural Woodworking Institute - Section 10 Casework, Custom Grade, Flush Overlay Design. All body members and tops shall be thickness as shown on the drawings or as specified herein, medium density fiberboard or plywood covered on the exposed side with decorative plastic laminate and unexposed side with laminate backing sheet. Wood veneer shall be glued to the particle board under pressure.
- C. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
- D. Door and Drawer Fronts: 3/4 inch thick; flush style.
- E. Mechanically fasten back splash to countertops as recommended by laminate manufacturer at 16 inches on center.
- F. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.
- G. Provide cutouts for plumbing fixtures. Verify locations of cutouts from on-site dimensions. Prime paint cut edges.
- H. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify location and sizes of utility rough-in associated with work of this section.

3.02 INSTALLATION

- A. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.
- B. Use concealed joint fasteners to align and secure adjoining cabinet units.
- C. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.

3.03 ADJUSTING

- A. Adjust installed work.
- 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 SCHEDULES

- A. P-LAM
 - 1. P-LAM 1: Premium Price Point (highest cost)
 - 2. P-LAM 2: Premium Price Point (highest cost)
 - 3. P-LAM CABINETS: Premium Price Point (highest cost)
 - ~~4. P-LAM COUNTERS: Premium Price Point (highest cost)~~
 - ~~a. Standard spec with top set backsplash and sidesplash.~~
 - ~~b. 3mm PVC edge banding on counter edges~~
- B. Solid Surfacing
 - 1. SSM -1: Premium Price Point (highest cost)

END OF SECTION

Door / Hardware Index - REVISED

Door Numbers	HwSet#
1A	02
1B	02
3	02
4	02
101	10
102	04
104	11
105	04
106	04
107	04
108	04
109	04
110	04
RX101A	02
RX101B	08
RX103	04
RX104	04
RX105	04
RX106	01
RX107	01
RX108A	02
RX108B	05
RX109	04
RX110	02
RX110B	03
RX111	09
RX112A	02
RX112B	06
RX113A	07
RX113B	07
RX114	02

SECTION 08 80 00
GLAZING - REVISED

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glass.
- B. Glazing compounds and accessories.
- C. Transaction Window.

1.02 RELATED REQUIREMENTS

- A. Section 08 12 13 - Hollow Metal Frames: Glazed borrowed lites.
- B. Section 08 14 16 - Flush Wood Doors: Glazed lites in doors.
- C. Section 08 43 13 - Aluminum-Framed Storefronts: Glazing furnished by storefront manufacturer; shall meet state Energy Compliances.

1.03 REFERENCE STANDARDS

- A. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2011).
- B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014.
- C. ASTM C1036 - Standard Specification for Flat Glass; 2011.
- D. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2012.
- E. ASTM E773 - Standard Test Method for Accelerated Weathering of Sealed Insulating Glass Units; 2001.
- F. ASTM E774 - Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units; 1997.
- G. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2010.
- H. GANA (GM) - GANA Glazing Manual; 2009.
- I. GANA (SM) - GANA Sealant Manual; 2008.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Pre-installation Meeting: Convene a pre-installation meeting one week before starting work of this section; require attendance by all affected installers.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
- C. Product Data on Glazing Compounds: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.

1.06 QUALITY ASSURANCE

- A. Perform Work in accordance with GANA Glazing Manual and FGMA Sealant Manual for glazing installation methods.

1.07 PRE-INSTALLATION MEETING

- A. Convene one week before starting work of this section.

1.08 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.

- B. Sealed Insulating Glass Units: Provide a ten (10) year warranty to include coverage for seal failure, interpane dusting or misting, including replacement of failed units.

PART 2 PRODUCTS

2.01 GLASS MATERIALS

- A. Float Glass Manufacturers:
1. AGC Flat Glass North America, Inc: www.na.agc-flatglass.com.
 2. Guardian Industries Corporation: www.guardian.com.
 3. Pilkington North America Inc: www.pilkington.com/na.
 4. PPG Industries, Inc: www.ppgideascape.com.
 5. Visteon Glass Systems: www.visteon.com/floatglass.
 6. Viracon.
 7. Substitutions: Refer to Section 01 60 00 - Product Requirements.
- B. Float Glass: Provide float glass based glazing unless noted otherwise.
1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality-Q3.
 2. Heat-Strengthened and Fully Tempered Types: ASTM C1048, Kind HS and Kind FT.
 3. Tinted Types: ASTM C1036, Class 2 - Tinted, color and performance characteristics as indicated.
 4. Thicknesses: As indicated; for exterior glazing comply with requirements indicated for wind load design regardless of thickness indicated.
- C. Fire Resistance-Rated Glazing: Type, thickness, and configuration as required to achieve indicated ratings.
1. IBC Fire Resistance Rating: W-45, minimum.
 2. Provide products listed by Underwriters Laboratories or Intertek Warnock Hersey.
 3. Safety Certification: 16 CFR 1201 Category II.
- D. Fire-Protection-Rated Glazing: Type, thickness, and configuration as required to achieve indicated ratings.
1. IBC Fire Protection Rating: As indicated on drawings.
 2. Provide products listed by Underwriters Laboratories or Intertek Warnock Hersey.
 3. Labeling: Provide permanent label on each piece giving the IBC rating and other information required by the applicable code.
- E. Clear Float Glass: Clear, annealed.
1. Comply with ASTM C 1036, Type I, transparent flat, Class 1 clear, Quality Q3 (glazing select).
 2. Comply with ASTM C 1048, Condition A uncoated, Type I, transparent flat, Class 1, Quality q3 glazing select.
 3. 1/4 inch thick.
- F. Safety Glass: Clear; fully tempered with horizontal tempering.
1. Comply with ASTM C 1048, Condition A uncoated, Type I, transparent flat, Class 1, Quality q3 glazing select.
 2. Comply with ANSI Z97.1.
 3. 1/4 inch thick, interior glazing.
- G. Laminated Glass: 1/2" Laminated Glazing.
1. Comply with ASTM C 1048
- H. Ballistic Glazing: Total Security Solutions **Defender Insulated Glass Level 3** or approved equal; ~~level 8.~~

2.02 SEALED INSULATING GLASS UNITS

- A. Manufacturers:
1. Any of the manufacturers specified for float glass.
 2. Substitutions: Refer to Section 01 60 00 - Product Requirements.

- B. Sealed Insulating Glass Units: Types as indicated.
 - 1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
 - 2. Edge Spacers: Aluminum, bent and soldered corners.
 - 3. Edge Seal: Glass to elastomer with supplementary silicone sealant.
 - 4. Purge interpane space with dry hermetic air.
- C. Insulated Glass Units: Double pane with glass to elastomer edge seal.
 - 1. Outer pane of 1/4 inch glass, inner pane of 1/4 inch glass
 - 2. Place reflective coating on No. 3 surface within the unit.
 - 3. Comply with ASTM E 774 and E 773, Class CBA.
 - 4. Purge interpane space with dry hermetic air.
 - 5. Total unit thickness of 1 inch.
- D. Tempered Insulated Glass Units : Double pane with glass to elastomer edge seal.
 - 1. Outer pane of 1/4 inch tempered glass, inner pane of 1/4 inch tempered glass.
 - 2. Place reflective coating on No. 3 surface within the unit.
 - 3. Comply with ASTM E 774 and E 773, Class CBA.
 - 4. Purge interpane space with dry hermetic air.
 - 5. Total unit thickness of 1 inch .
- E. Insulated Spandrel Glass Units (Type SG): Double Pane with glass to elastomer edge seal.
 - 1. Outer pane of 1/4 inch heat strengthened glass, inner pane of 1/4 inch ceramic frit fused to the outer surface, color as selected by Architect.
 - 2. Comply with ASTM C 1048, Condition B spandrel glass one surface coated Type II pattern flat, Class 2 tinted heat absorbing and light reducing, Quality q7 decorative.
 - 3. Comply with ASTM C 1036 Type I, transparent flat, Class 2 tinted heat absorbing and light reducing.
 - 4. Total unit thickness of 1 inch.
- F. Insulated Silkscreen Glass Units (Silkscreen & Tempered): Triple Pane with glass to elastomer edge seal.
 - 1. Outer panes of 1/4 inch heat strengthened glass, inner pane of 1/4 inch ceramic frit fused to the outer surface, color as selected by Architect.
 - 2. Comply with ASTM C 1048, Condition C other coated glass one surface coated Type II pattern flat, Class 2 tinted heat absorbing and light reducing, Quality q7 decorative.
 - 3. Comply with ASTM C 1036 Type I, transparent flat, Class 2 tinted heat absorbing and light reducing.
 - 4. Total unit thickness of 1 inch.

2.03 GLAZING COMPOUNDS

- A. Manufacturers:
 - 1. Dow Corning Corp: www.dowcorning.com.
 - 2. GE Plastics: www.geplastics.com.
 - 3. Pecora Corporation: www.pecora.com.
 - 4. Substitutions: Refer to Section 01 60 00 - Product Requirements.
- B. Butyl Sealant: Single component; ASTM C920, Grade NS, Class 12-1/2, Uses M and A, Shore A hardness of 10 to 20; black color.
- C. Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; non-bleeding, non-staining; ASTM C920, Type S, Grade NS, Class 25, Uses M, A, and G; with cured Shore A hardness range of 15 to 25; color as selected.

2.04 GLAZING ACCESSORIES

- A. Manufacturers:
 - 1. Norton Performance Plastics Corp.
 - 2. Pecora Corporation: www.pecora.com.
 - 3. Tremco, Inc: www.tremcosealants.com.
 - 4. Substitutions: Refer to Section 01 60 00 - Product Requirements.

- B. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.
- C. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Minimum 3 inch long x one half the height of the glazing stop x thickness to suit application, self-adhesive on one face.
- D. Glazing Tape: Preformed butyl compound with integral resilient tube spacing device; 10 to 15 Shore A durometer hardness; coiled on release paper; black color.
- E. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option I; .
- F. Glazing Clips: Manufacturer's standard type.
- G. Transaction Window: CRL Cashier windows or approved equal.
 - 1. Stainless steel shelf with built-in deal tray and speak through.
 - 2. 30" width x 18" depth or as shown on drawings.
 - 3. See paragraph 2.01, item H above.
- H. Ballistic Glass Boxes: CRL Bullet Protection Hand Package Receiver or approved equal.
 - 1. Aluminum extrusion framing with level 3 ballistic clear glazing.
 - 2. 16" width x 16" or as shown on drawings.
 - 3. CPR31/CPR32; See drawings for handed direction(s).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that openings for glazing are correctly sized and within tolerance.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

3.02 PREPARATION

- A. Clean contact surfaces with solvent and wipe dry.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant.
- D. Install sealants in accordance with manufacturer's instructions.

3.03 INSTALLATION - EXTERIOR WET/DRY METHOD (PREFORMED TAPE AND SEALANT)

- A. Cut glazing tape to length and set against permanent stops, 3/16 inch below sight line. Seal corners by butting tape and dabbing with butyl sealant.
- B. Apply heel bead of butyl sealant along intersection of permanent stop with frame ensuring full perimeter seal between glass and frame to complete the continuity of the air and vapor seal.
- C. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.
- D. Rest glazing on setting blocks and push against tape and heel bead of sealant with sufficient pressure to attain full contact at perimeter of pane or glass unit.
- E. Install removable stops, with spacer strips inserted between glazing and applied stops 1/4 inch below sight lines.
 - 1. Place glazing tape on glazing pane of unit with tape flush with sight line.
- F. Install removable stops, with spacer strips inserted between glazing and applied stops, 1/4 inch below sight line. Place glazing tape on glazing pane or unit with tape flush with sight line.
- G. Fill gap between glazing and stop with silicone type sealant to depth equal to bite of frame on glazing, but not more than 3/8 inch below sight line.

- H. Apply cap bead of silicone type sealant along void between the stop and the glazing, to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

3.04 INSTALLATION - INTERIOR WET/DRY METHOD (TAPE AND SEALANT)

- A. Cut glazing tape to length and install against permanent stops, projecting 1/16 inch above sight line.
- B. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.
- C. Rest glazing on setting blocks and push against tape to ensure full contact at perimeter of pane or unit.
- D. Install removable stops, spacer shims inserted between glazing and applied stops at 24 inch intervals, 1/4 inch below sight line.
- E. Fill gaps between pane and applied stop with silicone type sealant to depth equal to bite on glazing, to uniform and level line.
- F. Trim protruding tape edge

3.05 CLEANING

- A. Remove glazing materials from finish surfaces.
- B. Remove labels after Work is complete.
- C. Clean glass and adjacent surfaces.

END OF SECTION

SECTION 09 21 16
GYPSON BOARD ASSEMBLIES - REVISED

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Performance criteria for gypsum board assemblies.
- B. Metal stud wall framing.
- C. Metal channel ceiling framing.
- D. Acoustic insulation.
- E. Cementitious backing board.
- F. Gypsum wallboard.
- G. Joint treatment and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 07 84 00 - Firestopping: Top-of-wall assemblies at fire rated walls.
- B. Section 07 90 05 - Joint Sealers: Acoustic sealant.

1.03 REFERENCE STANDARDS

- A. AISI SG02-1 - North American Specification for the Design of Cold-Formed Steel Structural Members; American Iron and Steel Institute; 2001 with 2004 supplement. (replaced SG-971)
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2020.
- C. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017.
- D. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2013.
- E. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2017.
- F. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2020.
- G. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2020.
- H. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2018.
- I. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2020.
- J. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.
- K. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.
- L. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2016.
- M. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2020.
- N. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009, (reapproved 2016).
- O. ASTM E413 - Classification for Rating Sound Insulation; 2016.
- P. GA-216 - Application and Finishing of Gypsum Board; Gypsum Association; 2016.
- Q. GA-600 - Fire Resistance Design Manual; Gypsum Association; 2015.

- R. ICC (IBC) - International Building Code; Most recent edition adopted by the Authorities Having Jurisdiction.
- S. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing gypsum board application and finishing, with minimum 3 years of documented experience.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.
- B. Interior Partitions Indicated as Acoustic: Provide completed assemblies with the following characteristics:
 - 1. Acoustic Attenuation: STC of 45-49 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.
- C. Fire Rated Assemblies: Provide completed assemblies with the following characteristics:
 - 1. Fire Rated Partitions: UL listed assembly No. U419; 1 hour rating.
 - 2. UL Assembly Numbers: Provide construction equivalent to that listed for the particular assembly in the current UL Fire Resistance Directory.

2.02 METAL FRAMING MATERIALS

- A. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf.
 - 1. Studs: "C" shaped with flat or formed webs with knurled faces.
 - 2. Runners: U shaped, sized to match studs.
 - 3. Ceiling Channels: C shaped.
 - 4. Furring: Hat-shaped sections, minimum depth of 7/8 inch.
 - 5. Furring: "Z" shaped sections, minimum depth of 2 inches.
 - a. Contractors Option: Alternate "Z" Shaped Section: EcoStud, 100% recycled plastic studs as manufactured by Superior Polymer, phone 906-337-3355.
- B. Metal Framing: Drywall and Plaster Ceilings:
 - 1. Chicago Metallic Corporation - System 640 and fire Front 650.
 - 2. USG - Drywall Suspension System Flat for Ceilings, rated and non-rated one hour.
 - 3. Armstrong - Quickstix Drywall Ceiling Framing.
- C. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
- D. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection using slotted holes, screws and anti-friction bushings, preventing rotation of studs while maintaining structural performance of partition.
 - 1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI North American Specification for the Design of Cold-Formed Steel Structural Members.
 - 2. Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot dipped galvanized coating.
 - 3. Provide components UL-listed for use in UL-listed fire-rated head of partition joint systems indicated on drawings.
 - 4. Deflection and Firestop Track:
 - a. Provide mechanical anchorage devices as described above that accommodate deflection while maintaining the fire-rating of the wall assembly.

- b. Acceptable Products:
 - 1) "Posi Clip" by Fire Trak Corporation.
 - 2) "The System" by Metal-Lite, Inc.
- 5. Provide top track preassembled with connection devices spaced to fit stud spacing indicated on drawings; minimum track length of 12 feet.
- E. Partial Wall Framing Connection to Floor: Provide support out-of-plane loading of cantilevered partial wall systems that are unsupported at the top track. Out-of-plan loads are transferred to the floor system through the base-plate, which is welded to the heavy stud member.
 - 1. Plate Material: ASTM A36 ½" thick hot rolled steel.
 - 2. Stud Material: ASTM A1011 SS Grade 50, 50ksi (340 MPa); 97 mils (12ga), 0.1017" Design thickness, 0.0966" Min. thickness.
 - 3. Coating: Envirocron® Powder Coating
 - 4. Plate Dimensions: 3-3/8" x 8" x ½" thick
 - 5. Stud Dimensions: 3-5/8" x 2-1/2" x 59-1/4" tall
 - 6. Packaging: Individually
 - 7. Product Weight: 19.3 lb/piece
 - 8. Code Approvals & Performance Standards:
 - a. AISI S100-16 (2020) w/S2-20 North American Specification for the Design of Cold-Formed Steel Structural Members
 - b. ASTM A36 Standard Specification for Carbon Structural Steel
 - c. ASTM A1011 Standard Specification for Structural Steel
 - 9. Acceptable Product:
 - a. ClarkDietrich Pony Wall Heavy 60" (PW60)

2.03 BOARD MATERIALS

- A. Manufacturers - Gypsum-Based Board:
 - 1. CertainTeed Corporation: www.certainteed.com.
 - 2. Lafarge North America Inc: www.lafargenorthamerica.com.
 - 3. National Gypsum Company: www.nationalgypsum.com.
 - 4. USG Corporation: www.usg.com.
 - 5. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
 - 2. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
 - 3. Thickness:
 - a. Vertical Surfaces: 5/8 inch.
 - b. Ceilings: 5/8 inch.
 - 4. Paper-Faced Products:
 - a. CertainTeed Corporation; ProRoc Brand Gypsum Board.
 - b. Lafarge North America Inc; Regular Drywall and Firecheck Type X and Type C.
 - c. National Gypsum Company; Gold Bond Brand Gypsum Wallboard.
 - d. USG Corporation; Sheetrock Brand Gypsum Panels.
 - e. Substitutions: See Section 01 60 00 - Product Requirements.
- C. Security Board/Mesh:
 - 1. Gyp. Bd. Assemblies, Bullet Resistant Panels:
 - a. Manufacturer: Armocore
 - b. Model: UL752 Level 3
 - c. Thickness: 7/16"
 - d. Protection Level:
 - 1) Ballistic: UL752 Level 3
 - 2) Forced Entry: Class IV per ASTM F1233-98

- e. Installation: Install per manufacturer's instructions. All joints need to be reinforced by a 4" batten strip.
- 2. Security Barrier Mesh:
 - a. Manufacturer: CLARK DIETRICH
 - b. Model: BM15
 - c. Gauge: 9
 - d. Material: Type II, Class 1 – Carbon Steel – Mesh, Complying to ASTM F1267 and A1011.
 - e. Installation: Install per manufacturer's instructions with Barrier Mesh clips, install Barrier Mesh clips 6" on center.
- D. Backing Board for Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM C1396/C1396M; sizes to minimum joints in place; ends square cut.
 - 1. Application: Vertical surfaces behind thinset tile, except in wet areas.
 - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 - 3. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
 - 4. Type: Regular and Type X, in locations indicated.
 - 5. Type X Thickness: 5/8 inch.
 - 6. Regular Board Thickness: 5/8 inch.
 - 7. Edges: Tapered.
 - 8. Products:
 - a. CertainTeed Corporation; ProRoc Brand Moisture Resistant Gypsum Board ("Greenboard").
 - b. Georgia-Pacific Gypsum; DensShield Tile Backer.
 - c. Lafarge North America Inc; Watercheck ("Greenboard").
 - d. National Gypsum Company; Gold Bond Brand XP Gypsum Board.
 - e. USG Corporation; Sheetrock Brand Mold Tough Gypsum Panels.
 - f. Substitutions: See Section 01 60 00 - Product Requirements.

2.04 ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced.
 - 1. Owens Corning - Noise Barrier Batts
 - 2. Manville - Sound Control Batts
 - 3. Certainteed - Sound Control Batts
 - 4. Guardian Fiberglass, Inc. - Sound Control Batts
- B. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board. Acoustical sealant shall be as manufactured by one of the following or approved equal:
 - 1. Ohio Sealants Inc. - Sound Sealant Rubber Base
 - 2. Pecora - Acoustical Sealant
 - 3. Tremco -Acoustical Sealant
- C. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board.
- D. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.
 - 1. Tape: 2 inch wide, coated glass fiber tape for joints and corners, except as otherwise indicated.
 - 2. Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.
 - 3. Ready-mixed vinyl-based joint compound.
 - 4. Powder-type vinyl-based joint compound.
 - 5. Chemical hardening type compound for use in mold resistant systems.
- E. Screws for Attachment to Steel Members Less Than 0.03 inch In Thickness, to Wood Members, and to Gypsum Board: ASTM C1002; self-piercing tapping type; cadmium-plated for exterior locations.
- F. Screws for Attachment to Steel Members From 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws for application of gypsum board to loadbearing steel studs.

- G. Resilient Furring Channels: 1/2 inch deep Galvanized steel, Dietrich RC Deluxe.
- ~~H. Security Barrier Mesh: 16 gauge, 3/4" Diamond; Clark Dietrich or approved equal~~
- H. Wall Port: 2" inside diameter, color white, manufactured by Wall Eye Solutions.

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Studs: Space studs as permitted by standard.
 - 1. Extend partition framing to structure where indicated and to ceiling in other locations.
 - 2. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.
- C. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.
- D. Standard Wall Furring: Install at concrete and masonry walls scheduled to receive gypsum board, not more than 4 inches from floor and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches on center.
 - 1. Orientation: Vertical.
 - 2. Spacing: As indicated.
- E. Acoustic Furring: Install resilient channels at maximum 24 inches on center. Locate joints over framing members.
- F. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
 - 1. Level ceiling system to a tolerance of 1/360.
 - 2. Main runners shall be installed 48" on center, and be directly suspended by not less than 12 gage galvanized steel wire spaced 48" on center along the furring runners. Hanger wires shall be wrapped tightly with at least 3 full turns.
 - 3. Furring main runners shall be interconnected by furring cross tees 48" long spaced 16" on center and also 8" from the ends of each gypsum drywall panel. Cross tees shall also be installed adjacent to all recessed light fixtures on each side not supported by a furring runner. Pay special attention to the type of lay-in light fixture and direction in which they are installed.
 - 4. Wall track shall be installed wherever suspension components meet vertical surfaces, and the suspension component ends shall be butt cut to fit into the wall track.
 - 5. Studs: Space studs at 16 inches (400 mm) on center.
 - a. Extend stud framing through ceiling to structure above. Maintain clearance under structural building members to avoid deflection transfer to studs. Provide extended leg ceiling runners.
 - b. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.
 - 6. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.
- G. Blocking: Install blocking for support of plumbing fixtures, wall cabinets, toilet accessories, and hardware. Bolt or screw steel channels to studs.

3.03 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: 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.
 1. Place one bead continuously on substrate before installation of perimeter framing members.
 2. Place continuous bead at perimeter of each layer of gypsum board.
 3. In non-fire-rated construction, seal around all penetrations by conduit, pipe, ducts, and rough-in boxes.
 4. Bottom of Partitions: Apply a round bead of sealant at each side stud track before setting gypsum board. Set gypsum board into sealant to form complete contact with adjacent materials.
 5. Top and Sides of Partitions Abutting Existing Construction or Non-acoustical New Construction - After gypsum board is installed apply acoustical sealant to provide full contact with adjacent existing surfaces at each side of the partition.
 6. Cut Outs - Backs of electrical boxes, pipes, ducts, and other equipment penetrating the wall surface shall be buttered with sealant and perimeter edges of all items sealed with sealant.

3.04 BOARD INSTALLATION

- A. Comply with ASTM C 840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
 1. Exception: Tapered edges to receive joint treatment at right angles to framing.
- C. Fire-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
- D. Cementitious Backing Board: Install over steel framing members and plywood substrate where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.
- E. Installation on Metal Framing: Use screws for attachment of all gypsum board except face layer of non-rated double-layer assemblies, which may be installed by means of adhesive lamination.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints 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. Partition, furring or column fireproofing abuts a structural element (except floor) or dissimilar wall or ceiling.
 3. Ceiling or soffit abuts a structural element, dissimilar wall or partition or other vertical penetration.
 4. Construction changes within the plane of partition or ceiling.
 5. Ceiling dimensions exceed fifty feet in either direction with perimeter relief, thirty feet without relief.
 6. Where wings of "L", "U" and "T" shaped ceiling areas are joined.
 7. Where gypsum board systems abut dissimilar materials, gypsum board shall be isolated by installing a casing bead within a 1/4" of the dissimilar material and sealing the joint with either acoustical sealant as specified above for sound insulated partitions or caulking as specified under Section 07 90 05.
 8. Ceiling height door frames may be used as control joints. Less than ceiling height frames shall have control joints extending to the ceiling from both corners. Window openings shall be treated similar to doors with joint extending to the floor as well as the ceiling. Control joints in gypsum board to gypsum board configurations shall be formed using expansion joint formers as specified above. Joints shall be caulked with sound sealant or caulking as specified in Section 07 90 05 as appropriate to the condition.
 9. Control joints in fire rated construction shall be formed with double studs and expansion joint former and backed with safing insulation as specified under Section 07 84 00.
- B. Corner Beads: Install at external corners, using longest practical lengths.

3.06 JOINT TREATMENT

- A. Glass Mat Faced Gypsum Board and Exterior Glass Mat Faced Sheathing: Use fiberglass joint tape, bedded and finished with chemical hardening type joint compound.
- B. Paper Faced Gypsum Board: Use paper joint tape, bedded with ready-mixed vinyl-based joint compound and finished with ready-mixed vinyl-based joint compound.
- C. 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 1: Fire rated wall areas above finished ceilings, whether or not accessible in the completed construction.
- D. 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.

END OF SECTION

SECTION 09 65 00
RESILIENT FLOORING - REVISED

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. VCT
- B. Resilient flooring.
- C. Resilient base.
- D. Installation accessories.

1.02 RELATED REQUIREMENTS

- A. Section 03 30 00 - Cast-in-Place Concrete: Restrictions on curing compounds for concrete slabs and floors.

1.03 REFERENCE STANDARDS

- A. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.
- B. ASTM F970 - Standard Test Method for Static Load Limit; 2007 (Reapproved 2011).
- C. ASTM F1066 - Standard Specification for Vinyl Composition Floor Tile; 2004 (Reapproved 2014)e1.
- D. ASTM F1861 - Standard Specification for Resilient Wall Base; 2008 (Reapproved 2012)e1.
- E. ASTM F1913 - Standard Specification for Vinyl Sheet Floor Covering Without Backing; 2004 (Reapproved 2014).
- F. FS RR-T-650 - Treads, Metallic and Nonmetallic, Skid Resistant; Federal Specifications and Standards; Revision E, 1994.
- G. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; Resilient Floor Covering Institute; October 2011.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, installation adhesives and accessories, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Shop Drawings: Indicate seaming plan.
- D. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.
- E. Verification from the flooring installer, in writing, on his letterhead, indicating that he has reviewed the concrete moisture content testing reports, or has conducted his own moisture content tests and accepts the moisture levels present within the concrete slab as acceptable for the installation of the products being furnished.
- F. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect roll materials from damage by storing on end.

1.06 FIELD CONDITIONS

- A. Maintain temperature in storage area between 55 degrees F and 90 degrees F.
- B. 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.

PART 2 PRODUCTS

2.01 VCT FLOORING

- A. VCT: Nora by Interface – Noraplan Environcare Tile
 - 1. Color: TBD
 - 2. Dimensions: 24" x 24" (610mm x 610mm)
 - 3. Thickness: 0.08" (2.0 mm)
 - 4. *Integral Cove base as noted at locations shown on drawings.
 - 5. Contact: Nora Lewandowski nora.lewandowski@interface.com

2.02 SHEET FLOORING

- A. **SV-1:**
 - 1. **Product: Eco Surface Forest RX**
 - 2. **Color: To be determined**
 - 3. **Surface Layer: 2mm Heterogeneous Vinyl surface layer**
 - 4. **Base Layer: 5mm Vulcanized Composition Rubber base layer**
 - 5. **Roll: 7mm (0.28") x 72" (1.83m) x 30 LF (9.14m)**
- B. **SV-2 and SV-3:** Nora by Interface – Noraplan Environcare Sheet
 - 1. Color: TBD
 - 2. Dimensions: 49.21' x 48" (15m x 1.22m)
 - 3. Overall Thickness: 0.08" (2.0 mm)
 - 4. *Integral Cove base as noted at locations shown on drawings.
 - 5. Contact: Nora Lewandowski nora.lewandowski@interface.com

2.03 RESILIENT BASE

- A. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; top set Style B, Cove.
 - 1. Height: 4 inch, or as noted.
 - 2. Thickness: 0.125 inch thick.
 - 3. Finish: Satin.
 - 4. Accessories: Premolded external corners and end stops.
 - 5. Manufacturers:
 - a. VB1 - VINYL BASE - 4" Cove Johnsonite
 - b. Substitutions: Not permitted.

2.04 ACCESSORIES

- A. Subfloor Filler: Cement based; type recommended by adhesive material manufacturer. No gypsum based fillers are allowed.
- B. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
- C. Moldings, Transition and Edge Strips: Metal.
- D. Filler for Sheet Vinyl Coved Base: Plastic.
- E. Cap for Sheet Vinyl Coved Base: Vinyl

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. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive resilient flooring.
- C. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.

- D. Cementitious Sub-floor Surfaces: Verify that substrates are dry enough and ready for resilient flooring installation by testing for moisture and pH.
 - 1. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.
- E. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to sub-floor surfaces.
- F. Verify that concrete sub-floor surfaces are ready for resilient flooring installation by reviewing testing report for moisture emission rate and alkalinity; obtain instructions if test results are not within the following limits:
 - 1. Moisture emission rate: Not greater than 3 lb per 1000 sq ft per 24 hours when tested using calcium chloride moisture test kit for 72 hours, as per ASTM F 1869-03.
 - 2. Alkalinity: pH range of 5-9.
 - 3. Installer shall verify in writing that he has reviewed the test results and is satisfied that the installation can proceed.
- G. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

- A. Remove existing resilient flooring and flooring adhesives; follow the recommendations of RFCI (RWP).
- B. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
- C. Remove sub-floor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.
 - 1. Sub-floor filler used on concrete slab on grade construction shall be cement based.
 - 2. No Gypsum based sub-floor fillers are allowed.
- D. Prohibit traffic until filler is fully cured.
- E. Clean substrate.

3.03 INSTALLATION

- A. Starting installation constitutes acceptance of sub-floor conditions. Design intent is to match that of existing conditions.
- B. Install in accordance with manufacturer's written instructions.
- C. Spread only enough adhesive to permit installation of materials before initial set.
- D. Fit joints and butt seams tightly.
- E. Set flooring in place, press with heavy roller to attain full adhesion.
- F. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.
- G. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.
- H. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

3.04 FLOORING

- A. Install in accordance with manufacturer's instructions.
- B. Spread only enough adhesive to permit installation of materials before initial set.
- C. Set flooring in place, press with heavy roller to attain full adhesion.
- D. Lay flooring with joints and seams parallel to longer room dimensions, to produce minimum number of seams. Lay out seams to avoid widths less than 1/3 of roll width; match patterns carefully at seams.
- E. Seal seams by heat welding where indicated.

- F. Double cut sheet at seams.
- G. Lay flooring with tightly butted seams, without any seam sealer unless otherwise indicated.
- H. Finish seams in sheet vinyl by heat welding.
- I. Double cut sheet; provide heat welded seams.
- J. Where floor finishes are different on opposite sides of door, terminate flooring under centerline of door.
- K. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated. Before installation of flooring, secure metal strips with stainless steel screws. Secure resilient strips by adhesive.
- L. Coved Base: Install as detailed on drawings, using coved base filler as backing at floor to wall junction. Extend sheet flooring vertically to height indicated, and cover top edge with metal cap strip and cap with a vinyl cap.
- M. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

3.05 RESILIENT BASE

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
- B. Install base on solid backing. Bond tightly to wall and floor surfaces.
- C. Scribe and fit to door frames and other interruptions.

3.06 CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Clean in accordance with manufacturer's written instructions.
- C. Clean, seal, and wax resilient flooring products in accordance with manufacturer's instructions.

3.07 PROTECTION

- A. Prohibit traffic on resilient flooring for 48 hours after installation.
- B. No thresholds in any floor areas. Coordinate with architect for further information.

END OF SECTION

SECTION 10 22 13
WIRE MESH PARTITIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wire mesh system for storage.
- B. Access door.

1.02 REFERENCE STANDARDS

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2008.
- B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2012.
- C. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2010a.
- D. ASTM A510/A510M - Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel; 2011.
- E. ASTM A510M - Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel (Metric); 2008.
- F. AWS D1.1/D1.1M - Structural Welding Code - Steel; American Welding Society; 2010.

1.03 DESIGN REQUIREMENTS

- A. Design partition system to provide for movement of components without damage, undue stress on fasteners or other detrimental effects, when subject to design loads.
- B. Design system to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for screen materials, finishes.
- C. Shop Drawings: Indicate plan and vertical dimensions, elevations, component details; head, jamb, and sill details; location of hardware. Provide component details, anchorage, and type and location of fasteners.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Wire Mesh Partitions:
 - 1. Acceptable Manufacturer: WireCrafters, LLC; 6208 Strawberry Lane, Louisville, KY 40214-2900. ASD. Tel: (800) 626-1816 or (502) 363-6691. Fax: (502) 361-3857. www.wirecrafters.com Email: info@wirecrafters.com
 - 2. Substitutions: Not permitted.

2.02 WIRE MESH PARTITIONS

- A. Wire Mesh Partitions: Factory-assembled modular sized panels stacked between post uprights, complete with all components, accessories, hardware, and fasteners; interchangeable units that allow expansion without waste of components.
 - 1. Style: Full mesh.
 - 2. Provide fixed sections unless otherwise indicated.
 - 3. Post Spacing: As required to suit dimensions, using manufacturer's standard panel widths.
 - 4. Panel frames bolted together and to posts.

5. Height: One 48 inch (1220 mm) high panels.
 6. Finish: Electrostatic sprayed enamel, in manufacturer's standard color.
- B. Posts: Square 2 by 2 inch (50 by 50 mm) 14 gauge steel tube.
1. Factory drilled holes for attaching panels.
 2. Welded-on base plate, 2 by 7 by 1/4 inch (50 by 178 by 6 mm), with factory drilled holes for floor anchors.
 3. Decorative plastic post cap.
 4. Corner Posts: Same as in-line posts.
 5. Provide appropriate hardware for attaching panels to posts and posts to floor.
- C. Wire Mesh Panels: Steel angle frames with wire mesh securely welded in place; frame joints coped at corner and securely welded; factory drilled holes for fasteners.
1. Wire Mesh: 10 gauge, 0.135 inch (3.5 mm) steel wire woven into 2 by 1 inch (50 by 25 mm) rectangular mesh.
 2. Frame: 1-1/4 by 1-1/4 by 1/8 inch (32 by 32 by 3 mm) hot rolled steel angle.
 3. Vertical Panel Stiffeners: 1/4 by 3/4 inch (6 by 19 mm) steel bar securely welded to frame behind mesh on panels 4 feet (1219 mm) or wider.
- D. Door Sections: Matching wire mesh panels.
1. Frame: 1-1/4 by 1-1/4 by 1/8 inch (32 by 32 by 3 mm) hot rolled steel angle.
 2. Stiffeners: Two horizontal and one vertical stiffener of 1/4 by 3/4 inch (6 by 19 mm) flat hot rolled steel bar.
 3. Hinged Doors:
 - a. Single Door Width: 36 inches (915 mm).
 - b. Door Opening Height: 87-1/4 inches (2216 mm), with transom of similar construction to full height of partition.
 - c. Hinges: 3 5-knuckle tight-pin butt hinges fastened to door panel and frame.
 - d. Closer: Commercial grade hydraulic door closer
 - e. Lever Handles: Storeroom function
 - f. Electric Strike

2.07 FABRICATION

- A. Fit and assemble in largest practical sections for delivery to site, ready for installation.
- B. Make exposed joints flush or tight.
- C. Provide components required for anchorage to adjacent construction.
- D. Fabricate wall panels as shown on drawings to go from floor to precast concrete ceiling at 9'-4" high.
- E. Fabricate door for hinged operation.

2.08 FINISHES

- A. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- B. Shop Finished Surfaces: One coat electrostatic sprayed enamel.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install items plumb and level, accurately fitted, free from distortion or defects.

3.02 ADJUSTING

- A. Adjust hinged doors to achieve free movement.

3.03 CLEANING

- A. Remove temporary protection to prefinished surfaces.

END OF SECTION

SECTION 10 28 00
TOILET ACCESSORIES - REVISED

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Accessories for toilet rooms, showers, and utility rooms.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 – Rough Carpentry: Related work.
- B. Section 06 41 00 – Architectural Wood Casework: Mop holder for casework, see drawings.

1.03 REFERENCE STANDARDS

- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2012.
- B. ASTM A269 - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2010.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2011.
- D. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2010.
- E. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium; 2011e1.
- F. ASTM C1036 - Standard Specification for Flat Glass; 2011e1.
- G. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror; 2008.
- H. ASTM F2285 - Standard Consumer Safety Performance Specification for Diaper Changing Tables for Commercial Use; 2004 (Reapproved 2010).
- I. GSA CID A-A-3002 - Mirrors, Glass; U.S. General Services Administration; 1996.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with the placement of internal wall reinforcement, concealed ceiling supports, and reinforcement of toilet partitions to receive anchor attachments.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on accessories describing size, finish, details of function, attachment methods.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Products listed are made by Bobrick.
- B. Other Acceptable Manufacturers:
 - 1. A & J Washroom Accessories Inc: www.ajwashroom.com.
 - 2. American Specialties, Inc: www.americanspecialties.com.
 - 3. Bradley Corporation: www.bradleycorp.com.
 - 4. Substitutions: Section 01 60 00 - Product Requirements.

2.02 MATERIALS

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
 - 1. Grind welded joints smooth.
 - 2. Fabricate units made of metal sheet of seamless sheets, with flat surfaces.
- B. Keys: Provide 2 keys for each accessory to Owner; master key all lockable accessories.

- C. Stainless Steel Sheet: ASTM A666, Type 304.
- D. Stainless Steel Tubing: ASTM A269, Type 304 or 316.
- E. Galvanized Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
- F. Mirror Glass: Float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
- G. Adhesive: Contact type, waterproof.
- H. Fasteners, Screws, and Bolts: Hot dip galvanized, tamper-proof, security type.
- I. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.

2.03 FINISHES

- A. Stainless Steel: No. 4 satin brushed finish, unless otherwise noted.
- B. Chrome/Nickel Plating: ASTM B456, SC 2, satin finish, unless otherwise noted.
- C. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats epoxy baked enamel.
- D. Galvanizing for Items Other than Sheet: Comply with ASTM A123/A123M; galvanize ferrous metal and fastening devices.
- E. Shop Primed Ferrous Metals: Pretreat and clean, spray apply one coat primer and bake.
- F. Back paint components where contact is made with building finishes to prevent electrolysis.

2.04 TOILET ROOM ACCESSORIES

- A. Paper Towel Dispenser: Folded paper type, stainless steel, surface-mounted, with viewing slots on sides as refill indicator and tumbler lock.
 - 1. Capacity: 400-C Fold minimum.
 - 2. Product: B-262 manufactured by Bobrick.
- B. Soap Dispenser: Liquid soap dispenser, wall-mounted, surface, with stainless steel cover and horizontal stainless steel tank and working parts; push type soap valve, check valve, and window gage refill indicator, tumbler lock.
 - 1. Minimum Capacity: 40 ounces.
 - 2. Product: B-2111 manufactured by Bobrick.
- C. Grab Bars: Stainless steel, non-slip grasping surface finish.
 - 1. Standard Duty Grab Bars:
 - a. Push/Pull Point Load: 250 pound-force, minimum.
 - b. Dimensions: 1-1/2 inch outside diameter, minimum 0.05 inch wall thickness, concealed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
 - c. Finish: Non-slip grasping surface.
 - d. Length and Configuration: As indicated on drawings.
 - e. Products:
 - 1) B-6806 manufactured by Bobrick.
- D. Robe Hook: Heavy-duty stainless steel, single-prong, rectangular-shaped bracket and backplate for concealed attachment, satin finish.
 - 1. Product: B-76717 by Bobrick.

2.06 UTILITY ROOM ACCESSORIES

- A. Combination Utility Shelf/Mop and Broom Holder: 0.05 inch (1.3 mm) thick stainless steel, Type 304, with 1/2 inch (12 mm) returned edges, 0.06 inch (1.6 mm) steel wall brackets.
 - 1. Drying rod: Stainless steel, 1/4 inch (6 mm) diameter.
 - 2. Hooks: 2, 0.06 inch (1.6 mm) stainless steel rag hooks at shelf front.
 - 3. Mop/broom holders: 3 spring-loaded rubber cam holders at shelf front.
 - 4. Length: 30 inches.

5. Product: B-224 manufactured by Bobrick.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify exact location of accessories for installation.

3.02 PREPARATION

- A. Deliver inserts and rough-in frames to site for timely installation.
- B. Provide templates and rough-in measurements as required.

3.03 INSTALLATION

- A. Install accessories in accordance with manufacturers' instructions.
- B. Install plumb and level, securely and rigidly anchored to substrate.
- C. Mounting Heights and Locations: As required by accessibility regulations, as indicated on drawings.

3.04 PROTECTION

- A. Protect installed accessories from damage due to subsequent construction operations.

END OF SECTION

SECTION 10 51 00
LOCKERS - REVISED

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Locker units with hinged doors.
- B. Metal filler panels.

1.02 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2011.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on locker types, sizes and accessories.
- C. Shop Drawings: Indicate locker plan layout, numbering plan.
- D. Samples: Submit two samples 3 x 6 inches (75 x 150 mm) in size, of each color scheduled; applied to specified base metal.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Protect locker finish and adjacent surfaces from damage.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Lockers:
 - 1. Lyon Workspace Products; Product Standard Quiet Lockers: www.lyonworkspace.com.
 - 2. Penco Products, Inc; Product Guardian: www.pencoproducts.com.
 - 3. Republic Storage Systems Co; Product Quiet Lockers: www.republicstorage.com.
 - 4. List Industries, Inc.; Product Whisper Quiet Premier Locker.
 - 5. Art Metal Products; Product Artisan Silent Lockers.
 - 6. Hadrian; Product Emperor.
 - 7. Hallowell; Product Silent KD Lockers.
 - 8. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 MATERIALS

- A. Sheet Steel: ASTM A653/A653M SS Grade 33/230, with G60/Z180 coating, stretcher leveled; to the following minimum thicknesses:
 - 1. Body and Shelf: 24 gage, 0.024 inch
 - 2. Door Outer Face: 16 gage
 - 3. Door Frame: 16 gage
 - 4. Hinges: 14 gage, 0.075 inch
 - 5. Base: 20 gage, 0.036 inch
 - 6. Trim: 20 gage, 0.036 inch
- B. Accessories for Each Locker: one double prong ceiling hook, three single prong wall hooks, and shelf.
- ~~C. Locker Benches: Stationary type; bench top of laminated maple species wood, stained, sealed and varnished; pedestals of chrome steel, 18 inches high.~~

2.03 LOCKER UNITS

- A. Width: 12 inches
- B. Depth: 12 inches
- C. Height: 60 inches
- D. Configuration: two tier.

- E. Mounting: Surface mounted.
- F. Base: Metal base.
- G. Top: sloped metal with closures.
- H. Locking: Recessed Handle Equipped for padlock hasps.
- I. Ventilation Method: Door louvers.
- J. Class: Quiet.
- K. Locker Body: Formed and flanged; with steel stiffener ribs; electric spot welded.
- L. Frames: Formed channel shape, welded and ground flush, welded to body, resilient gaskets and latching for quiet operation.
- M. Locking device supplied by others.
- N. Number Plates: Provide oval shaped aluminum plates. Form numbers of block font style, in contrasting color.
- O. Provide ventilation openings at top and bottom of each locker.
- P. Form recess for operating handle and locking device.
- Q. Finish edges smooth without burrs.
- R. Fabricate metal tops and closure pieces.

2.04 FINISHING

- A. Clean, degrease, and neutralize metal; prime and finish with one coat of baked enamel.
- B. Paint locker units 1 color, as selected.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install lockers plumb and square.
- C. Place and secure on prepared base.
- D. Bolt adjoining locker units together to provide rigid installation.
- E. Install end panels and filler panels.
- F. Install accessories.
- G. Replace components that do not operate smoothly.

3.02 CLEANING

- A. Clean locker interiors and exterior surfaces.

END OF SECTION

IHS WOODROW WILSON PHARMACY USP REDESIGN

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

PROJECT NUMBER: 022003.00

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ABBREVIATIONS

ADA	AMERICANS WITH DISABILITIES ACT	MECH	MECHANICAL
ADJ	ADJUSTABLE	MIN	MINIMUM
AFF	ABOVE FINISHED FLOOR	MISC	MISCELLANEOUS
AHU	AIR HANDLING UNIT	MO	MASONRY OPENING
ALT	ALTERNATE	MTL	METAL
ALUM	ALUMINUM		
APPROX	APPROXIMATE	NA	NOT APPLICABLE
ARCH	ARCHITECT	NIC	NOT IN CONTRACT
		NOM	NOMINAL
		NTS	NOT TO SCALE
B.O. / BO	BOTTOM OF BACKSPASH	OC	ON CENTER
B-SPLASH	BUILDING	OH	OVERHEAD
BLDG	BLOCKING		
BLKG	BEARING	P.T.	PRESSURE TREATED
BRG		PC	PRECAST
		PL	PLATE
C-TOP	COUNTERTOP	PLAM / P.LAM.	PLASTIC LAMINATE
CG	CORNER GUARD	PLY / PLYWD	PLYWOOD
CJ	CONTROL JOINT	PNT	PAINT
CL	CENTERLINE	PREFIN	PREFINISHED
CLR	CEILING	PTD	PAPER TOWEL DISPENSER
CLG	CLEARANCE		
CMU	CONCRETE MASONRY UNIT	QT	QUARRY TILE
COL	COLUMN	QTY	QUANTITY
CONC	CONCRETE		
CONT	CONTINUOUS	RCP	REFLECTED CEILING PLAN
CT	CERAMIC / PORCELAIN TILE	REF	REFRIGERATOR
		REINF	REINFORCED
D	DEEP	REQD	REQUIRED
DF	DRINKING FOUNTAIN	RTU	ROOF TOP UNIT (MECH.)
DIA	DIAMETER	RWL	RAIN WATER LEADER
DIM	DIMENSION		
DISP	DISPENSER	S.SPLASH	SIDESPLASH
DN	DOWN	SACT	SUSPENDED ACOUSTICAL CEILING TILE
DWG	DRAWING	SCHED	SCHEDULE
		SD	SOAP DISPENSER
EA	EACH	SEAL	SEALANT (SEALED)
EJ	EXPANSION JOINT	SF	SQUARE FOOT (FEET)
ELEC	ELECTRICAL	SIM	SIMILAR
EQ	EQUAL	SND	SANITARY NAPKIN DISPOSAL
EQUIP / EQPT.	EQUIPMENT	SPEC	SPECIFICATION
EXST / EX. / EXIST.	EXISTING	SS	STAINLESS STEEL
EXT	EXTERIOR	SSM	SOLID SURFACE MATERIAL
		STL	STEEL
F.T.	FIRE TREATED	STRUCT	STRUCTURAL CONSULTANT
F.V.	FIELD VERIFY	SV	SHEET VINYL
FD	FLOOR DRAIN		
FDN	FOUNDATION	T.O.	TOP OF
FE	FIRE EXTINGUISHER	TBB	TILE BACKER BOARD
FEC	FIRE EXTINGUISHER CABINET	TPD	TOILET PAPER DISPENSER
FLR	FLOOR	TRTD	TREATED
FRP	FIBERGLASS REINFORCED PANEL	TYP	TYPICAL
FUR	FURRING		
		UNO	UNLESS NOTED OTHERWISE
GB	GRAB BAR	VB	VINYL BASE
GLAZ	GLAZING	VCT	VINYL COMPOSITION TILE
GYP. BD / G.BD / GBD	GYPSONUM BOARD	VIF	VERIFY IN FIELD
		VWC	VINYL WALL COVERING
		W	WIDE
		W/	WITH
		W/O	WITHOUT
		WD	WOOD
		WRB	WEATHER RESISTIVE BARRIER
		#	NUMBER (OR POUND)
		&	AND
		@	AT
H	HIGH		
HC	HANDICAPPED		
HM	HOLLOW METAL		
HT	HEIGHT		
INSUL	INSULATION		
INT	INTERIOR		
LAM	LAMINATE		
LVT	LUXURY VINYL TILE		
MATL	MATERIAL		
MAX	MAXIMUM		

ARCHITECTURAL GENERAL NOTES

- GENERAL NOTES APPLY TO ALL DRAWING SHEETS.
- REVIEW THE CONSTRUCTION DOCUMENTS PRIOR TO START OF CONSTRUCTION. NOTIFY ARCHITECT UPON ENCOUNTERING ANY UNFORESEEN CONDITIONS, DISCREPANCIES, ERRORS, OR INCONSISTENCIES.
- WORK SHALL BE DONE IN ACCORDANCE WITH ALL RULES AND REGULATIONS OF ALL APPLICABLE SAFETY AND BUILDING CODES. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR SECURING AND PAYING FOR ALL PERMITS REQUIRED AND FOR THE SCHEDULING OF ALL REQUIRED INSPECTIONS DURING THE COURSE OF THE PROJECT.
- THE GENERAL CONTRACTOR SHALL TAKE PRECAUTIONS AND BE RESPONSIBLE FOR THE SAFETY OF ALL BUILDING OCCUPANTS FROM CONSTRUCTION PROCEDURES DURING CONSTRUCTION TO MINIMIZE DISTURBANCES TO ADJACENT SPACES AND /OR STRUCTURES AND THEIR OCCUPANTS, PROPERTY, PUBLIC THOROUGHFARES, ETC. MAINTAIN ALL REQUIRED EXITS DURING CONSTRUCTION.
- ALL MATERIALS AND SYSTEMS SHALL BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS AND ALL CONSTRUCTION SHALL BE OF INDUSTRY STANDARD OR BETTER.
- DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS IN THE FIELD FOR ACCURACY PRIOR TO CONSTRUCTION. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED BECAUSE OF DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND THOSE INDICATED ON THE DRAWINGS, UNLESS THEY CONTRIBUTE TO A CHANGE IN THE SCOPE OF WORK.
- IN THE EVENT OF CONFLICT BETWEEN DATA SHOWN ON DRAWINGS AND DATA SHOWN IN THE SPECIFICATION, THE WORK OF GREATER QUALITY OR QUANTITY SHALL BE PROVIDED, IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION, AND NO CHANGE IN THE CONTRACT SUM WILL BE PERMITTED. DETAIL DRAWINGS TAKE PRECEDENT OVER DRAWINGS OF LARGER SCOPE. NOTIFY ARCHITECT IF AT ANY TIME AN ERROR OR DISCREPANCY IS DISCOVERED.
- IMMEDIATELY NOTIFY ARCHITECT OF ANY LONG LEAD ITEMS THAT WILL AFFECT THE COMPLETION DATE
- ALL WOOD IN CONTACT WITH CONCRETE OR CONCRETE BLOCK TO BE PRESSURE TREATED - TYPICAL.
- PROVIDE METAL BACKING AND / OR TREATED WOOD BLOCKING FOR ALL WALL MOUNTED EQUIPMENT (GRAB BARS, TOILET ROOM ACCESSORIES, TV MOUNTS, HEADWALLS, EQUIPMENT RAILS, ETC.) VERIFY HEIGHT AND LENGTH WITH ACTUAL EQUIPMENT.
- PATCH ALL DISTURBED FIREPROOFING AS REQUIRED TO MAINTAIN RATING. REPAIR AND INSTALL ALL FIREPROOFING AS REQUIRED BY CODE. FIREPROOF ANY NEW PENETRATIONS REQUIRED BY THE WORK. REFER TO CODE SUMMARY FOR RATINGS.
- ALL EXPOSED METAL TO RECEIVE PAINT UNLESS OTHERWISE NOTED
- ALL ADJACENT DISSIMILAR MATERIALS TO RECEIVE CAULKING, INCLUDING EQUIPMENT MOUNTED TO WALLS

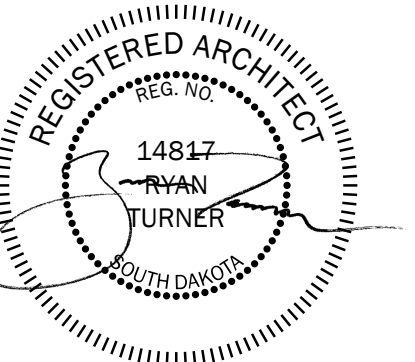
PROJECT TEAM

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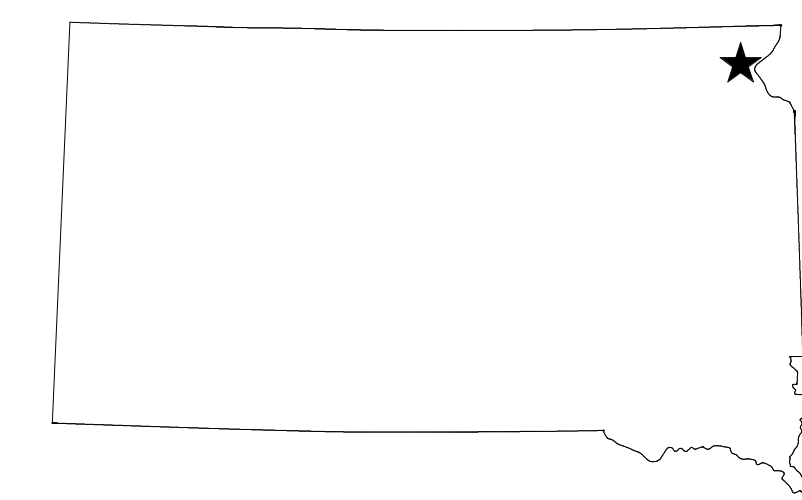
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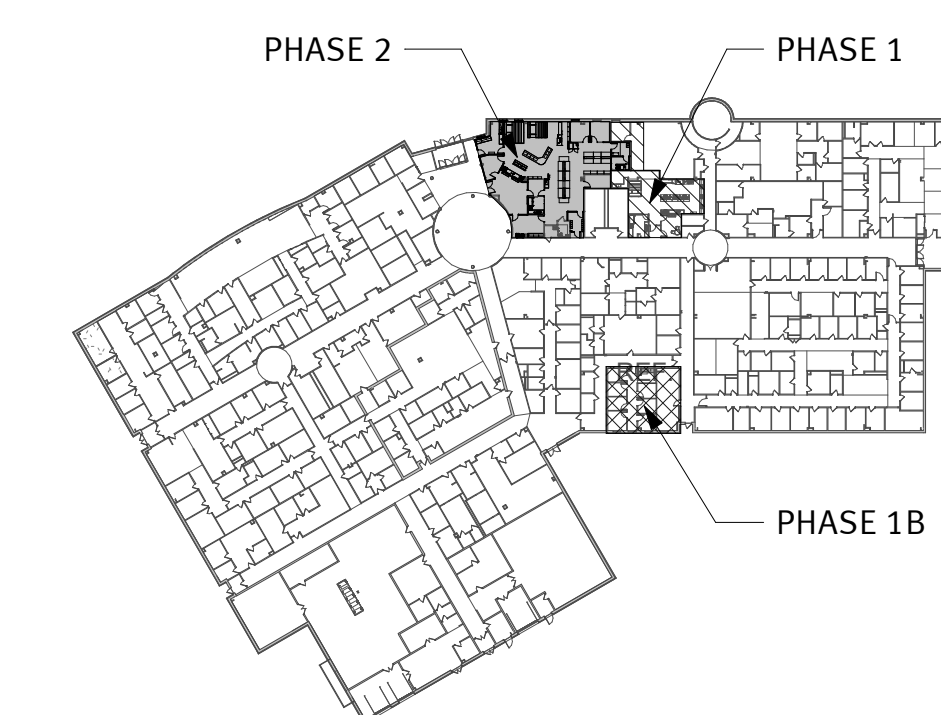
ELEVATION LABEL 100'-0" T.O. STL.	MATCHLINE IDENTIFICATION AREA A AREA B	BREAKLINE	NOTE IDENTIFICATION 1 (LEADER OPTIONAL)
ELEVATION REFERENCE ELEVATION NUMBER: 5, 12, 15, 14, 7.2, 13 SHEET NUMBER: A8.1, A7.2	SECTION REFERENCE SECTION NUMBER: 1 SHEET NUMBER: A5.1	DETAIL REFERENCE DETAIL NUMBER: 10 SHEET NUMBER: A7.1 AREA TO BE DETAILED OR ENLARGED	
ROOM IDENTIFICATION TOILET ROOM: 204 ROOM NAME: TOILET ROOM NUMBER: 204	WINDOW TAG W205	DOOR TAG 204	WALL TAG APPROXIMATE THICKNESS IN INCHES SEQUENTIAL INDICATOR PARTIAL HT WALL; IN INCHES
TITLE MARKER 1 VIEW TITLE 1 VIEW SCALE	REVISION IDENTIFICATION REVISION TYPE: AS REVISION NUMBER: 1	NORTH ARROW / COMPASS PLAN NORTH ACTUAL NORTH (IF DIFFERENT)	
REPRESENTS NEW DOOR	REPRESENTS EXISTING DOOR TO REMAIN	REPRESENTS EXISTING DOOR TO BE REMOVED	
WALLS WITH HATCH INDICATE NEW CONSTRUCTION	WALLS SHADED GRAY INDICATE EXISTING TO REMAIN	DASHED LINES INDICATE WALLS & ITEMS TO BE REMOVED	

LOCATION MAP

★ STAR INDICATES PROJECT LOCATION



KEY PLAN



MATERIALS

	COMPACT FILL/SAND		RIGID INSULATION
	POROUS FILL/GRAVEL		BATT INSULATION
	MORTAR/PLASTER		GYPSONUM BOARD
	FACE BRICK		PLYWOOD
	CMU		CONT. ROUGH WOOD
	CONCRETE		WOOD BLOCKING
	STUD WALL/METAL		FINISHED WOOD



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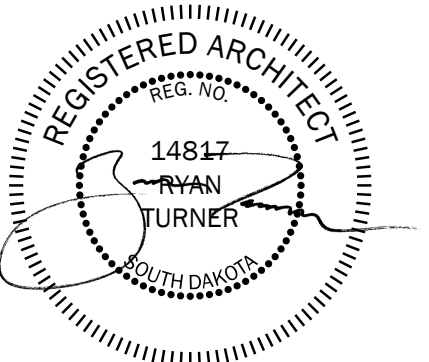
100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

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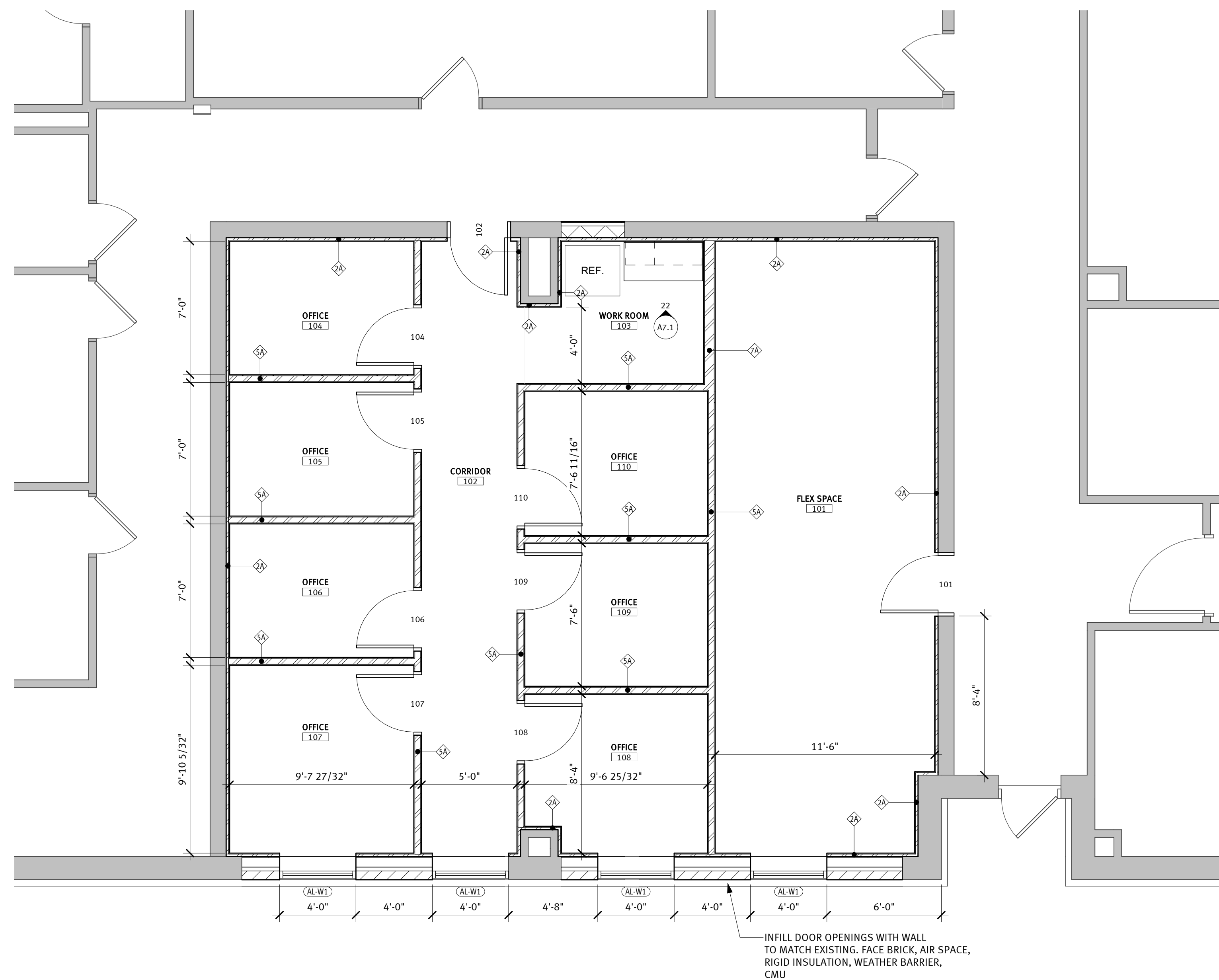
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Addendum	1	24/09/10

ROOM FINISH SCHEDULE PHASE 1B									
ROOM FINISH SCHEDULE									
REV.	NO.	NAME	FLOOR		WALL FINISH				NOTES
			FINISH	BASE	NORTH	EAST	SOUTH	WEST	
	101	FLEX SPACE	VCT-1	RB	PNT-2	PNT-2	PNT-2	PNT-2	PHASE 1B
	102	CORRIDOR	CPT-1	RB	PNT-2	PNT-2	PNT-2	PNT-2	PHASE 1B
	103	WORK ROOM	CPT-1	RB	PNT-2	PNT-2	PNT-2	PNT-2	PHASE 1B
	104	OFFICE	CPT-2	RB	PNT-2	PNT-2	PNT-2	PNT-2	PHASE 1B
	105	OFFICE	CPT-2	RB	PNT-2	PNT-2	PNT-2	PNT-2	PHASE 1B
	106	OFFICE	CPT-2	RB	PNT-2	PNT-2	PNT-2	PNT-2	PHASE 1B
	107	OFFICE	CPT-2	RB	PNT-2	PNT-2	PNT-2	PNT-2	PHASE 1B
	108	OFFICE	CPT-2	RB	PNT-2	PNT-2	PNT-2	PNT-2	PHASE 1B
	109	OFFICE	CPT-2	RB	PNT-2	PNT-2	PNT-2	PNT-2	PHASE 1B
	110	OFFICE	CPT-2	RB	PNT-2	PNT-2	PNT-2	PNT-2	PHASE 1B



1 FLOOR PLAN - PHASE 1-B
1/4" = 1'-0"

ADDENDUM 1

FLOOR PLAN -
PHASE 1-B

sheet number:

A2.2



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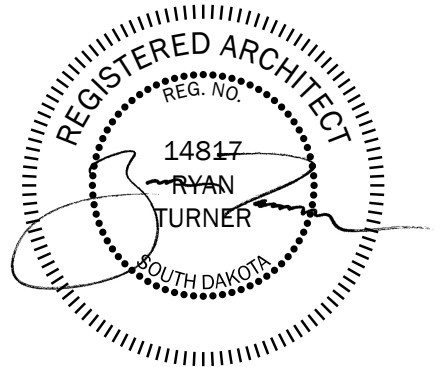
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 SISSETON, SD 57262

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reg. #: 14817

sign date: 01/12/2024

revision / issue	no.	date
Adendum	1	24/09/10

RCP - PHASE 1
 AND PHASE 1B

sheet number:
A3.1

RCP GENERAL NOTES

- COORDINATE FINAL LOCATIONS OF CEILING MOUNTED EQUIPMENT W/ OWNER AND ARCHITECT.
- SEE M&E DRAWINGS FOR LIGHTING, GRILLS, AND DIFFUSER LOCATIONS.
- SUSPENDED ACOUSTICAL CEILING TILE GRID IS TO BE CENTERED IN RECTANGULAR ROOM OR CENTERED BETWEEN THE LONGEST WALLS OF IRREGULARLY SHAPED ROOMS UNLESS OTHERWISE NOTED.
- VERIFY GYPSUM BOARD CONTROL JOINT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.
- CEILING HEIGHTS INDICATED ARE FROM FINISHED FLOOR OF CURRENT LEVEL SHOWN.

RCP NOTES

- SAMPLE NOTE



① RCP PHASE 1
 1/4" = 1'-0"

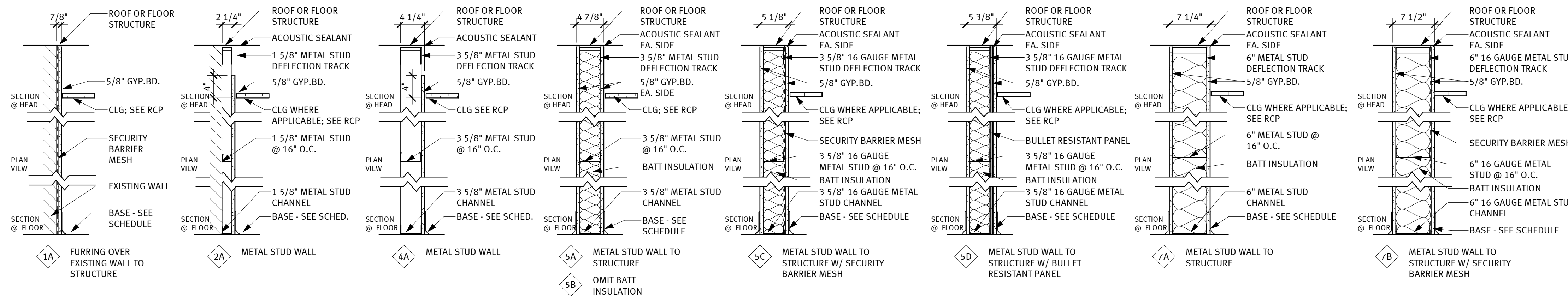


② RCP PHASE 1B
 1/4" = 1'-0"

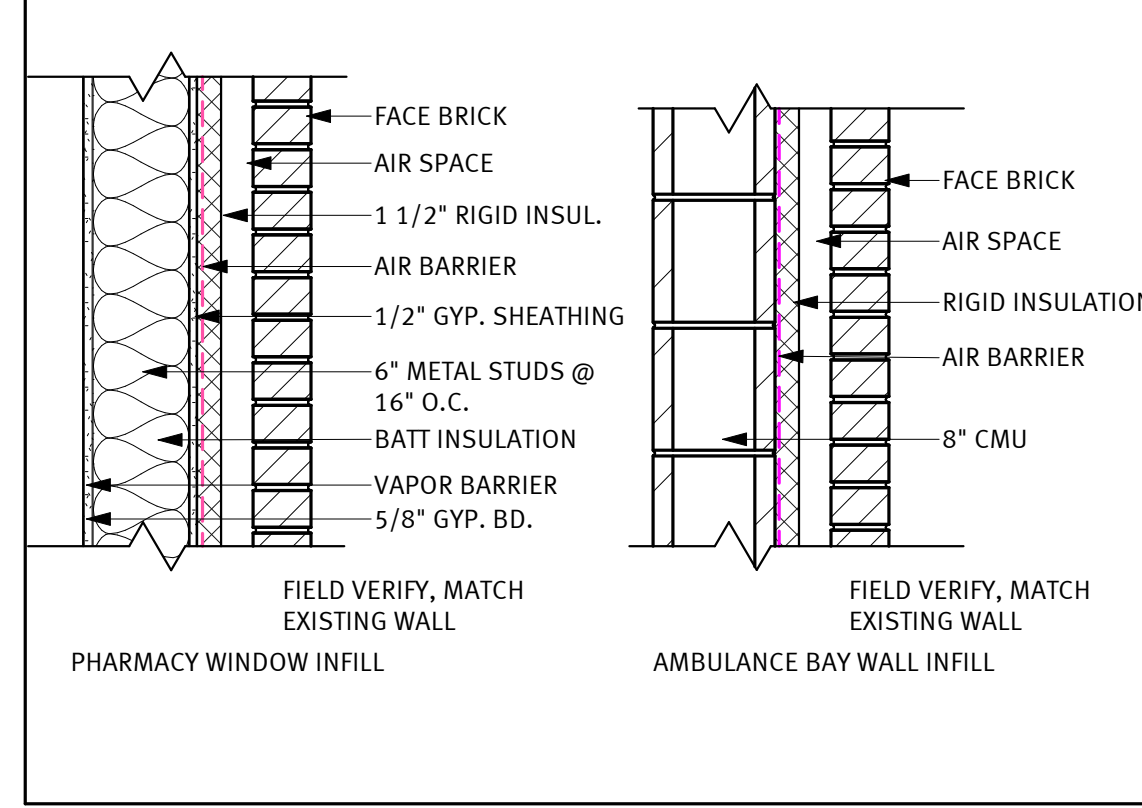
Adendum

WALL TYPES

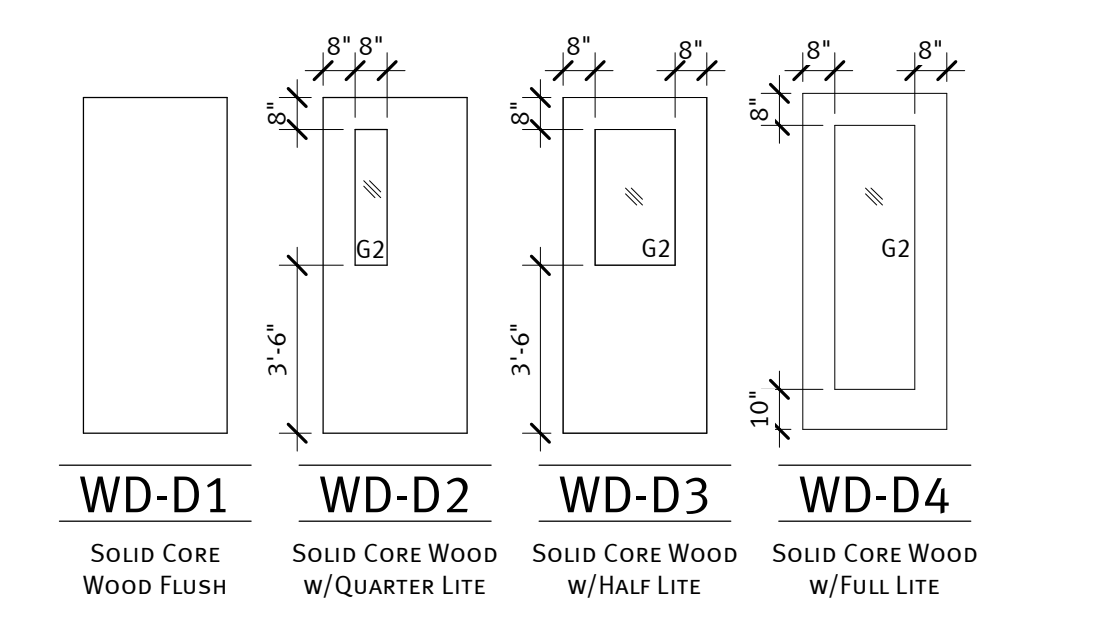
NOTE: ALL WALLS SHALL BE BUILT TO STRUCTURE ABOVE UNLESS OTHERWISE NOTED



EXTERIOR WALL ASSEMBLIES



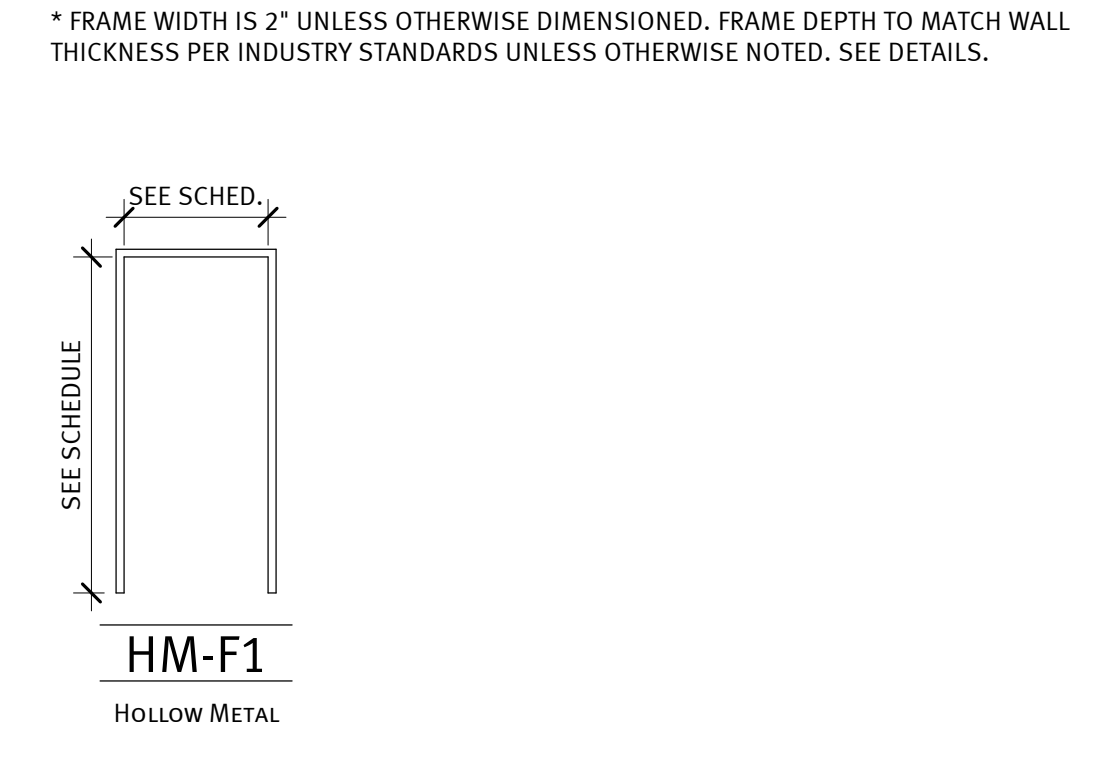
DOOR TYPES



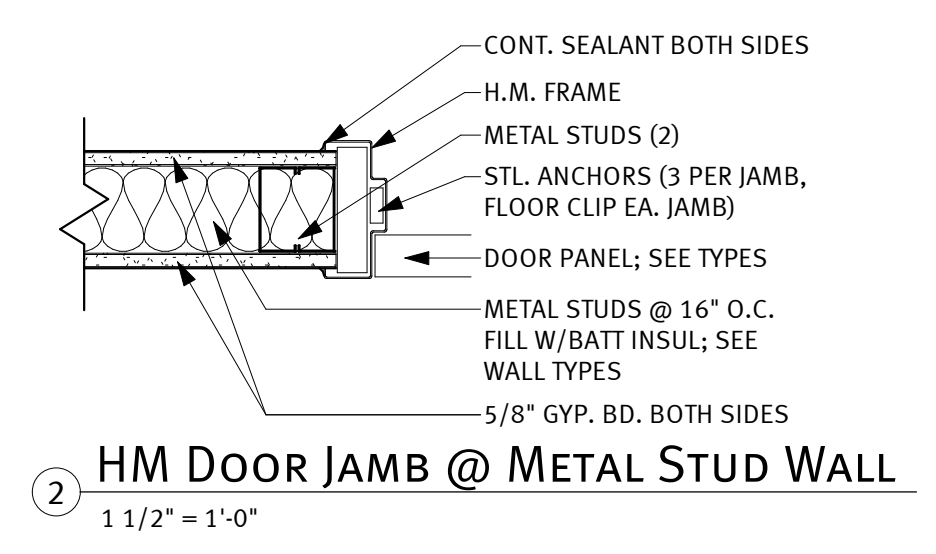
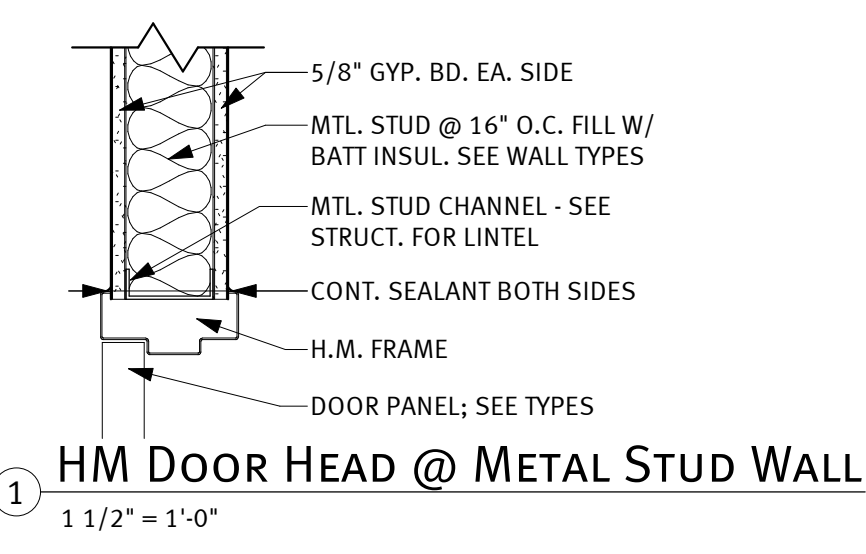
DOOR AND FRAME SCHEDULE										
REV.	NO.	DOOR			FRAME			FIRE LABEL	HDW. NO.	NOTES
		WIDTH	HEIGHT	TYPE	DETAIL					
					HEAD	JAMB	SILL			
	RX101A	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	02	
	RX101B	3'-0"	7'-0"	WD-D3	HM-F1	1/A4.1	2/A4.1	--	08	
	RX103	3'-0"	7'-0"	WD-D2	HM-F1	1/A4.1	2/A4.1	--	04	
	RX104	3'-0"	7'-0"	WD-D2	HM-F1	1/A4.1	2/A4.1	--	04	
	RX105	3'-0"	7'-0"	WD-D2	HM-F1	1/A4.1	2/A4.1	--	04	
	RX106	3'-0"	7'-0"	WD-D3	HM-F1	1/A4.1	2/A4.1	--	01	
	RX107	3'-0"	7'-0"	WD-D3	HM-F1	1/A4.1	2/A4.1	--	01	
	RX108A	3'-0"	7'-0"	WD-D2	HM-F1	1/A4.1	2/A4.1	--	02	
	RX108B	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	05	
	RX110A	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	02	
	RX110B	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	03	
	RX111	6'-0"	7'-0"	WD-D4	HM-F1	1/A4.1	2/A4.1	--	09	
	RX112A	3'-0"	7'-0"	WD-D2	HM-F1	1/A4.1	2/A4.1	--	02	
	RX112B	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	06	
	RX113A	3'-0"	7'-0"	WD-D3	HM-F1	1/A4.1	2/A4.1	--	07	
	RX113B	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	07	

ROOM FINISH SCHEDULE										
REV.	NO.	NAME	FLOOR		WALL FINISH				NOTES	
			FINISH	BASE	NORTH	EAST	SOUTH	WEST		
	N11	HSKPG								NO WORK
	N12	TOILET								NO WORK
	RX101	STAFF ENTRY	SV-2	RB	PNT-3	PNT-3	PNT-3	PNT-3		
	RX102	PHARMACY	SV-1	RB	PNT-1	PNT-1	PNT-1	PNT-1		
	RX103	OFFICE	VCT-1	RB	PNT-2	PNT-2	PNT-2	PNT-2		
	RX104	OFFICE	VCT-1	RB	PNT-2	PNT-2	PNT-2	PNT-2		
	RX105	OFFICE	VCT-1	RB	PNT-2	PNT-2	PNT-2	PNT-2		
	RX106	ANTEROOM	SV-2/SV-3	SV-2/SV-3	EPOXY PNT	EPOXY PNT	EPOXY PNT	EPOXY PNT		
	RX107	POSITIVE BUFFER ROOM	SV-3	SV-3	EPOXY PNT	EPOXY PNT	EPOXY PNT	EPOXY PNT		
	RX108	COUNS.	SV-2	SV-2	PNT-3	PNT-3	PNT-3	PNT-3		
	RX109	CONTROLLED SUBSTANCES	SV-1	RB	PNT-1	PNT-1	PNT-1	PNT-1		
	RX110	COUNS.	SV-2	RB	PNT-3	PNT-3	PNT-3	PNT-3		
	RX111	WAITING	VCT-1	RB	PNT-2	PNT-2	PNT-2	PNT-2		
	RX112	COUNS.	SV-2	RB	PNT-3	PNT-3	PNT-3	PNT-3		
	RX113	RECEIVING/ HZD STOR	SV-2	SV-2	PNT-1	PNT-1	PNT-1	PNT-1		

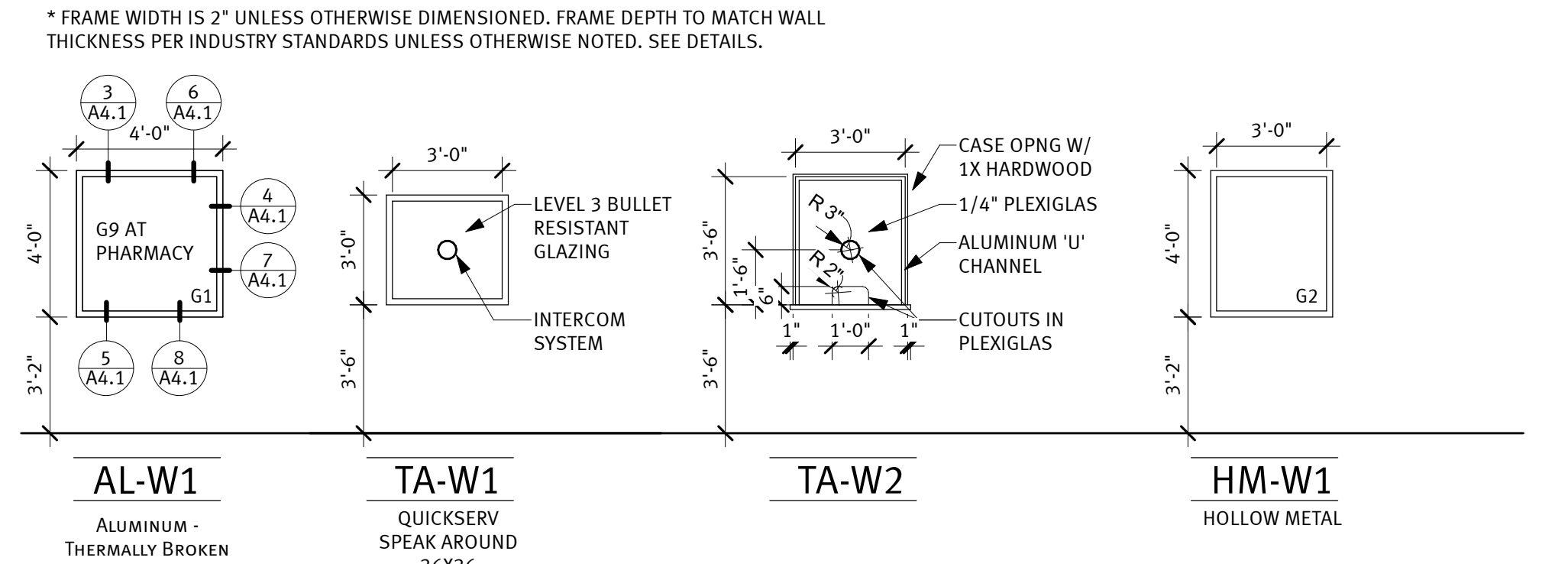
FRAME TYPES



DOOR AND FRAME SCHEDULE										
REV.	NO.	DOOR			FRAME			FIRE LABEL	HDW. NO.	NOTES
		WIDTH	HEIGHT	TYPE	DETAIL					
					HEAD	JAMB	SILL			
	1A	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	2	
	1B	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	2	
	3	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	2	
	4	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	04	
	101	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	10	
	102	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	02	
	104	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	04	
	105	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	04	
	106	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	04	
	107	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	04	
	108	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	04	
	109	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	04	
	110	3'-0"	7'-0"	WD-D1	HM-F1	1/A4.1	2/A4.1	--	04	

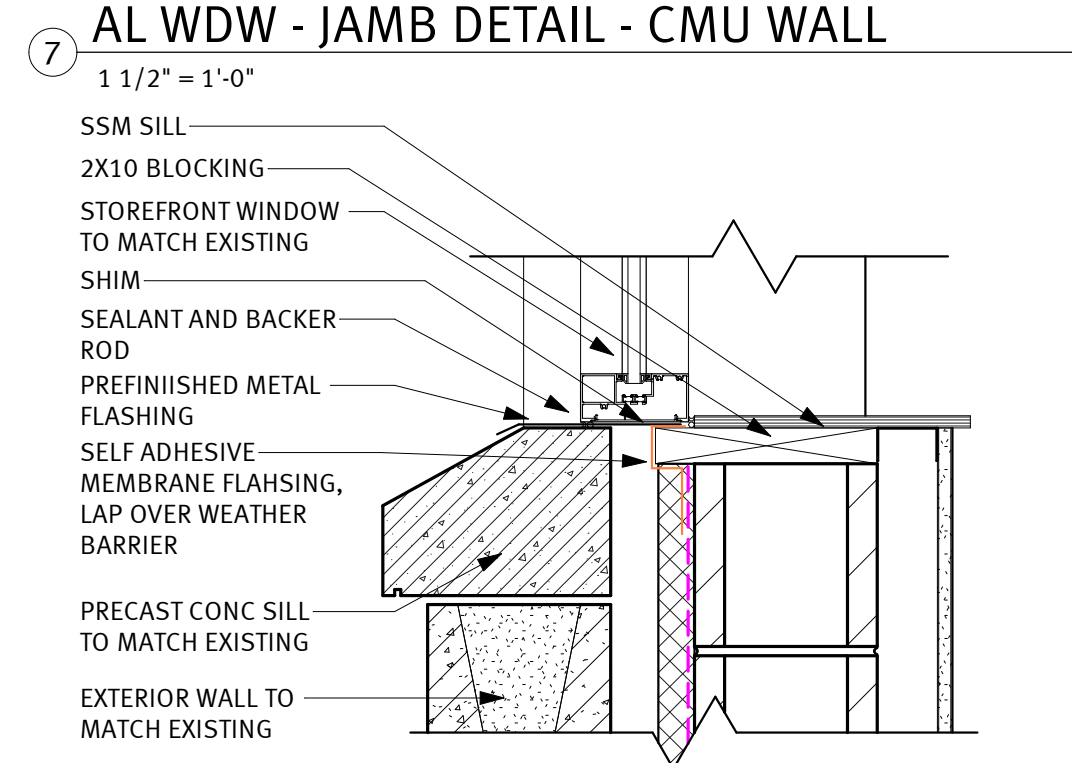
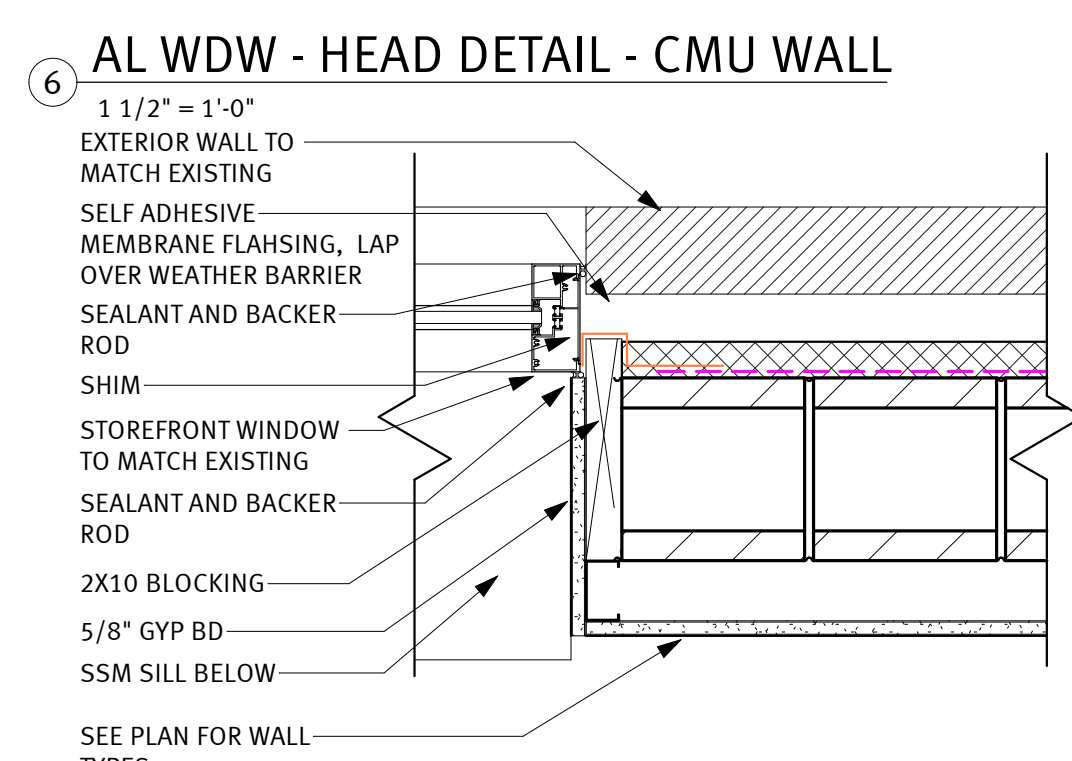
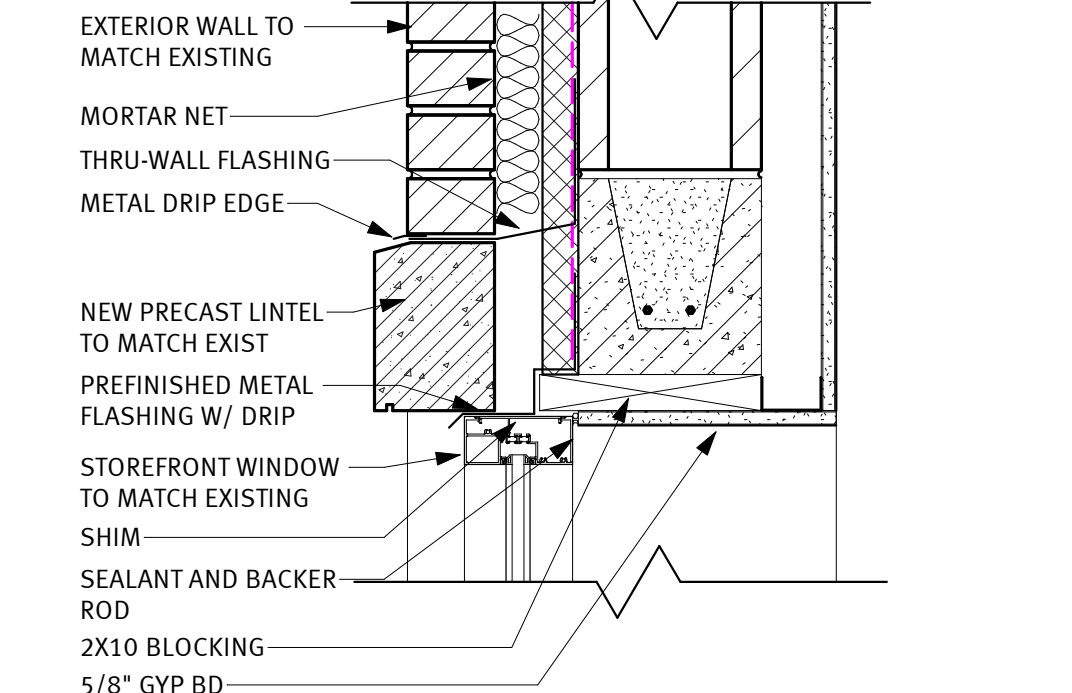
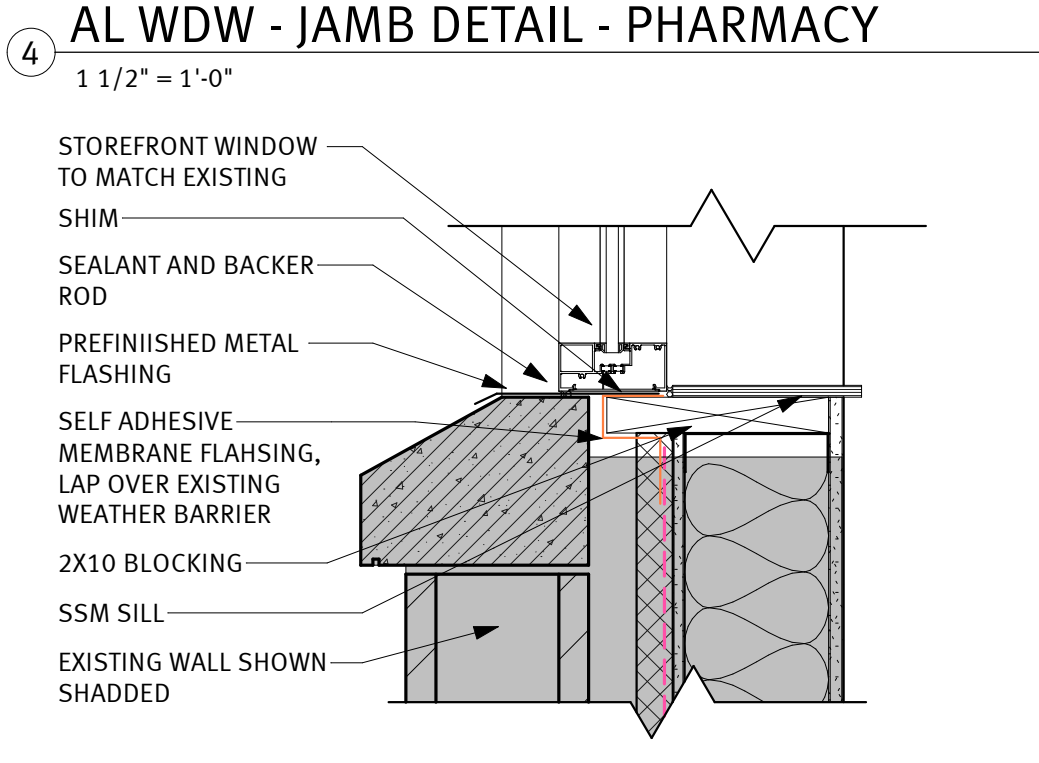
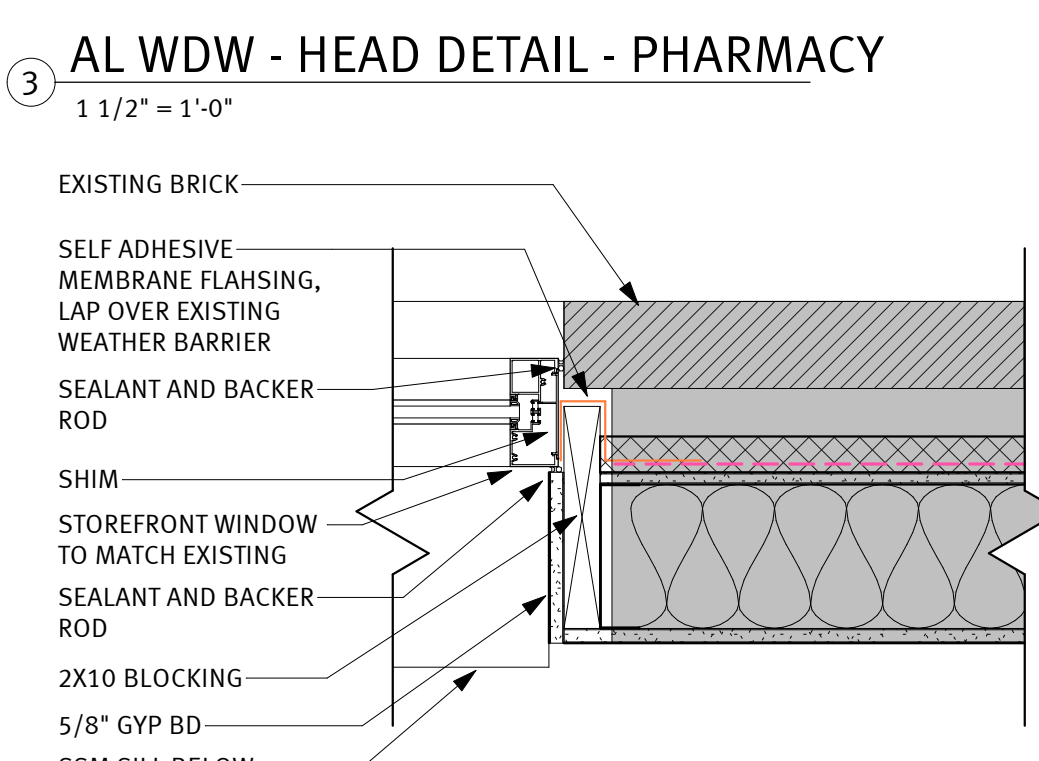
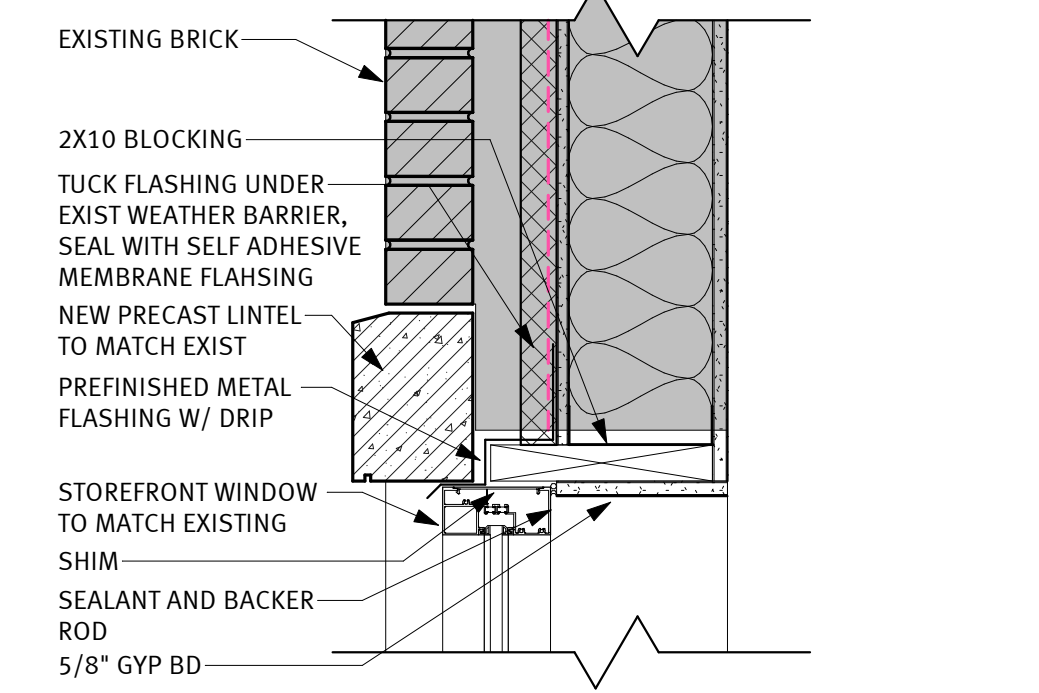


WINDOW TYPES



GLAZING TYPES

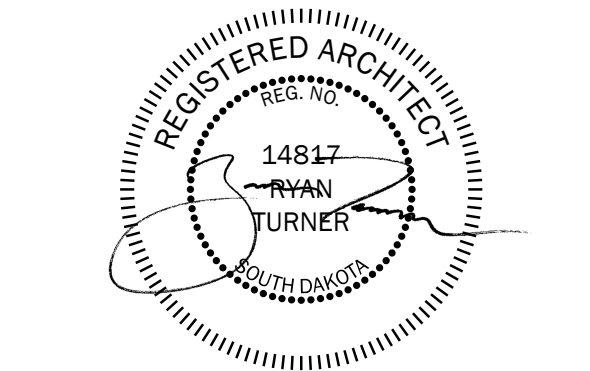
- G1: 1" INSULATED, TEMPERED GLAZING
- G2: 1/4" TEMPERED, CLEAR GLAZING
- G3: 1" INSULATED GLAZING
- G4: 1/4" CLEAR GLAZING
- G5: FIRE-RATED SAFETY GLAZING
- G6: 1" INSULATED, TEMPERED, SPANDREL GLAZING
- G7: 1" INSULATED, SPANDREL GLAZING
- G8: 1/2" TEMPERED, LAMINATED GLAZING
- G9: BALLISTIC GLAZING
- G10: 1" INSULATED, TEMPERED SILKSCREEN GLAZING



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100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

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reg. #: 14817
sign date: 01/12/2024

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Adendum	1	2409/10

MECHANICAL/ELECTRICAL ADDENDUM #1

DIVISION 21 – FIRE PROTECTION

CHANGES TO THE PROJECT MANUAL:

None

CHANGES TO THE FIRE PROTECTION DRAWINGS:

None.

DIVISION 22 – PLUMBING

CHANGES TO THE PROJECT MANUAL:

- 1. Specification section 22 40 00- Plumbing Fixtures, has been updated. Refer to attached section for additional information.

CHANGES TO THE PLUMBING DRAWINGS:

- 1. All the drawings have been updated and new pages have been added to the package to include the phasing. Please refer to updated drawings for additional information.

APPROVED MANUFACTURER SUBSTITUTIONS: Naming below does not guarantee approval, substitutions must meet requirements of the specifications and plans.

Section:	Item:	Manufacturer:
-----------------	--------------	----------------------

DIVISION 23 – HEATING, VENTILATION, AND AIR CONDITIONING

CHANGES TO THE PROJECT MANUAL:

- 1. TOC has been updated:
 - a. Refer to attached TOC for additional information.
- 2. Specification section 23 34 23 – HVAC Power Ventilators:
 - a. Laboratory Exhaust Fan has been updated.
 - b. Refer to attached section for additional information.
- 3. Specification section 23 82 36 – Finned-Tube Radiation Heaters, has been added.
 - a. Refer to attached section for additional information.

CHANGES TO THE MECHANICAL DRAWINGS:

- 1. All the drawings have been updated and new pages have been added to the package to include the phasing. Please refer to updated drawings for additional information.

APPROVED MANUFACTURER SUBSTITUTIONS: Naming below does not guarantee approval, substitutions must meet requirements of the specifications and plans.

Section:	Item:	Manufacturer:
-----------------	--------------	----------------------

CHANGES TO THE PROJECT MANUAL:

1. Specification section 27 0010 - GENERAL PROVISIONS, has been updated. Refer to attached section for additional information.
2. Specification section 27 0500 - COMMON WORK RESULTS FOR COMMUNICATIONS, has been updated. Refer to attached section for additional information.
3. Specification section 27 1513 – COPPER HORIZONTAL CABLING, has been updated. Refer to attached section for additional information.
4. Specification section 27 1543 – FACEPLATES AND CONNECTORS, has been updated. Refer to attached section for additional information.

CHANGES TO THE ELECTRICAL DRAWINGS:

1. All the drawings have been updated and new pages have been added to the package to include the phasing. Please refer to updated drawings for additional information.

APPROVED MANUFACTURER SUBSTITUTIONS: Naming below does not guarantee approval, substitutions must meet requirements of the specifications and plans.

Section:	Item:	Manufacturer:
<hr/>		

END OF MECHANICAL/ELECTRICAL ADDENDUM #1

SECTION 224000 - PLUMBING FIXTURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Protective shielding guards.
 - 2. Fixture supports.
 - 3. Faucets.
 - 4. Sinks.
- B. Related Sections include the following:
 - 1. Division 22 Section "Emergency Plumbing Fixtures."

1.3 DEFINITIONS

- A. Retain abbreviations and terms that remain after this Section has been edited.
- B. ABS: Acrylonitrile-butadiene-styrene plastic.
- C. Accessible Fixture: Plumbing fixture that can be approached, entered, and used by people with disabilities.
- D. FRP: Fiberglass-reinforced plastic.
- E. PMMA: Polymethyl methacrylate (acrylic) plastic.
- F. PVC: Polyvinyl chloride plastic.
- G. Solid Surface: Nonporous, homogeneous, cast-polymer-plastic material with heat-, impact-, scratch-, and stain-resistance qualities.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Diagram power, signal, and control wiring.
- C. Operation and maintenance data.

1.5 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Regulatory Requirements: Comply with requirements in ICC A117.1, "Accessible and Usable Buildings and Facilities"; Public Law 90-480, "Architectural Barriers Act"; and Public Law 101-336, "Americans with Disabilities Act"; for plumbing fixtures for people with disabilities.
- C. Regulatory Requirements: Comply with requirements in Public Law 102-486, "Energy Policy Act," about water flow and consumption rates for plumbing fixtures.
- D. NSF Standard: Comply with NSF 61, "Drinking Water System Components--Health Effects," for fixture materials that will be in contact with potable water.
- E. Select combinations of fixtures and trim, faucets, fittings, and other components that are compatible.
- F. Comply with the following applicable standards and other requirements specified for plumbing fixtures:
 - 1. Enameled, Cast-Iron Fixtures: ASME A112.19.1M.
 - 2. Plastic Laundry Trays: ANSI Z124.6.
 - 3. Plastic Shower Enclosures: ANSI Z124.2.
 - 4. Plastic Sinks: ANSI Z124.6.
 - 5. Porcelain-Enameled, Formed-Steel Fixtures: ASME A112.19.4M.
 - 6. Slip-Resistant Bathing Surfaces: ASTM F 462.
 - 7. Solid-Surface-Material Lavatories and Sinks: ANSI/ICPA SS-1.
 - 8. Stainless-Steel Residential Sinks: ASME A112.19.3.
 - 9. Vitreous-China Fixtures: ASME A112.19.2M.
 - 10. Water-Closet, Flush Valve, Tank Trim: ASME A112.19.5.
 - 11. Water-Closet, Flushometer Tank Trim: ASSE 1037.
- G. Comply with the following applicable standards and other requirements specified for lavatory and sink faucets:
 - 1. Backflow Protection Devices for Faucets with Side Spray: ASME A112.18.3M.
 - 2. Backflow Protection Devices for Faucets with Hose-Thread Outlet: ASME A112.18.3M.
 - 3. Diverter Valves for Faucets with Hose Spray: ASSE 1025.
 - 4. Faucets: ASME A112.18.1.
 - 5. Hose-Connection Vacuum Breakers: ASSE 1011.
 - 6. Hose-Coupling Threads: ASME B1.20.7.
 - 7. Integral, Atmospheric Vacuum Breakers: ASSE 1001.
 - 8. NSF Potable-Water Materials: NSF 61.
 - 9. Pipe Threads: ASME B1.20.1.
 - 10. Sensor-Actuated Faucets and Electrical Devices: UL 1951.
 - 11. Supply Fittings: ASME A112.18.1.
 - 12. Brass Waste Fittings: ASME A112.18.2.
- H. Comply with the following applicable standards and other requirements specified for bathtub/shower and shower faucets:
 - 1. Backflow Protection Devices for Hand-Held Showers: ASME A112.18.3M.

2. Combination, Pressure-Equalizing and Thermostatic-Control Antiscald Faucets: ASSE 1016.
 3. Faucets: ASME A112.18.1.
 4. Hand-Held Showers: ASSE 1014.
 5. High-Temperature-Limit Controls for Thermal-Shock-Preventing Devices: ASTM F 445.
 6. Hose-Coupling Threads: ASME B1.20.7.
 7. Manual-Control Antiscald Faucets: ASTM F 444.
 8. Pipe Threads: ASME B1.20.1.
 9. Pressure-Equalizing-Control Antiscald Faucets: ASTM F 444 and ASSE 1016.
 10. Sensor-Actuated Faucets and Electrical Devices: UL 1951.
 11. Thermostatic-Control Antiscald Faucets: ASTM F 444 and ASSE 1016.
- I. Comply with the following applicable standards and other requirements specified for miscellaneous fittings:
1. Atmospheric Vacuum Breakers: ASSE 1001.
 2. Brass and Copper Supplies: ASME A112.18.1.
 3. Dishwasher Air-Gap Fittings: ASSE 1021.
 4. Manual-Operation Flushometers: ASSE 1037.
 5. Plastic Tubular Fittings: ASTM F 409.
 6. Brass Waste Fittings: ASME A112.18.2.
 7. Sensor-Operation Flushometers: ASSE 1037 and UL 1951.
- J. Comply with the following applicable standards and other requirements specified for miscellaneous components:
1. Disposers: ASSE 1008 and UL 430.
 2. Dishwasher Air-Gap Fittings: ASSE 1021.
 3. Flexible Water Connectors: ASME A112.18.6.
 4. Grab Bars: ASTM F 446.
 5. Hose-Coupling Threads: ASME B1.20.7.
 6. Hot-Water Dispensers: ASSE 1023 and UL 499.
 7. Off-Floor Fixture Supports: ASME A112.6.1M.
 8. Pipe Threads: ASME B1.20.1.
 9. Plastic Toilet Seats: ANSI Z124.5.
 10. Supply and Drain Protective Shielding Guards: ICC A117.1.

PART 2 - PRODUCTS

2.1 PROTECTIVE SHIELDING GUARDS

A. Protective Shielding Pipe Covers,:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Plumberex Specialty Products Inc.
 - b. TRUEBRO, Inc.
 - c. Zurn Plumbing Products Group; Tubular Brass Plumbing Products Operation.

2. Description: Manufactured plastic wraps for covering plumbing fixture hot- and cold-water supplies and trap and drain piping. Comply with Americans with Disabilities Act (ADA) requirements.

2.2 FIXTURE SUPPORTS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Josam Company.
 2. MIFAB Manufacturing Inc.
 3. Smith, Jay R. Mfg. Co.
 4. Tyler Pipe; Wade Div.
 5. Watts Drainage Products Inc.; a div. of Watts Industries, Inc.
 6. Zurn Plumbing Products Group; Specification Drainage Operation.
- B. Lavatory Supports:
 1. Description: Type II, lavatory carrier with concealed arms and tie rod for wall-mounting, lavatory-type fixture. Include steel uprights with feet.
 2. Accessible-Fixture Support: Include rectangular steel uprights.

2.3 FAUCETS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Chicago Faucets.
 2. Symmons Industries, Inc.
 3. Delta Faucet Company - Commercial.
 4. Zurn Plumbing Products Group; Commercial Brass Operation/

2.4 SINKS

- A. **SK-1**: ADA Compliant, counter-mounting, single bowl, stainless-steel fixture.
 1. Basis-of-Design Product: Subject to compliance with requirements, provide Elkay Model LRAD2022 or an approved equal by one of the following:
 - a. Eljer.
 - b. Kohler Co.
 - c. American Standard Companies, Inc.
 - d. Just Manufacturing Company.
 - e. Moen, Inc.
 - f. Franke
 2. Description: ADA compliant, single-bowl, counter-mounting, self-rimming, stainless-steel sink.
 - a. Overall Dimensions: 19 1/2" x 22". Depth 6-1/2".
 - b. Inside Bowl Dimensions: 16" x 16". Depth 6-1/2".

- c. Metal Thickness: 18 gauge stainless steel.
- d. Bowl:
 - 1) Drain: 3-1/2-inch.
 - a) Location: Centered in bowl.
- e. Faucet Hole Punching: Compatible with faucet.
- f. **Faucet:** Chicago Faucet Model **1100-GN8AE3-317AB**, deck mounted faucet with **8-1/4-inch rigid/swing gooseneck spout** and 4-inch hot and cold water metal vandal proof wristblade handles, vandal proof **2.2** gpm aerator, polished chrome plated brass construction.
- g. Scald Protection: Provide thermostatic mixing valve TMV-1. Refer to specification section 22 1119 for requirements.
- h. Supplies: NPS 1/2 chrome-plated copper with loose key stops.
- i. Drain Piping: NPS 1-1/2 chrome-plated, cast-brass P-trap; 0.045-inch-thick tubular brass waste to wall; and wall escutcheon(s).
- j. Protective Shielding Guard(s): Yes.

B. **SK-2:** ADA Compliant, counter-mounting, single bowl, stainless-steel fixture.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Elkay Lustertone Model LRAD3122 or an approved equal by one of the following:
 - a. Eljer.
 - b. Kohler Co.
 - c. American Standard Companies, Inc.
 - d. Just Manufacturing Company.
 - e. Moen, Inc.
 - f. Franke
2. Description: ADA compliant, double-bowl, counter-mounting, self-rimming, stainless-steel sink.
 - a. Overall Dimensions: 31" x 22". Depth 6-1/2".
 - b. Inside Bowl Dimensions: 28" x 16". Depth 6-1/2".
 - c. Metal Thickness: 18 gauge stainless steel.
 - d. Bowl:
 - 1) Drain: 3-1/2-inch.
 - a) Location: Off-centered in bowl.
 - e. Faucet Hole Punching: Compatible with faucet.
 - f. Sink Faucet: Chicago Faucet model 1100-GN8AE3-369AB, deck mounted faucet with 8-inch spout and 2-3/8-inch hot and cold water metal lever handles, 2.2 gpm vandal proof aerator, polished chrome plated brass, 8-inch by 13.5-inch high gooseneck spout.
 - g. Scald Protection: Provide thermostatic mixing valve TMV-1. Refer to specification section 22 1119 for requirements.
 - h. Supplies: NPS 1/2 chrome-plated copper with loose key stops.
 - i. Drain Piping: NPS 1-1/2 chrome-plated, cast-brass P-trap; 0.045-inch-thick tubular brass waste to wall; and wall escutcheon(s).
 - j. Protective Shielding Guard(s): Yes.

C. **SK-3:** Wall-Hung, Single Bowl, Surgeon Scrub Sink, Stainless Steel.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Elkay Model EWSF130261 or an approved equal by one of the following:
 - a. Eljer.
 - b. Kohler Co.
 - c. American Standard Companies, Inc.
 - d. Just Manufacturing Company.
 - e. Moen, Inc.
 - f. Franke
2. Description: Stainless steel scrub-up sink.
 - a. Overall Dimensions: 30" x 23". Depth 26".
 - b. Metal Thickness: 16 gauge stainless steel.
 - c. Bowl:
 - 1) Drain: 3-1/2-inch.
 - a) Location: Rear center in bowl.

D. Faucet Hole Punching: Compatible with faucet.

- a. **Faucet:** Elkay Model LK406LGN05T4, 4" centerset with exposed deck laminar flow faucet with 5" Gooseneck spout 4" wristblade handles chrome. Faucet has a flow rate of 1.5 gpm, and is made of chrome-plated brass material, with a quarter turn ceramic disc valve. Faucet requires 2 faucet holes.
- b. Scald Protection: Provide thermostatic mixing valve TMV-1. Refer to specification section 22 1119 for requirements.
- c. Supplies: Valve Connection is 1/2" NPT Female.
- d. Drain Piping: NPS 1-1/2 chrome-plated, cast-brass P-trap; 0.045-inch-thick tubular brass waste to wall; and wall escutcheon(s).
- e. Protective Shielding Guard(s): Yes.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before plumbing fixture installation.
- B. Examine walls, floors, cabinets, and counters for suitable conditions where fixtures will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PLUMBING FIXTURE INSTALLATION - COMMON REQUIREMENTS

- A. Assemble plumbing fixtures, trim, fittings, and other components according to manufacturers' written instructions.

- B. Install plumbing fixture level and plumb according to roughing-in drawings.
- C. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.
 - 1. Exception: Use ball, gate, or globe valves if supply stops are not specified with fixture. Comply with valve requirements specified in Section 220523 "General-Duty Valves for Plumbing Piping."
- D. Install traps on fixture outlets.
 - 1. Exception: Omit trap on fixtures with integral traps.
 - 2. Exception: Omit trap on indirect wastes unless otherwise indicated.
- E. Joint Sealing:
 - 1. Seal joints between plumbing fixture and walls, floors, cabinets, and counters using sanitary-type, one-part, mildew-resistant silicone sealant.
 - 2. Match sealant color to plumbing fixture.
 - 3. Comply with sealant requirements specified in Section "Joint Sealants."

3.3 LAVATORIES, SINKS, AND COMMERCIAL SINKS INSTALLATION

- A. Install supports, affixed to building substrate, for wall-mounted fixtures.
- B. Install counter-mounting fixtures in and attached to casework.
- C. Install accessible wall-mounted fixtures at handicapped/elderly mounting height for people with disabilities or the elderly, according to ANSI A117.1.
- D. Set floor-mounted sinks in leveling bed of cement grout.
- E. Install water-supply flow-control fittings with specified flow rates in fixture supplies at stop valves.
- F. Install faucet-spout flow-control fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.
- G. Install fresh batteries in battery-powered, electronic-sensor mechanisms.
- H. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings. Comply with escutcheon requirements specified in Section 220500 "Common Work Results for Plumbing."
- I. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible lavatories and sinks.

3.4 CONNECTIONS

- A. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

- B. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.

3.5 FIELD QUALITY CONTROL

- A. Verify that installed plumbing fixtures are categories and types specified for locations where installed.
- B. Check that plumbing fixtures are complete with trim, faucets, fittings, and other specified components.
- C. Inspect installed plumbing fixtures for damage. Replace damaged fixtures and components.
- D. Test installed fixtures after water systems are pressurized for proper operation. Replace malfunctioning fixtures and components, then retest. Repeat procedure until units operate properly.
- E. Clean fixtures, remove stains and labels prior to acceptance.
- F. Install fresh batteries in sensor-operated mechanisms.

3.6 PROTECTION

- A. Provide protective covering for installed fixtures and fittings.
- B. Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by Owner.

END OF SECTION 224000

SECTION 233423 - HVAC POWER VENTILATORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. In-line centrifugal fans.
 - 2. Laboratory exhaust fans.
 - 3. Roof Curbs.

1.3 SUBMITTALS

- A. Product Data: Include rated capacities, furnished specialties, and accessories for each type of product indicated and include the following:
 - 1. Certified fan performance curves with system operating conditions indicated.
 - 2. Certified fan sound-power ratings.
 - 3. Motor ratings and electrical characteristics, plus motor and electrical accessories.
 - 4. Material thickness and finishes, including color charts.
 - 5. Fan speed controllers.
 - 6. Roof curbs.
- B. Field quality-control test reports.
- C. Operation and Maintenance Data: For power ventilators to include in emergency, operation, and maintenance manuals.

1.4 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. AMCA Compliance: Products shall comply with performance requirements and shall be licensed to use the AMCA-Certified Ratings Seal.
- C. NEMA Compliance: Motors and electrical accessories shall comply with NEMA standards.
- D. UL Standard: Power ventilators shall comply with UL 705.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver fans as factory-assembled unit, to the extent allowable by shipping limitations, with protective crating and covering.
- B. Disassemble and reassemble units, as required for moving to final location, according to manufacturer's written instructions.
- C. Lift and support units with manufacturer's designated lifting or supporting points.

1.6 COORDINATION

- A. Coordinate size and location of structural-steel support members.
- B. Coordinate installation of roof curbs, equipment supports, and roof penetrations. These items are specified in Division 07 Sections.

PART 2 - PRODUCTS

2.1 IN-LINE CENTRIFUGAL FANS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Greenheck.
 - 2. Carnes Company.
 - 3. Loren Cook Company.
- B. Housing: Minimum 18 gauge galvanized steel housing with bolted construction and integral duct collars. Provide access doors for two sides.
- C. Direct-Drive Units: Motor mounted in airstream, factory wired to disconnect switch located on outside of fan housing.
- D. Fan Wheels: Aluminum, airfoil blades welded to aluminum hub.
- E. Fan Motor: Permanently lubricated electronically commutated rated for continuous duty with speed controller. Minimum efficiency: 85%.
- F. Accessories:
 - 1. Variable-Speed Controller: Solid-state control to reduce speed from 100 percent down to 20 percent.
 - 2. Companion Flanges: For inlet and outlet duct connections.
 - 3. Fan Guards: 1/2- by 1/2-inch mesh of galvanized steel in removable frame. Provide guard for inlet or outlet for units not connected to ductwork.

2.2 LABORATORY EXHAUST FANS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Greenheck.
 - 2. Loren Cook Company.
- B. Description: Direct drive tubular centrifugal fans consisting of housing, wheel, fan shaft, bearings, motor and disconnect switch, drive assembly, curb base, discharge cone and accessories.
- C. Housing: Minimum 12 gauge steel construction with adjustable motor plate, integral housing drain and bolted, gasketed access door. Fans shall incorporate a high velocity conical discharge nozzle supplied by the fan manufacturer. Steel components shall be coated with a 5 mil electrostatically applied baked epoxy powder coating with ultraviolet protective topcoat.
- D. Fan Wheels: Backward inclined non-overloading steel centrifugal with blades continuously welded to the backplate. Fan impeller hub shall be keyed to a stainless steel drive shaft. Fan wheels shall be coated with a 5 mil electrostatically applied baked epoxy powder coating. Fan impeller shall be statically and dynamically balanced in accordance with AMCA Standard 204-96.
- E. Motors and Drives: Motor shall be premium efficiency, NEMA frame, totally enclosed fan cooled (TEFC) with 1.15 service factor. Fan bearings shall be heavy duty re-greaseable ball or roller type in cast iron pillow block housings selected for minimum L50 life of not less than 200,000 hours. Bearings shall have extended stainless steel lube lines with Zerk fittings. Drives shall be selected for minimum 1.5 service factor utilizing precision machined cast iron sheaves keyed to the wheel and motor shafts.
- F. Accessories:
 - 1. Fan isolation box with gravity isolation damper. Isolation box shall be coated with a 5 mil electrostatically applied baked epoxy powder coating with ultraviolet protective topcoat. Isolation damper shall have extruded aluminum frame, damper blades and linkage.
- G. Capacities and Characteristics: Refer to the schedule on the drawings.

2.3 ROOF CURBS

- A. Roof Curbs: Heavy duty steel with mitered and welded corners. Roof curbs shall be coated with a 5 mil electrostatically applied baked epoxy powder coating with ultraviolet protective topcoat. Roof curb shall be capable of supporting exhaust fan and discharge nozzle without the use of guy wires. Size as required to suit roof opening and fan base.
 - 1. Configuration: Self-flashing without a cant strip, with mounting flange.
 - 2. Overall Height: 12 inches.

2.4 MOTORS

- A. Comply with requirements in Division 23 Section "Common Motor Requirements for HVAC Equipment."

2.5 SOURCE QUALITY CONTROL

- A. Sound-Power Level Ratings: Comply with AMCA 301, "Methods for Calculating Fan Sound Ratings from Laboratory Test Data." Factory test fans according to AMCA 300, "Reverberant Room Method for Sound Testing of Fans." Label fans with the AMCA-Certified Ratings Seal.
- B. Fan Performance Ratings: Establish flow rate, pressure, power, air density, speed of rotation, and efficiency by factory tests and ratings according to AMCA 210, "Laboratory Methods of Testing Fans for Rating."

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install power ventilators level and plumb.
- B. Inline Fans: Suspend units from structure.
- C. Secure roof-mounting fans to roof curbs with cadmium-plated hardware.
- D. Install units with clearances for service and maintenance.
- E. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."
- F. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."
- G. Label units according to requirements specified in Division 23 Section "Identification for HVAC Piping and Equipment."

3.2 CONNECTIONS

- A. Duct installation and connection requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of ducts and duct accessories.
- B. Install ducts adjacent to power ventilators to allow service and maintenance.

3.3 FIELD QUALITY CONTROL

- A. Perform the following field tests and inspections and prepare test reports:
 - 1. Verify that shipping, blocking, and bracing are removed.

2. Verify that unit is secure on mountings and supporting devices and that connections to ducts and electrical components are complete. Verify that proper thermal-overload protection is installed in motors, starters, and disconnect switches.
 3. Verify that cleaning and adjusting are complete.
 4. Disconnect fan drive from motor, verify proper motor rotation direction, and verify fan wheel free rotation and smooth bearing operation. Reconnect fan drive system.
 5. Verify lubrication for bearings and other moving parts.
 6. Verify that manual and automatic volume control and fire and smoke dampers in connected ductwork systems are in fully open position.
 7. Disable automatic temperature-control operators, energize motor and adjust fan to indicated rpm, and measure and record motor voltage and amperage.
 8. Shut unit down and reconnect automatic temperature-control operators.
 9. Remove and replace malfunctioning units and retest as specified above.
- B. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.4 ADJUSTING

- A. Refer to Division 23 Section "Testing, Adjusting, and Balancing for HVAC" for testing, adjusting, and balancing procedures.
- B. Adjust potentiometer as required to achieve design airflow.
- C. Adjust belt tension and align drive belt assemblies.
- D. Replace fan and motor pulleys as required to achieve design airflow.
- E. Lubricate bearings.

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain power ventilators.
 1. Train Owner's maintenance personnel on procedures and schedules for starting and stopping, troubleshooting, servicing, and maintaining equipment and schedules.

END OF SECTION 233423

SECTION 23 8236 - FINNED-TUBE RADIATION HEATERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes electric radiation heaters.

1.3 SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include rated capacities, operating characteristics, furnished specialties, and accessories.
- B. Shop Drawings:
 - 1. Include plans, elevations, sections, and details.
 - 2. Include enclosure joints, corner pieces, access doors, and other accessories.
 - 3. Include diagrams for power, signal, and control wiring.
- C. Color Samples for Initial Selection: For finned-tube radiation heaters with factory-applied color finishes.
- D. Color Samples for Verification: For each type of exposed finish.

PART 2 - PRODUCTS

2.1 ELECTRIC BASEBOARD RADIATION HEATERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Berko.
 - 2. Indeeco.
 - 3. TPI Corporation.
 - 4. Qmark.
- B. Description: Factory-packaged units constructed according to UL 499, UL 1030, and UL 2021.

1. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Heating Elements: Nickel-chromium-wire heating element enclosed in metallic sheath mechanically bonded to fins, with high-temperature cutout and sensor running the full length of the element. Element supports shall eliminate thermal expansion noise.
- D. Enclosures: Minimum 0.0329-inch-thick steel, removable front cover.
 1. Full-height back.
 2. End caps.
 3. Inside and outside corners.
 4. Finish: Baked-enamel finish in manufacturer's standard color as selected by Architect.
 5. Element Brackets: Primed and painted steel to support front panel and element.
- E. Unit Controls: Remote thermostat.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive finned-tube radiation heaters for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for electrical connections to verify actual locations before installation of finned-tube radiation heaters.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 BASEBOARD RADIATION HEATER INSTALLATION

- A. Install units level and plumb.
- B. Terminate enclosures with manufacturer's end caps except where enclosures are indicated to extend to adjoining walls.

3.3 CONNECTIONS

- A. Ground electric finned-tube radiation heaters according to Section 260526 "Grounding and Bonding for Electrical Systems."
- B. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

3.4 FIELD QUALITY CONTROL

- A. Perform the following field tests and inspections:
 - 1. Operational Test: After electrical circuitry has been energized, start units to confirm proper operation.
 - 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- B. Units will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

END OF SECTION 238236

SECTION 270010 - GENERAL PROVISIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section covers general installation practices and requirements for all work under Division 27.
- B. The General Conditions, Supplementary General Conditions, and Division 01 General Requirements apply to Division 27.
- C. The contractor shall adhere to local ordinances, laws, regulations, the National Electrical Code and OSHA Regulations.
- D. Raceways for Division 27 shall be furnished and installed by the Division 26 Contractor. All equipment, components, wiring and final terminations etc. shall be furnished and installed by Division 27.

1.2 DRAWINGS

- A. Communications floor plan drawings are too scale and are typically not dimensioned. The Contractor shall not scale drawings for equipment placement and clearances. Dimensions given on drawings shall always take precedence over scaled drawings.
- B. The Contractor shall field verify distances and equipment placements coordinating locations with other trades, construction managers, and general contractor prior to installation.
- C. Change orders requests for additional costs related to the contractor's misunderstanding related to the amount of work involved and lack of knowledge related to the site conditions will not be allowed.

1.3 PERMITS, FEES AND INSPECTIONS

- A. All permits, inspections, and licenses required for any communications system under the Division 27 specifications shall be the responsibility of the Contractor. The costs of all permits, fees, and inspections shall be included in the Contractor's bid.

1.4 CONTRACTOR QUALIFICATIONS

- A. The Contractor shall have at least five years experience in the installation of similar systems as specified herein and shall have completed at least two projects of similar size and scope within the last 24 months. The contract shall provide references upon request (including the project name, address, date of implementation, client name, title, telephone number, and project description).
- B. The Contractor bidding on communication systems specified herein shall be certified by the product manufacturer to install, service, and warranty the specified product prior to the time of

bid and throughout the duration of the installation; or, the bidding contractor shall utilize a sub-contractor(s) certified by the product manufacturer to install, service, and warranty the specified product. Manufacturer certifications shall not be project specific and should be valid for any and all projects completed by the Contractor.

- C. The Contractor must maintain a ~~Minnesota~~ Wyoming low-voltage contractor's license as required by the Wyoming State Board of Electricity.
- D. The Contractor shall provide copies of certificates for proof of manufacturer's training, manufacturer's certified installer, authorized distributor in the shop drawing submittal and at the request of the engineer to verify compliance with specification prior to recommendations for awarding bid.

1.5 SUBMITTALS

- A. Submittal for bidding shall be as stated in the Bidding Requirements.
- B. Material lists, schedule of values, lists of subcontractors, and proof of contractor qualifications shall be provided to Engineer upon request and shall follow the guidelines as stated in the General Requirements (Division 01 of the specifications).
- C. Performance Bonds, Payment Bonds, and Insurance Certificates shall be submitted by the Contractor prior to execution of the contract; refer to General Requirements.
- D. Shop drawings shall be submitted as stated in the General Requirements (Division 01 of the specifications). In addition to items stated in the General Requirements, all communication system shop drawings shall included the following items:
 - 1. Manufacturer's data (specifications, "cut sheets")
 - 2. Detail drawing of any custom panels or jack plates
 - 3. Wiring diagrams for all installed cabling
 - 4. Equipment rack/cabinet layouts
 - 5. Proposed labeling schemes and labeling methods
 - 6. List of cabling distances (typical and maximum) for all structured cabling
 - 7. Equipment room floor plan layouts
 - 8. Copy of Contractors training and authorized installer certificates
 - 9. Copy of structured cabling extended warranty information

Submit shop drawings bound and labeling in accordance with specification section numbers. In addition, one paper copy of the submittal shall be sent directly to EDI.

- E. As-Built documentation requirements may be described in additional detail by other Division 27 specification sections. As-built documentation shall included the following items:
 - 1. A copy of the approved shop drawing submittal
 - 2. A complete list of all materials used on the project
 - 3. A copy of the Division 27 specifications (including addendum and change orders)
 - 4. Schematic drawings and block diagrams of components
 - 5. Floor plan drawings including devices locations and labeling
 - 6. Test results and output level readings (i.e., amplifier loads, RF tap reading)
 - 7. Warranties

Submit a minimum two complete copies of all as-built documentation (provide additional copies if more than two copies are required by General Requirements). As-built submittal shall be neatly bound, indexed, tabbed, and labeled.

- F. Close-out documentation shall include all as-built documentation and additional close-out documents as required in the General Requirements.

1.6 MATERIALS AND EQUIPMENT

- A. All materials used on this project shall be new. Used and refurbished equipment is not permitted. Provide equipment to site in original packaging whenever practical.
- B. The contractor is responsible for scheduling all deliveries and providing proper receipt, handling, and storage of all materials. Protect all equipment from physical damages (dents, scratches, dust, water, paint, chemicals, and temperature extremes) and vandalism, or theft. The contractor shall replace any damages or stolen equipment. The contractor is responsible for all equipment until the final project acceptance by the Owner.
- C. All material and equipment used on the project shall be as specified. Approval for substitute material will be considered prior to bidding as described in the instructions to bidders. Applications for prior approval will be considered only from Contractors intending to bid on the project.

PART 2 - PRODUCTS

- 2.1 Not Used

PART 3 - EXECUTION

3.1 GENERAL

- A. All cable, equipment, and components shall be installed in accordance with manufacturer's written instructions, in compliance with NEC, and in accordance with industry standard practices.
- B. All equipment shall be installed in a neat, professional manner, always vertically plumb and securely fastened.
- C. Most pathways for the communications systems are provided by other trades and not part of the Division 27 work; however, the Division 27 communications contractor may be required to create some pathways. Holes in masonry shall be made with rotary drills; impact tools are not permitted. Never penetrate through structural members or architectural finishes without prior approval from the architect or engineer. All penetration work shall be patched, sealed, cleaned, and returned to original conditions. All penetration in fire rated walls and floors shall be sealed with approved fire barriers systems in accordance with manufacturer's instructions.
- D. This communications contractor is responsible for creating a waterproof seal in and around openings to the building exterior created by or used by the communications contractor. All

waterproof sealing materials shall comply with appropriate codes and shall be installed in accordance with manufacturer's instructions.

- E. The communications contractor shall clean up all debris related to Division 27 work on a regular basis leaving the job site in a clean, safe condition.

3.2 FINAL ACCEPTANCE

- A. All project review reports ("Punch-Lists") submitted by the engineer shall be completed and signed by the Contractor prior to final project acceptance.
- B. The Contractor shall schedule and conduct a final project review meeting with the Owner and Engineer to discuss the following items:
 - 1. As-built drawings and documentation
 - 2. Test results
 - 3. Warranty and problem resolution procedures
 - 4. Special maintenance procedures
 - 5. Address any questions of the Owner and Engineer
- C. The Contractor shall complete all additional training for the Owner as specified in other Division 27 specification sections.

END OF SECTION 270010

SECTION 270500 - COMMON WORK RESULTS FOR COMMUNICATIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes the overall work results relating all Division 27 section on the facility.
- B. Refer to other Division 27 sections for product information, installation practices, schedules, warranty, performance/testing requirements, and other systems information details.

1.2 DESCRIPTION OF WORK FOR STRUCTURED CABLING SYSTEMS

- A. Voice and data cabling system shall be complete, include all specified and ancillary components, be ready for use and installation of telephone and data equipment, and consist of the following criteria:
 - 1. For the voice horizontal cabling, One (1) Category 6A cables shall be installed from rack mounted patch panels in communication rooms to information outlet jacks as shown on the drawings. The Category 6A voice cabling shall be fully tested and documented and shall have a connectivity hardware manufacturer's quality and applications assurance warranty.
 - 2. For the data horizontal cabling, One (1) Category 6A cables shall be installed from rack mounted patch panels in communication rooms to information outlet jacks and wireless antenna locations as shown on the drawings. The Category 6A data cabling shall be fully tested and documented and shall have a connectivity hardware manufacturer's quality and applications assurance warranty.
 - 3. For the voice/data horizontal cabling, Two (2) Category 6A cables shall be installed from rack mounted patch panels in communication rooms to information outlet jack locations as shown on the drawings. The Category 6A data cabling shall be fully tested and documented and shall have a connectivity hardware manufacturer's quality and applications assurance warranty.
 - 4. For the wireless access point horizontal cabling, One (1) Category 6A cable shall be installed from rack mounted patch panels in communication rooms to each wireless antenna locations as shown on the drawings. At each exterior wireless access point location, provide a Transtector #1101-994 data line surge protection device bonded to building steel. The Category 6A data cabling shall be fully tested and documented and shall have a connectivity hardware manufacturer's quality and applications assurance warranty.
 - 5. The voice backbone cabling shall consist of Category 3 UTP multi-pair cables routed from the main equipment room to communication rooms in a star configuration as shown on the schematic (one-line) drawings. All cable pairs shall be terminated on rack mounted 110 blocks in telecommunication room, wall mounted 110 blocks in the DEMARC room, and shall be fully tested and documented.
 - 6. The data backbone cable shall consist of 50/125 multi-mode optical fiber cable main equipment room to communication rooms in a star configuration as shown on the schematic (one-line) drawings. All strands of the optical fiber cables shall be terminated in rack mounted enclosures with SC type connectors and shall be fully tested and documented.
 - 7. Patch cords and station cords shall be furnished to the Owner (for final installation by the Owner) with quantities, types, and lengths as specified herein in section 27 1619.

- B. Other structured cabling components including racks, cabinets, enclosures, accessories, cable pathways, and grounding system will consist of the following criteria:
1. All racks, cabinets, enclosures, and accessories necessary for the structured cabling system shall be furnished and installed by the communications cabling contractor as specified herein and as shown on detail drawings.
 2. Major pathways for the structured cabling system including cable trays, conduits, backbones, and conduit sleeves (2" and larger) are specified in Division 26. Cable runway in communication rooms, J-hooks for locations where structured cabling leaves cable trays, and conduit sleeves (1½" and smaller) are specified in this section and shall be furnished and installed by the communications cabling contractor.
 3. The major components for the communications grounding and bonding system including grounding busbars in communication rooms, ground rods, and grounding conductors (larger than #2 AWG) are specified in Division 26 and schematic drawings. The communications cabling contractor shall furnish and install #2 AWG grounding conductors with required lugs and fasteners from all communications equipment and components to the communications grounding system.

PART 2 - PRODUCTS – Not Used (refer to other Division 27 sections).

PART 3 - EXECUTION – Not Used (refer to other Division 27 sections).

END OF SECTION 270500

SECTION 271513 - COPPER HORIZONTAL CABLING

PART 1 - GENERAL

1.1 SUMMARY

- A. This section covers copper horizontal cabling utilized by all Division 27 systems and possibly other intelligent building systems specified by other Divisions.
- B. Quantities for all copper horizontal cabling shall be provided as required to complete cabling to all outlets as shown on the floor plans.
- C. Horizontal copper cabling are those cable routed from the termination blocks and patch panels in the communication rooms to the outlet locations at the workstations.

1.2 RELATED SECTIONS

- A. Sections 27 00 10 and 27 05 00 contain general installation practices relevant to the communications cabling systems.
- B. Section 27 01 00 contains important information regarding manufacturer's warranties for the voice and data cabling systems.
- C. Section 27 05 53 contains information regarding the labeling of horizontal cabling.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. **General Performance:** Horizontal cabling system shall comply with transmission standards in TIA-568-C.1, when tested according to test procedures of this standard.
- B. **Telecommunications Pathways and Spaces:** Comply with TIA-569-D.
- C. **Grounding:** Comply with TIA-607-B.

2.2 HORIZONTAL VOICE & DATA CABLING

- A. **Category 6 Cable shall meet the following criteria:**
 - 1. Exceed TIA/EIA transmission performance requirements Category 6 cable at frequencies up to 250MHz.
 - 2. 100-ohm, 4-pair, 23 AWG solid bare copper conductor, unshielded twisted pair
 - 3. Standard: Comply with NEMA WC 66/ICEA S-116-732 and TIA-568-C.2 for Category 6 cables.
 - 4. Industry standard conductor insulation color coding (blue, orange, green, brown)
 - 5. Plenum rated, UL Listed type CMP marking on cable

6. Product identifications and cable distance markings at regular intervals on cable
7. ISO 9001 certified manufacturer
8. Transmission performance verified by UL
9. Normal product in inventory of local distributor
10. Basis of design: Leviton #LM-RDT-CAT6-UTP-CMP
11. Approved manufactures and product name/numbers: Leviton, Berk-Tek, Commscope, General, Superior Essex, Systemax

B. Category 6A Cable shall meet the following criteria:

1. Exceed TIA/EIA transmission performance requirements for Category 6A cable at frequencies up to 500MHz.
2. 100-ohm, 4-pair, 23 AWG solid bare copper conductor, unshielded twisted pair
3. Standard: Comply with TIA-568-C.2 for Category 6a cables.
4. Standard conductor insulation color coding: ~~(blue, orange, green, brown)~~
 - a. Data - Blue.
 - b. CCTV/Security - Yellow cable with Violet jacks.
 - c. Paging - Dark Gray
 - d. BioMED - Green (Pyxis, ScriptPRO).
 - e. WAP (Wifi) - White
5. Plenum rated, UL Listed type CMP marking on cable
6. Product identifications and cable distance markings at regular intervals on cable
7. ISO 9001 certified manufacturer
8. Transmission performance verified by UL
9. Normal product in inventory of local distributor
10. Basis of design: Leviton #LM-RDT-CAT6A-UTP-CMP
11. Approved manufactures and product name/numbers: Leviton, Berk-Tek, Commscope, General, Superior Essex, Systemax

PART 3 - EXECUTION

3.1 GENERAL

- A. Refer to Sections 27 00 00 and 27 10 00 for all typical installation practices.
- B. All horizontal cabling shall be labeled in accordance with labeling standards; refer to Section 27 05 53.

3.2 HORIZONTAL CABLING INSTALLATION PRACTICES

- A. The same manufacturer's product shall be utilized throughout the entire project for all voice and data horizontal cabling.
- B. All horizontal cables shall be terminated at both ends on faceplate jacks and patch panels. Any cables pulled for spare cables shall be neatly coiling in ceiling support system, clearly labeled are both ends, and identified on as-built drawings.

END OF SECTION 271513

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Memorial Health Center USP
Compliance

271513 - 3

COPPER HORIZONTAL CABLING

SECTION 271543 - FACEPLATES & CONNECTORS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section covers faceplates and connectors utilized for all Division 27 sections.
- B. Quantities for all communications faceplates and connectors shall be provided as required to terminate all outlet locations and cabling as shown on the floor plans.

1.2 RELATED SECTIONS

- A. Sections 27 00 10 and 27 05 00 contain general installation practices relevant to the communications cabling systems.
- B. Section 27 01 00 contains important information regarding manufacturer's warranties for the voice and data cabling systems.
- C. Section 27 05 53 contains information regarding the labeling of faceplates.

PART 2 - PRODUCTS

2.1 FACEPLATES

- A. Stainless-steel faceplates shall be utilized for communications cabling. Faceplates shall comply with the following requirements:
 - 1. Stainless-steel construction
 - 2. Labeling field with clear plastic cover for pre-printed labels or provide clear permanent polyester adhesive labels with black ink
 - 3. Snap-in flush fit for connector modules
Accept up to 4 connectors in single-gang or up to 8 connectors in double-gang configurations.
 - 4. UL Listed
 - 5. Approved manufactures: Commscope, Leviton, Ortronics, Panduit, Siemon, Systimax and 4MP.
- B. Stainless-Steel Wall Phone Plate shall be utilized for all wall telephone outlet locations.
 - 1. Stainless-steel construction
 - 2. Accept Category 6A jack
 - 3. Single-gang
 - 4. Studs mounted in standard positions to accommodate any standard wall telephone
 - 5. UL Listed
 - 6. Approved manufactures: Commscope, Leviton, Ortronics, Panduit, Siemon, Systimax

2.2 CONNECTORS

- A. Category 6A Voice/Data Jack shall be utilized for voice/data cabling and shall comply with the following requirements:
 - 1. TIA/EIA Category 6 compliant
 - 2. 8-position/8-conductor modular connector
 - 3. Blue color for voice/data jacks.
 - 4. Flush design for snap-in flush fitting on faceplate
 - 5. Approved manufacturers: Commscope, Leviton, Ortronics, Panduit, Siemon, Systimax
- B. Category 6A Wireless Access Point Jack shall be utilized for voice/data cabling and shall comply with the following requirements:
 - 1. TIA/EIA Category 6A compliant
 - 2. 8-position/8-conductor modular connector
 - 3. Green color for wireless access point jacks.
 - 4. Flush design for snap-in flush fitting on faceplate
 - 5. Approved manufacturers: Commscope, Leviton, Ortronics, Panduit, Siemon, Systimax
- C. Blank Inserts shall be provided for all blank faceplate opening and shall comply with the following requirements:
 - 1. Gray in color
 - 2. Flush design for snap-in flush fitting on faceplate
 - 3. Approved manufacturers: Commscope, Leviton, Ortronics, Panduit, Siemon, Systimax

PART 3 - EXECUTION

3.1 GENERAL

- A. Refer to Sections 27 00 00 and 27 10 00 for all typical installation practices.
- B. All faceplates shall be labeled in accordance with labeling standards; refer to Section 27 05 53.
- C. Verify modular furniture outlet locations and modular furniture manufacturer products with Architect prior to ordering communications devices for modular furniture locations.

3.2 FACE PLATE LOCATIONS

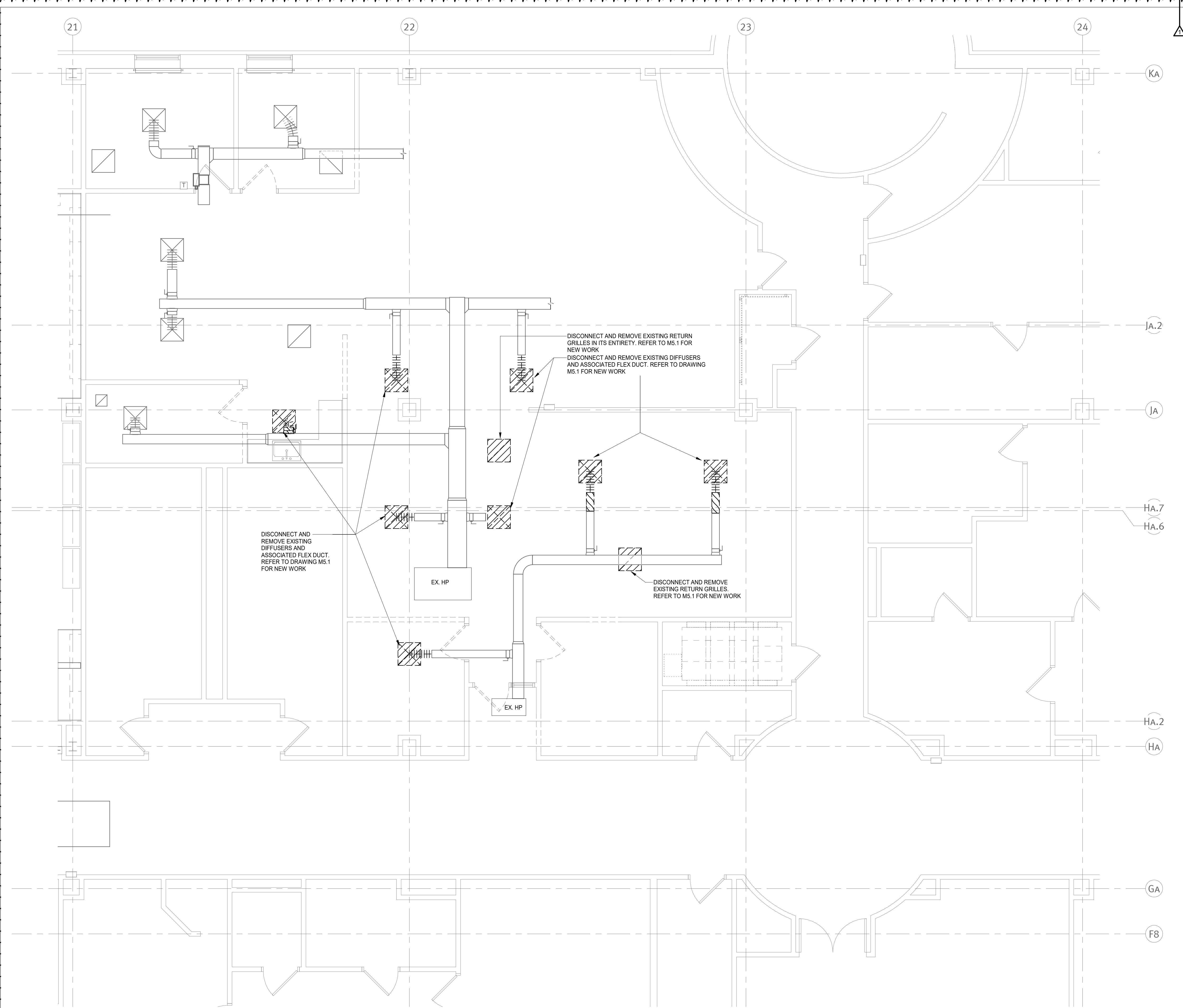
- A. See Appendix A in 26 27 26 for faceplate types and application.

3.3 FACEPLATE AND CONNECTOR INSTALLATION PRACTICES

- A. All faceplates shall be installed vertically plumb. When faceplates allow for adjustments, the contractor shall always adjust plate vertically plumb. Where faceplates offer no adjustment (i.e., stainless steel), the contractor shall communicate to other trades the importance of installing back boxes vertically plumb and shall notify other trades of corrective actions necessary to repair severely out-of-plumb locations.

- B. Faceplates shall fit flush with no gaps to the installed surface.
- C. Faceplates shall be securely fastened. Screws shall be tight; however, not tightened to the point of deforming, bending, or cracking the faceplate.
- D. Any deformed, broken, bent, or crack faceplates for connector hardware shall be replaced.
- E. Faceplates installed in not secure areas may be installed with standard screw hardware. Faceplates installed in secure perimeter areas shall be installed with tamper-proof screws.
- F. All snap-in faceplate jacks, adapters, and blank inserts shall be flush with the faceplate so the devices are not pushed through faceplates with connection of cables. Defective or broken components shall be replaces.
- G. Excess cable shall not be coiled behind faceplates. Excess cable loop shall be pulled back into ceiling spaces.
- H. Any blank faceplate connector opening shall be filled with blank inserts.
- I. Category 6A jack shall be terminated with T568B the wiring scheme.

END OF SECTION 271543



- GENERAL NOTES**
- A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. FIELD VERIFY LOCATIONS AND SIZES OF DUCTWORK, PIPING AND EQUIPMENT TO BE REMOVED.
 - B. NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - C. CUT AND PATCH EXISTING SURFACES (WALLS, FLOORS, AND/OR CEILINGS) AS REQUIRED TO PERFORM WORK. PATCHING SHALL MATCH SURROUNDING SURFACES.
 - D. DISCONNECTED EQUIPMENT SHALL BE REMOVED. NO EQUIPMENT SHALL BE ABANDONED IN PLACE.

WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
 SISSETON, SD 57262

project #: 020053.00
 date: 07/22/2022
 drawn by: AE
 checked by: MD

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

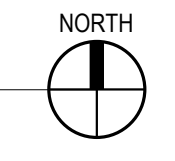
signature: *[Signature]*
 printed name: MIKE DOLEJS
 reg. #: 14204
 sign date: 07/22/2022

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 consulting engineers
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revision / issue	no.	date
Addendum #1	1	9/10/24

FLOOR PLAN - PHASE 1 - MECHANICAL DEMOLITION
 sheet title:
 sheet number: **M1.1**

1 Floor Plan - Phase 1 - Mechanical Demolition
 M1.1 1/4" = 1'-0"
 0 2' 4' 8'



WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

project #: 020053.00

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drawn by: AE

checked by: MD

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

signature: *Mike Dolejs*

printed name: MIKE DOLEJS

reg. #: 14204

sign date: 07/22/2022

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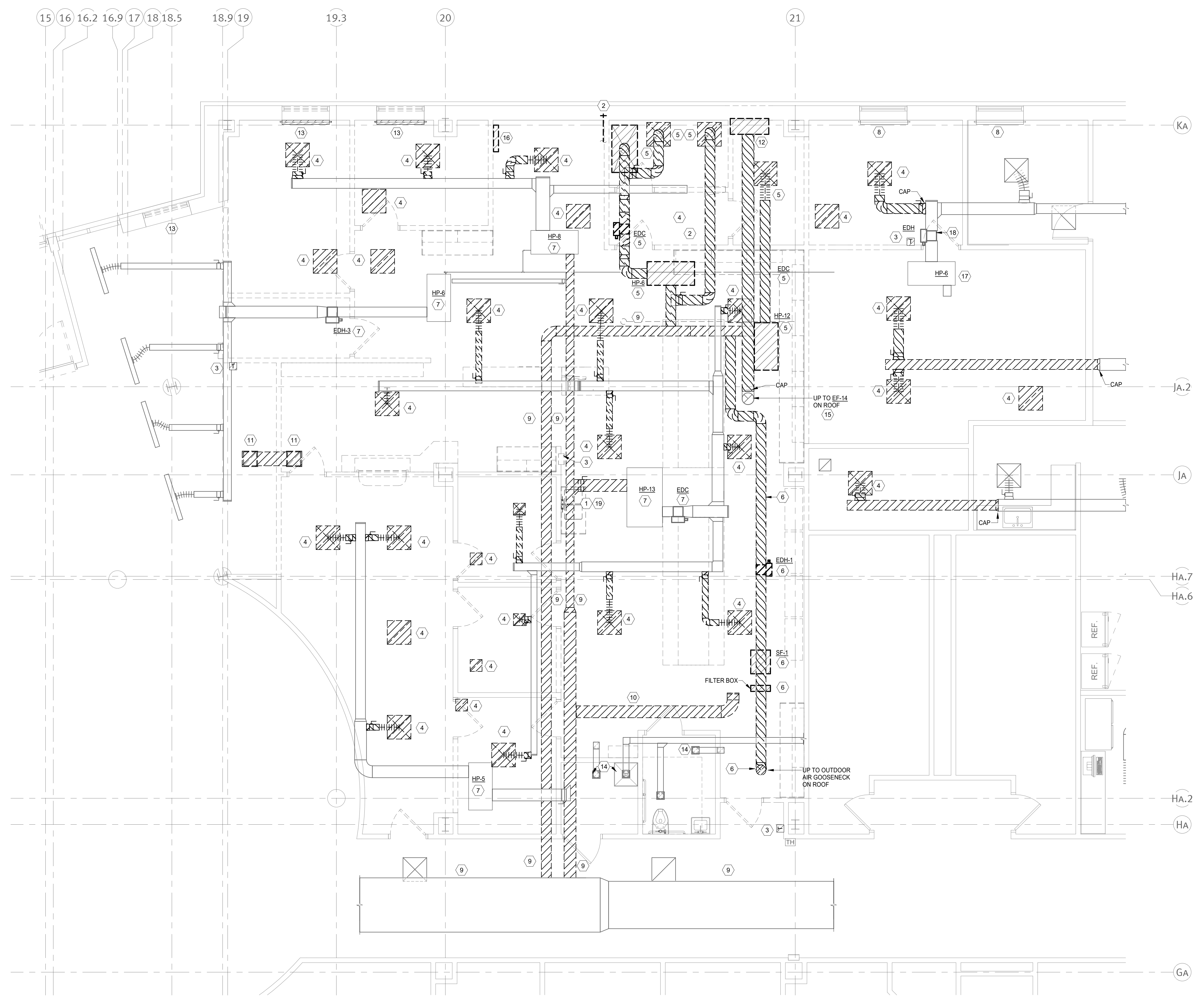
FLOOR PLAN -
PHASE 2 -
MECHANICAL
DEMOLITION

sheet title:
sheet number:

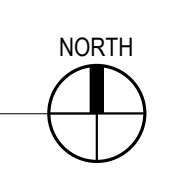
M1.3

- GENERAL NOTES**
- FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. FIELD VERIFY LOCATIONS AND SIZES OF DUCTWORK, PIPING AND EQUIPMENT TO BE REMOVED.
 - NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - CUT AND PATCH EXISTING SURFACES (WALLS, FLOORS, AND/OR CEILINGS) AS REQUIRED TO PERFORM WORK. PATCHING SHALL MATCH SURROUNDING SURFACES.
 - DISCONNECTED EQUIPMENT SHALL BE REMOVED. NO EQUIPMENT SHALL BE ABANDONED IN PLACE.

- PLAN NOTES**
- DISCONNECT AND REMOVE EXISTING PLUMBING FIXTURE, VERIFY EXISTING LOCATION. REFER TO SHEET M3.3 FOR NEW WORK.
 - DISCONNECT AND REMOVE EXISTING PLUMBING FIXTURE AND HOT AND COLD WATER BACK TO MAINS. VERIFY EXISTING LOCATIONS. REFER TO SHEET M3.3 FOR NEW WORK.
 - DISCONNECT EXISTING TEMPERATURE SENSOR. REFER TO SHEET M4.3 FOR NEW WORK.
 - DISCONNECT AND REMOVE EXISTING GRILLE, REGISTER, DIFFUSER AND FLEX DUCT. ASSOCIATED DUCTWORK TO REMAIN. REFER TO SHEET M5.3 FOR NEW WORK. SEAL UNUSED DUCT OPENINGS AT MAINS AIR TIGHT.
 - DISCONNECT AND REMOVE EXISTING HEAT PUMP AND ASSOCIATED ELECTRICAL, DUCT COIL, DUCTS, GRILLES, REGISTERS, DIFFUSERS, AND BRANCH PIPING. REFER TO SHEET M4.3 AND M5.3 FOR NEW WORK.
 - DISCONNECT AND REMOVE EXISTING ELECTRICAL DUCT COIL, IN-LINE SUPPLY FAN, FILTER BOX AND ASSOCIATED DUCTWORK. PATCH ROOF OPENING.
 - EXISTING HEAT PUMP, ELECTRIC DUCT COIL AND ASSOCIATED DUCTWORK AND PIPING TO REMAIN.
 - ELECTRIC BASEBOARD TO REMAIN.
 - DISCONNECT AND REMOVE EXISTING OUTDOOR AIR DUCTS AND CAP BRANCH CONNECTIONS AT MAIN. REFER TO SHEET M5.3 FOR NEW WORK.
 - DISCONNECT EXISTING OUTDOOR AIR DUCT.
 - DISCONNECT AND REMOVE EXISTING TRANSFER DUCT.
 - DISCONNECT AND REMOVE EXISTING EXHAUST DUCT AND ASSOCIATED HANGERS AND SUPPORT BACK TO MAIN DUCT THRU THE ROOF AND CAP. HOOD WILL BE REMOVED BY OTHERS. REFER TO SHEET M5.3 FOR NEW WORK.
 - DISCONNECT AND REMOVE EXISTING BASEBOARD AND CONTROLS.
 - EXISTING TRANSFER GRILLE AND ASSOCIATED DUCT TO REMAIN.
 - DISCONNECT AND REMOVE EXHAUST FAN ON THE ROOF. PROTECT ROOF CURB FOR REUSE. REFER TO SHEET M5.3 FOR NEW WORK.
 - DISCONNECT AND REMOVE EXISTING CABINET UNIT HEATER.
 - VERIFY EXISTING HEAT PUMP LOCATION. RELOCATE EXISTING HEAT PUMP IF PRESENT LOCATION CONFLICTS WITH NEW INTERIOR PARTITION. COORDINATE RELOCATION WITH ARCHITECT AND OWNER.
 - VERIFY EXISTING ELECTRIC DUCT HEATER LOCATION. RELOCATE EXISTING DUCT HEATER IF PRESENT LOCATION CONFLICTS WITH NEW INTERIOR PARTITION. COORDINATE RELOCATION WITH ARCHITECT AND OWNER.
 - DISCONNECT EXISTING REVERSE OSMOSIS WATER CONDITIONING EQUIPMENT AND PROTECT FOR REINSTALLATION. REFER TO SHEET M3.3 FOR NEW WORK.



1 Floor Plan - Phase 2 - Mechanical Demolition
M1.3
1/4" = 1'-0"
0 2 4 8



WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

project #: 020053.00

date: 07/22/2022

drawn by: AE

checked by: MD

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

signature: *MD*

printed name: MIKE DOLEJS

reg. #: 14204

sign date: 07/22/2022

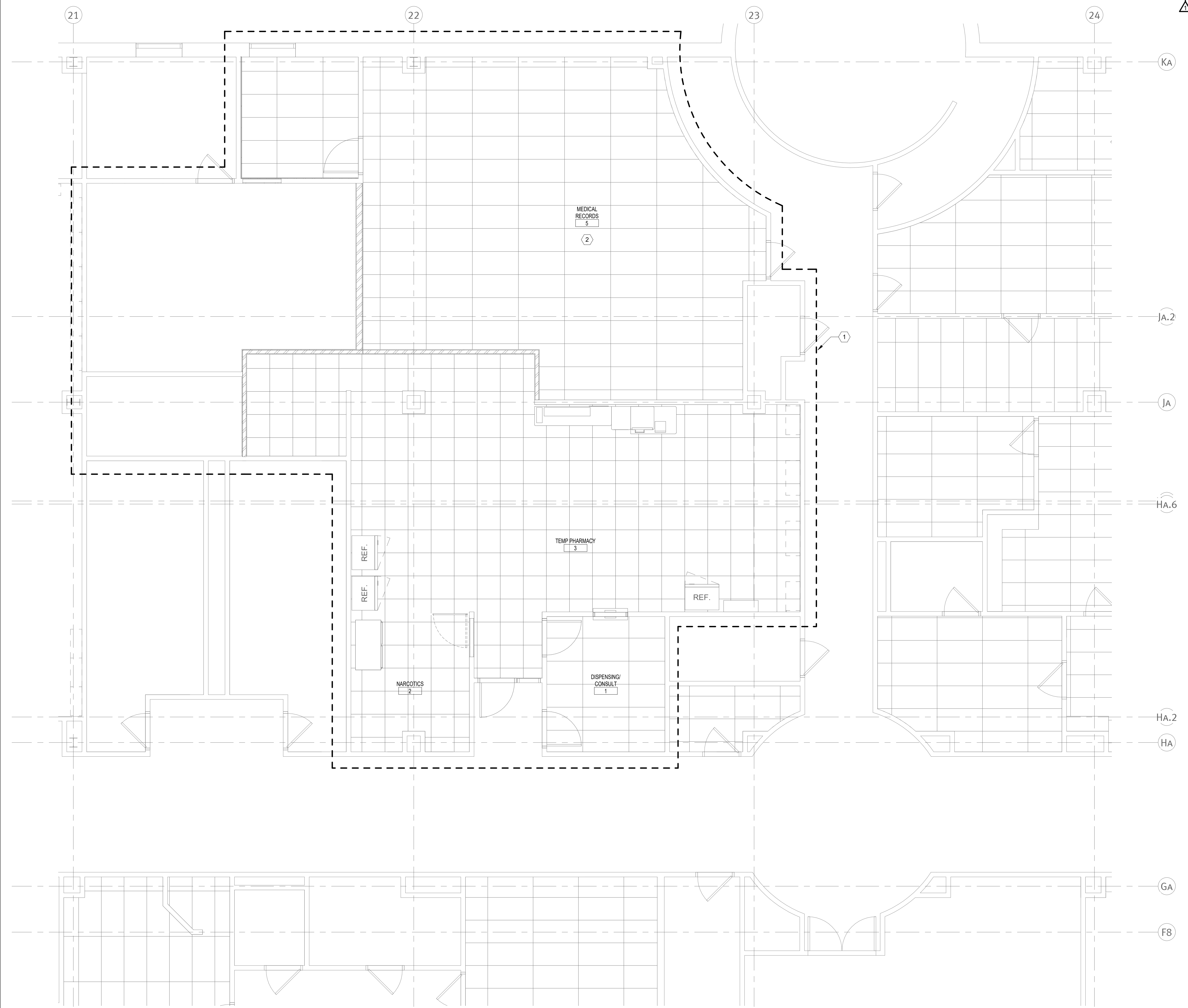
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Addendum #1	1	9/10/21

FLOOR PLAN -
PHASE 1 - FIRE
PROTECTION

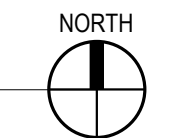
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sheet number:
M2.1



- ### GENERAL NOTES
- THIS DRAWING IS A BID DOCUMENT AND IS NOT A DESIGN DRAWING. CONFIRMATION OF FINAL DESIGN VIA SHOP DRAWINGS, HYDRAULIC CALCULATIONS, PRODUCT SUBMITTALS, ETC. IS THE SOLE RESPONSIBILITY OF THE FIRE PROTECTION DESIGN/BUILD CONTRACTOR.
 - REFER TO ARCHITECTURAL PLANS FOR COMPLETE CEILING/FLOOR/ROOM PLAN INFORMATION.
 - ALL AREAS SHALL BE DESIGNED AS LIGHT HAZARD OCCUPANCY UNLESS INDICATED OTHERWISE OR AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
 - PROVIDE PROTECTION ABOVE AND BELOW OBSTRUCTIONS AS REQUIRED, WHETHER INDICATED OR NOT.
 - ALL SPRINKLERS LOCATED IN FINISHED AREAS SHALL BE SYMMETRICAL IN PATTERN FOR THE AREA SERVED.
 - HIGH TEMPERATURE SPRINKLERS SHALL BE PROVIDED NEAR ALL HEAT PRODUCING EQUIPMENT IN ACCORDANCE WITH NFPA 13.
 - DRY TYPE PENDANT AND SIDEWALL SPRINKLER HEADS SHALL FOLLOW THE MANUFACTURER'S REQUIREMENTS FOR THE MINIMUM BARREL LENGTH IN THE HEATED AREA.
 - PROVIDE AUXILIARY DRAINS WITH PIPING TO APPROVED LOCATIONS FOR ALL TRAPPED PIPING. DRAIN PIPING SHALL BE SIZED PER NFPA 13 REQUIREMENTS.
 - ALL WALL AND FLOOR PENETRATIONS WITH FIRE PROTECTION PIPING SHALL BE FULLY SLEEVED AND SEALED.
 - APPROVED THROUGH PENETRATION FIRE STOP SYSTEMS SHALL BE USED FOR ALL RATED WALLS AND FLOORS TO MAINTAIN RATING.
 - NO STORAGE IS PERMITTED IN MECHANICAL OR ELECTRICAL ROOMS.
 - EXTENDED COVERAGE SPRINKLERS SHALL NOT BE INSTALLED IN MECHANICAL ROOMS.
 - DESIGN AREA REDUCTION FOR QUICK RESPONSE SPRINKLERS ALLOWED BY NFPA 13 SHALL NOT APPLY TO AREAS WITH CLOUD CEILINGS.
 - ALL MATERIALS USED IN THE INSTALLATION OF THE FIRE PROTECTION SYSTEMS SHALL BE NEW AND OF CURRENT ISSUE, APPROVED BY U.L. AND/OR F.M. AND THE AUTHORITIES HAVING JURISDICTION.
 - ALL FIRE PROTECTION WET AND DRY TYPE SYSTEM PIPING SHALL BE STEEL. DRY TYPE SYSTEM PIPING SHALL BE SCHEDULE 40.
 - WHERE NEW SPRINKLER HEADS ARE INSTALLED IN AREAS WITH CEILINGS THEY SHALL BE CENTERED IN THE CEILING TILES.
 - FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING FINAL SPRINKLER TYPES, LOCATIONS AND FINISHES IN ALL AREAS WITH ARCHITECT.
 - TAMPER SWITCHES AND FLOW SWITCHES SHALL BE FURNISHED AND INSTALLED BY FIRE PROTECTION CONTRACTOR. WIRING OF SUCH DEVICES IS THE RESPONSIBILITY OF THE FIRE ALARM CONTRACTOR. COORDINATE ALL FIRE PROTECTION WORK WITH FIRE ALARM CONTRACTOR.

- ### PLAN NOTES
- MODIFY EXISTING FIRE PROTECTION IN THIS AREA. DISCONNECT AND REMOVE EXISTING FIRE PROTECTION SPRINKLER HEADS/PIPING/ESCUTCHEONS AS NECESSARY TO ACCOMMODATE RENOVATION WORK. PROVIDE ADDITIONAL SPRINKLER HEADS/PIPING/ESCUTCHEONS AS REQUIRED TO ACCOMMODATE NEW OCCUPANCY. PROVIDE ALL NEW SPRINKLER HEADS IN RENOVATED AREAS.
 - MINIMUM OCCUPANCY CLASSIFICATION FOR BIDDING PURPOSES: COMPACT MOBILE STORAGE UNITS NO HIGHER THAN 8 FEET AND NO WIDER THAN 3 FEET WITH CLASS IV COMMODITIES (PLASTIC).

1 Floor Plan - Phase 1 - Fire Protection
M2.1 1/4" = 1'-0"
0 2' 4' 8'



WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

project #: 020053.00

date: 07/22/2022

drawn by: AE

checked by: MD

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

signature: *MD*

printed name: MIKE DOLEJS

reg. #: 14204

sign date: 07/22/2022

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consulting engineers
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1624 North Riverfront Drive Markato, MN 56001 (507) 625-7869

revision / issue	no.	date
Addendum #1	1	9/10/24

FLOOR PLAN -
PHASE 2 - FIRE
PROTECTION

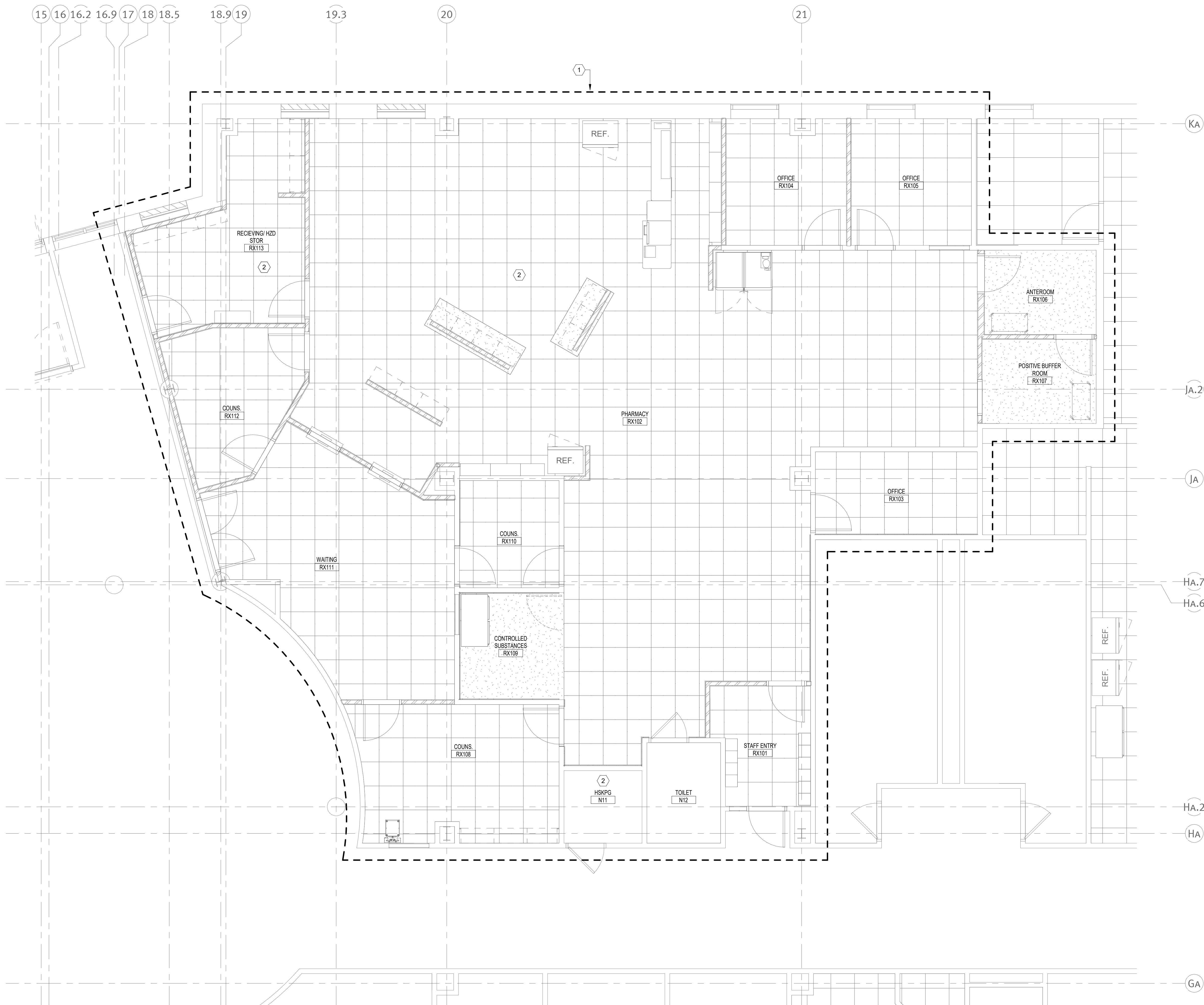
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M2.3

GENERAL NOTES

- THIS DRAWING IS A BID DOCUMENT AND IS NOT A DESIGN DRAWING. CONFIRMATION OF FINAL DESIGN VIA SHOP DRAWINGS, HYDRAULIC CALCULATIONS, PRODUCT SUBMITTALS, ETC. IS THE SOLE RESPONSIBILITY OF THE FIRE PROTECTION DESIGN/BUILD CONTRACTOR.
- REFER TO ARCHITECTURAL PLANS FOR COMPLETE CEILING/FLOOR/ROOM PLAN INFORMATION.
- ALL AREAS SHALL BE DESIGNED AS LIGHT HAZARD OCCUPANCY UNLESS INDICATED OTHERWISE OR AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- PROVIDE PROTECTION ABOVE AND BELOW OBSTRUCTIONS AS REQUIRED, WHETHER INDICATED OR NOT.
- ALL SPRINKLERS LOCATED IN FINISHED AREAS SHALL BE SYMMETRICAL IN PATTERN FOR THE AREA SERVED.
- HIGH TEMPERATURE SPRINKLERS SHALL BE PROVIDED NEAR ALL HEAT PRODUCING EQUIPMENT IN ACCORDANCE WITH NFPA 13.
- DRY TYPE PENDANT AND SIDEWALL SPRINKLER HEADS SHALL FOLLOW THE MANUFACTURER'S REQUIREMENTS FOR THE MINIMUM BARREL LENGTH IN THE HEATED AREA.
- PROVIDE AUXILIARY DRAINS WITH PIPING TO APPROVED LOCATIONS FOR ALL TRAPPED PIPING. DRAIN PIPING SHALL BE SIZED PER NFPA 13 REQUIREMENTS.
- ALL WALL AND FLOOR PENETRATIONS WITH FIRE PROTECTION PIPING SHALL BE FULLY SLEEVED AND SEALED.
- APPROVED THROUGH PENETRATION FIRE STOP SYSTEMS SHALL BE USED FOR ALL RATED WALLS AND FLOORS TO MAINTAIN RATING.
- NO STORAGE IS PERMITTED IN MECHANICAL OR ELECTRICAL ROOMS.
- EXTENDED COVERAGE SPRINKLERS SHALL NOT BE INSTALLED IN MECHANICAL ROOMS.
- DESIGN AREA REDUCTION FOR QUICK RESPONSE SPRINKLERS ALLOWED BY NFPA 13 SHALL NOT APPLY TO AREAS WITH CLOUD CEILINGS.
- ALL MATERIALS USED IN THE INSTALLATION OF THE FIRE PROTECTION SYSTEMS SHALL BE NEW AND OF CURRENT ISSUE, APPROVED BY U.L. AND/OR F.M. AND THE AUTHORITIES HAVING JURISDICTION.
- ALL FIRE PROTECTION WET AND DRY TYPE SYSTEM PIPING SHALL BE STEEL. DRY TYPE SYSTEM PIPING SHALL BE SCHEDULE 40.
- WHERE NEW SPRINKLER HEADS ARE INSTALLED IN AREAS WITH CEILINGS THEY SHALL BE CENTERED IN THE CEILING TILES.
- FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING FINAL SPRINKLER TYPES, LOCATIONS AND FINISHES IN ALL AREAS WITH ARCHITECT.
- TAMPER SWITCHES AND FLOW SWITCHES SHALL BE FURNISHED AND INSTALLED BY FIRE PROTECTION CONTRACTOR. WIRING OF SUCH DEVICES IS THE RESPONSIBILITY OF THE FIRE ALARM CONTRACTOR. COORDINATE ALL FIRE PROTECTION WORK WITH FIRE ALARM CONTRACTOR.

PLAN NOTES

- MODIFY EXISTING FIRE PROTECTION IN THIS AREA. DISCONNECT AND REMOVE EXISTING FIRE PROTECTION SPRINKLER HEADS/PIPING/ESCUTCHEONS AS NECESSARY TO ACCOMMODATE RENOVATION WORK. PROVIDE ADDITIONAL SPRINKLER HEADS/PIPING/ESCUTCHEONS AS REQUIRED TO ACCOMMODATE NEW OCCUPANCY. PROVIDE ALL NEW SPRINKLER HEADS IN RENOVATED AREAS.
- MINIMUM OCCUPANCY CLASSIFICATION FOR BIDDING PURPOSES: COMPACT MOBILE STORAGE UNITS NO HIGHER THAN 8 FEET AND NO WIDER THAN 3 FEET WITH CLASS IV COMMODITIES (PLASTIC).



1 Floor Plan - Phase 2 - Fire Protection
M2.3
1/4" = 1'-0"
0 2 4 8

WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

project #: 020053.00
date: 07/22/2022
drawn by: AE
checked by: MD

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

signature: *Mike Dolejs*
printed name: MIKE DOLEJS
reg. #: 14204
sign date: 07/22/2022

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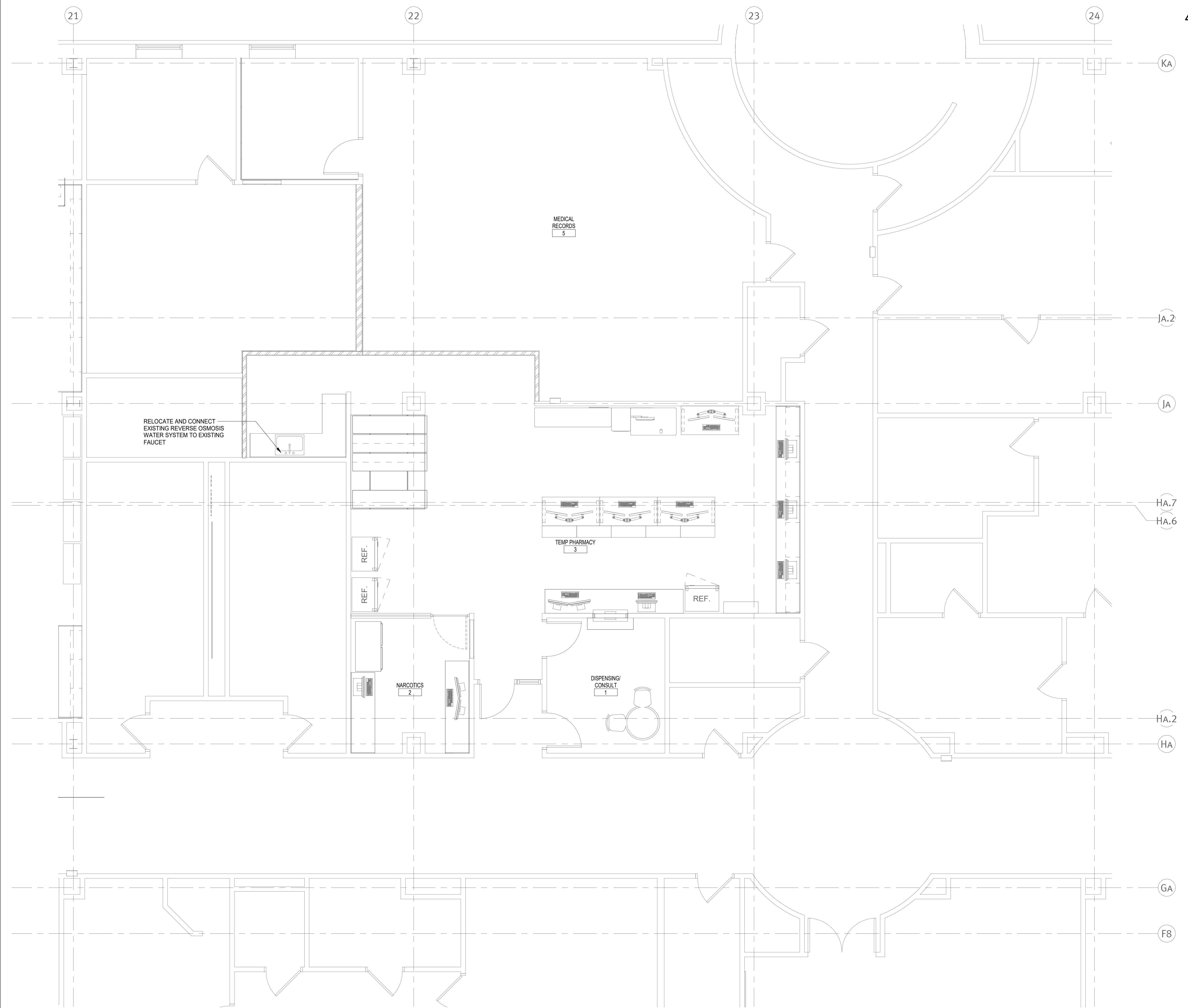
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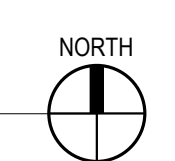
FLOOR PLAN -
PHASE 1 -
PLUMBING

sheet title:
sheet number:
M3.1

- GENERAL NOTES**
- PROVIDE A WALL OR FLOOR CLEANOUT AS REQUIRED TO SERVE EACH PLUMBING FIXTURE, SPECIALTY DEVICE, ETC. THAT HAS A NON-ACCESSIBLE TRAP. TYPICAL.
 - REFER TO PIPE HANGER AND SUPPORT DETAIL ON SHEET M7.1 INDICATING INSTALLATION REQUIREMENTS. TYPICAL.
 - REFER TO PIPE PENETRATION DETAIL ON SHEET M7.1 FOR PIPE PENETRATION INSTALLATION REQUIREMENTS. TYPICAL.
 - REFER TO WASTE AND VENT RISER DIAGRAM AND DOMESTIC WATER RISER DIAGRAMS ON SHEETS M2.3 THRU M2.6 FOR ADDITIONAL SIZES, PIPE ROUTING, VALVES AND PLUMBING SPECIALTY DEVICES. REFER TO PLUMBING RISER DIAGRAM SHEETS FOR PLUMBING ROUGH-IN SCHEDULE. TYPICAL.
 - PROVIDE SLEEVES FOR ALL SANITARY WASTE PIPING PASSING THROUGH STRUCTURAL FOOTINGS AND FOUNDATION WALLS. REFER TO SPECIFICATION SECTION 22 0500 AND DETAIL ON SHEET M7.1 FOR ADDITIONAL INFORMATION. COORDINATE AND VERIFY EXACT LOCATIONS AND ELEVATIONS WITH STRUCTURAL. TYPICAL.



1 Floor Plan - Phase 1 - Plumbing
M3.1
1/4" = 1'-0"
0 2 4 8



WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

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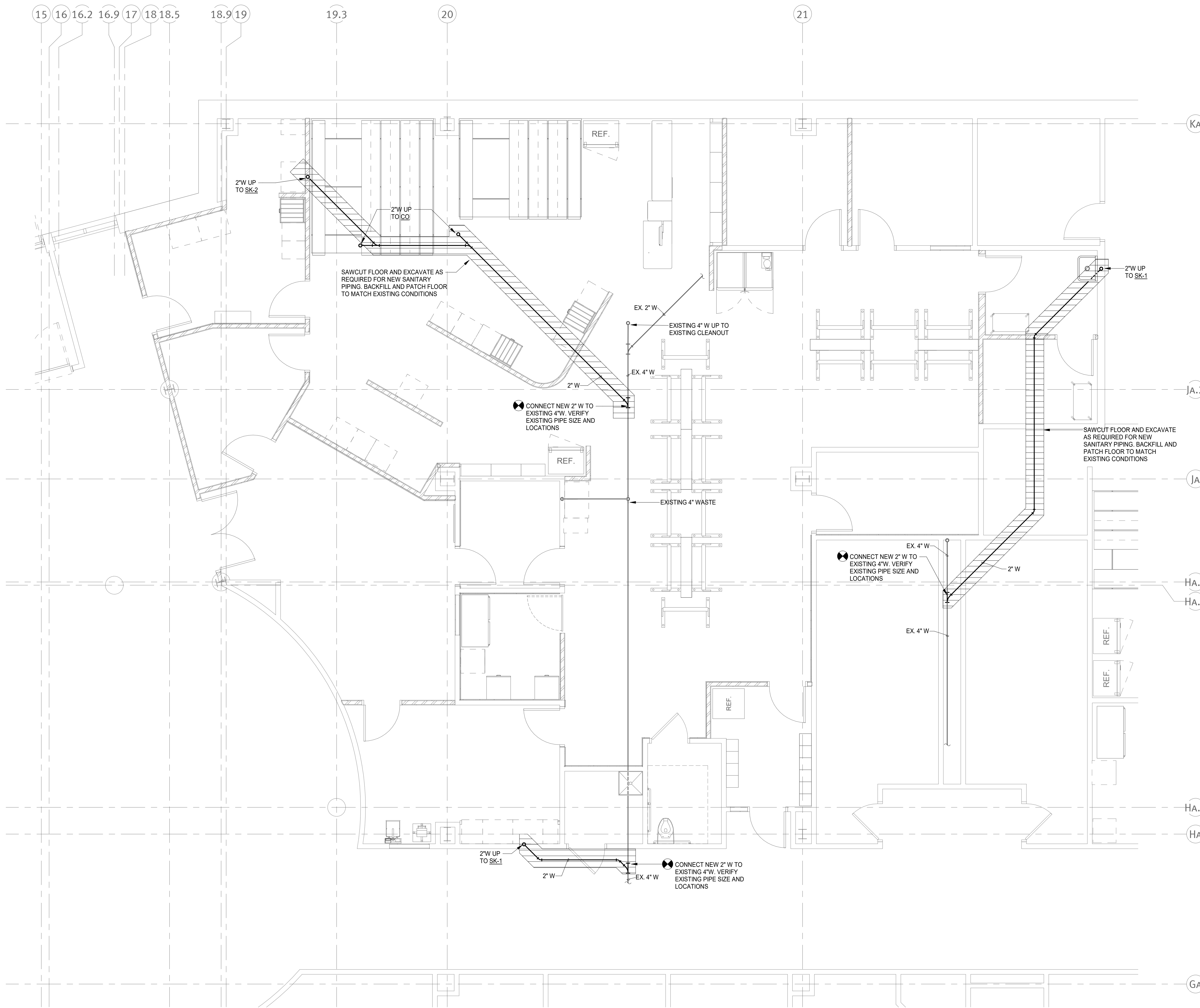
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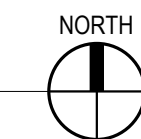
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GENERAL NOTES

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- REFER TO PIPE HANGER AND SUPPORT DETAIL ON SHEET M7.1 INDICATING INSTALLATION REQUIREMENTS, TYPICAL.
- REFER TO PIPE PENETRATION DETAIL ON SHEET M7.1 FOR PIPE PENETRATION INSTALLATION REQUIREMENTS, TYPICAL.
- REFER TO WASTE AND VENT RISER DIAGRAM AND DOMESTIC WATER RISER DIAGRAMS ON SHEETS M2.3 THRU M2.6 FOR ADDITIONAL SIZES, PIPE ROUTING, VALVES AND PLUMBING SPECIALTY DEVICES. REFER TO PLUMBING RISER SHEETS FOR PLUMBING ROUGH-IN SCHEDULE, TYPICAL.
- PROVIDE SLEEVES FOR ALL SANITARY WASTE PIPING PASSING THROUGH STRUCTURAL FOOTINGS AND FOUNDATION WALLS. REFER TO SPECIFICATION SECTION 22 0500 AND DETAIL ON SHEET M7.1 FOR ADDITIONAL INFORMATION. COORDINATE AND VERIFY EXACT LOCATIONS AND ELEVATIONS WITH STRUCTURAL, TYPICAL.



1 Underfloor Plan - Phase 2 - Plumbing
M3.2 1/4" = 1'-0"



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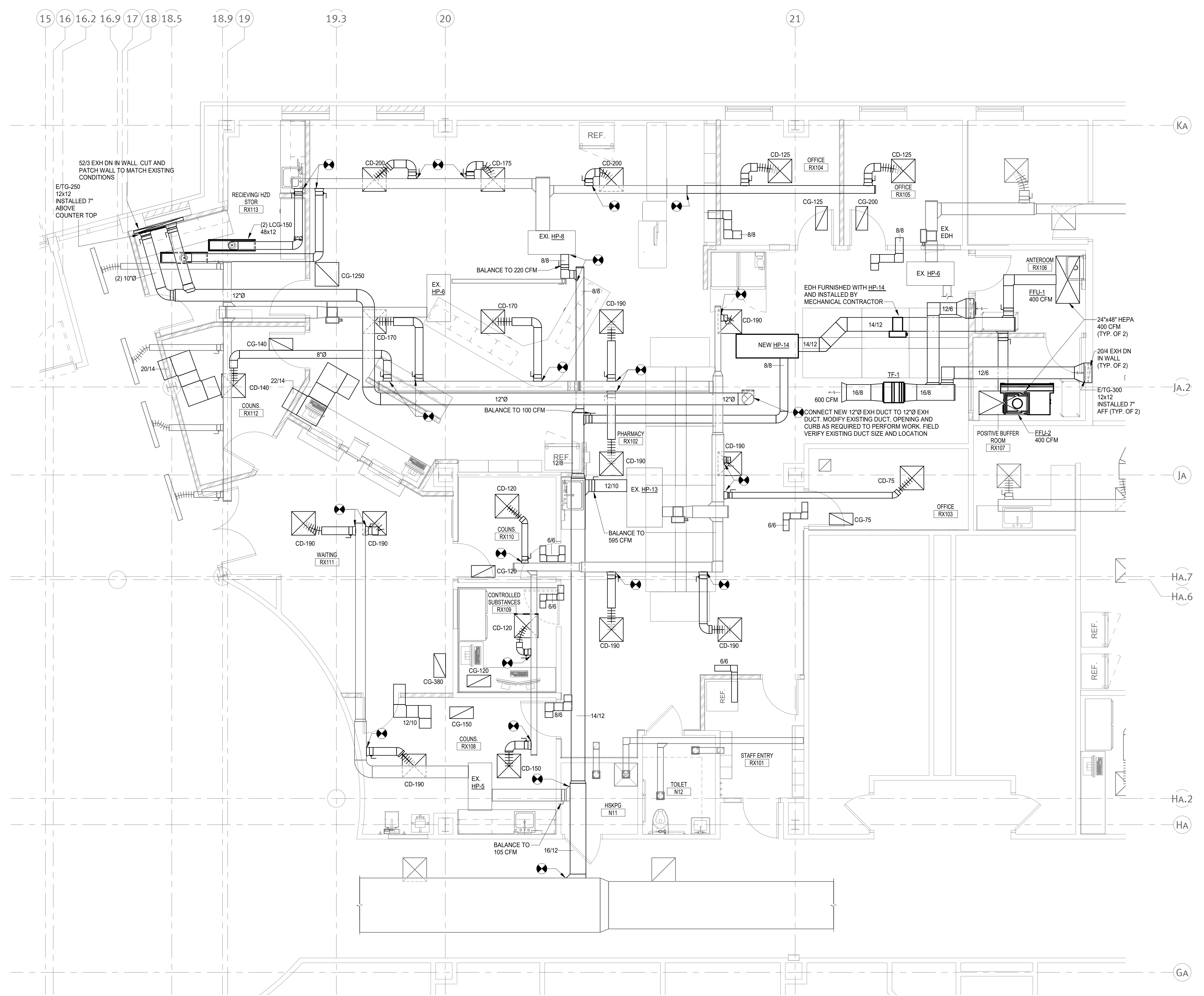
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FLOOR PLAN - PHASE 2 - HVAC

sheet number: **M5.3**

- GENERAL NOTES**
- DUCT SIZES SHOWN ON PLANS ARE CLEAR INSIDE DIMENSIONS WHERE DUCTWORK IS INTERNALLY LINED. INCREASE DIMENSIONS OF SHEET METAL ACCORDINGLY.
 - ALL TRANSFER DUCTS SHALL BE INTERNALLY LINED WITH 1" ACOUSTIC LINER.
 - MAINTAIN UNOBSTRUCTED CLEARANCE TO THE ENTIRE HEAT PUMP FOR MAINTENANCE ACCESS.
 - DIFFUSER BRANCH DUCT SIZE SHALL BE THE SAME AS THE DIFFUSER NECK SIZE UNLESS OTHERWISE NOTED.
 - PROVIDE BALANCING DAMPER FOR EACH SUPPLY OUTLET AND EXHAUST INLET, UNLESS THERE IS ONLY ONE DIFFUSER FOR A VAV BOX.
 - REFER TO CEILING DIFFUSERS SIZE SCHEDULE FOR DIFFUSERS NECK SIZES.
 - ALL CEILING GRILLES (RETURN AIR) SHALL BE 24"x12" UNLESS NOTED OTHERWISE.
 - COORDINATE DUCTWORK WITH ALL DISCIPLINES IN THE CEILING SPACE.
 - TEMPERATURE CONTROL CONTRACTOR SHALL FURNISH ALL MOTORIZED DAMPERS FOR INSTALLATION BY MECHANICAL CONTRACTOR.



15 16 16.2 16.9 17 18 18.5 18.9 19 19.3 20 21

KA

JA.2

JA

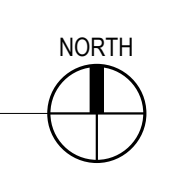
HA.7

HA.6

HA.2

HA

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1 Floor Plan - Phase 2 - HVAC
M5.3 1/4" = 1'-0"

WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

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Addendum #1 1 9/10/24

MECHANICAL SCHEDULES

sheet number: **M6.1**

IHS Woodrow Wilson Clinic - Ventilation Requirements

AREA	ASHRAE 170-2021	ASHRAE 62.1 2022	USP 795/797/800	ROOM AREA SQ. FT	ROOM HEIGHT FT	VOLUME CU. FT	COOLING (°F)	HEATING (°F)	ASHRAE 170-2021			ASHRAE 62.1 2022			USP 795/797/800			CODE MINIMUM AIR FLOWS					DESIGN AIRFLOWS							
									CODE PRESSURE REQ	OA ACH	TOTAL ACH	EXHAUST TO EXTERIOR	# OF PEOPLE	OA PER PERSON	OA PER SQ.FT	TOTAL OA	CODE PRESSURE REQ	OA ACH	TOTAL ACH	EXHAUST TO EXTERIOR	OA ACH	TOTAL ACH	OA CFM	TOTAL CFM	EXHAUST CFM	OA (CFM)	OA ACH	SUPPLY AIR (CFM)	SUPPLY AIR ACH	EXHAUST AIR (CFM)
PHARMACY RX102	PHARMACY SERVICES			1785	9	16,065	75	70	POSITIVE	2	4	NR							2	4	536	1071	NR	560	2	2080	8			
OFFICE RX103		OFFICE SPACE		93	9	837	75	70					2	5	0.06	16			NR	NR	16	NR	NR	25	2	75	5			
OFFICE RX104		OFFICE SPACE		102	9	918	75	70					2	5	0.06	16			NR	NR	16	NR	NR	25	2	125	8			
OFFICE RX105		OFFICE SPACE		106	9	954	75	70					2	5	0.06	16			NR	NR	16	NR	NR	25	2	200	13			
CONSULT RX108	PATIENT ROOM			191	9	1,719	75	70	NR	2	4	NR							2	4	57	115	NR	65	2	340	12			
CONSULT RX110	PATIENT ROOM			73	9	657	75	70	NR	2	4	NR							2	4	22	44	NR	30	3	120	11			
CONSULT RX112	PATIENT ROOM			115	9	1,035	75	70	NR	2	4	NR							2	4	35	69	NR	45	3	140	8			
RECEIVING HZD STORAGE RX113			USP 800 STORAGE HZD	172	9	1,548	75	70											2	12	62	310	500	60	2	300	12	500	19	
CONTROLLED SUBSTANCES RX109	PHARMACY SERVICES			72	9	648	75	70	POSITIVE	2	4	NR							2	4	22	43	NR	30	3	120	11			
POSITIVE BUFFER ROOM RX107			USP 797 - SCA ROOM	67	9	603	75	70											NR	2	4	20	42	NR	50	5	400	40		
ANTEROOM RX106	PATIENT ROOM			66	9	594	75	70	NR	2	4	NR							2	4	20	40	NR	50	5	400	40			
WAITING RX111		OFFICE SPACE		313	9	2,817	75	70					6	5	0.06	49			NR	NR	49	NR	NR	55	1	380	8			

WATER TO AIR HEAT PUMP SCHEDULE

ITEM TAG	SERVICE	MANUFACTURER	MODEL	TOTAL AIR CFM	WATER FLOW GPM	WATER PRESSURE DROP (FT-HD)	HPWS/ HPWR SIZES (IN.)	EAT DB DEG F	EAT WB DEG F	COOLING				EER	EAT DB F	HEATING		COP	CONTROL VALVE TYPE	REFER TO NOTES
										TOTAL CAP. MBTUH	SENSIBLE CAP. MBTUH	HEAT REJECTION MBTUH	HEAT ABSORPTION MBTUH			HEAT ABSORPTION MBTUH				
HP-14	RX106, RX107	DAIKIN	WGTH-026	800	6.0	5.5	3/4" / 3/4"	80	67	25.9	18.6	31.6	15.6	65	18.1	13.5	3.9	2-PORT	1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	
HP-15	102, 107, 108	DAIKIN	WGSB-015	500	5.0	9.6	3/4" / 3/4"	80	67	15.1	11.3	18.3	16.3	65	12.3	9.3	4.1	2-PORT	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	
HP-16	103, 104, 105, 106, 109, 110	DAIKIN	WGSB-019	600	4.5	7.6	3/4" / 3/4"	80	67	16.9	12.8	20.8	14.8	65	13.8	10.2	3.8	2-PORT	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	
HP-17	101	DAIKIN	WGTH-026	800	6.0	5.5	3/4" / 3/4"	80	67	25.9	18.6	31.6	15.6	65	18.1	13.5	3.9	2-PORT	1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	

NOTES:

- COOLING RATINGS BASED UPON: 90F EWT
- HEATING RATINGS BASED UPON: 30F EWT
- PROVIDE HEAT PUMP WITH DDC CONTROLS FOR INTERFACE WITH BUILDING AUTOMATION SYSTEM. HEAT PUMP UNIT DDC CONTROLS SHALL BE COMPATIBLE WITH AND INTEGRATED WITH EXISTING JOHNSON CONTROLS BUILDING AUTOMATION SYSTEM.
- PROVIDE UNIT WITH 2-STAGE COMPRESSOR, CONSTANT AIRFLOW ECM FAN MOTOR, STAINLESS STEEL DRAIN PAN AND CONDENSATE DRAIN PAN OVERFLOW PROTECTION.
- PROVIDE UNIT WITH SINGLE STAGE COMPRESSOR, CONSTANT AIRFLOW ECM FAN MOTOR, STAINLESS STEEL DRAIN PAN AND CONDENSATE DRAIN PAN OVERFLOW PROTECTION.
- PROVIDE UNIT WITH FOIL FACED INSULATION, DOUBLE-ISOLATED COMPRESSOR, COMPRESSOR SOUND ATTENUATION BLANKET, LOW LEAK 2" FILTER RACK AND MERV 13 FILTER OPTIONS.
- PROVIDE UNIT WITH EXTENDED LOOP WATER TEMPERATURE RANGE OPTION AND ELECTRIC PHASE LOSS PROTECTION.
- PROVIDE UNIT WITH SMART EC FAN AND HOT GAS REHEAT DEHUMIDIFICATION OPTION.
- PROVIDE UNIT WITH SUPPLY HOSE KIT HAVING WYE STRAINER/BLOWDOWN VALVE, ISOLATION BALL VALVE AND P/T PORT. REFER TO SPECIFICATION SECTION 23 8146 FOR ADDITIONAL HOSE KIT INFORMATION.
- PROVIDE UNIT WITH RETURN HOSE KIT HAVING AUTOMATIC FLOW CONTROL VALVE, ISOLATION BALL VALVE AND P/T PORT. REFER TO SPECIFICATION SECTION 23 8146 FOR ADDITIONAL HOSE KIT INFORMATION.
- PROVIDE UNIT WITH FIELD INSTALLED 5-KW ELECTRIC DUCT HEATER KIT.
- PROVIDE 4-YEAR EXTENDED COMPRESSOR AND REFRIGERATION CIRCUIT WARRANTY.
- HEAT PUMPS SHALL MEET OR EXCEED ARI 13256-1 RATING.
- REFER TO SPECIFICATION SECTION 23 8146 FOR ADDITIONAL REQUIREMENTS.
- REFER TO ELECTRICAL PLANS FOR ELECTRICAL REQUIREMENTS.

CEILING DIFFUSER SIZE SCHEDULE - CD AND CD2

CFM RANGE	FACE SIZE	NECK SIZE
0 - 125	12"x12"	6" dia.
0 - 125	24"x24"	6" dia.
126 - 225	24"x24"	8" dia.
226 - 330	24"x24"	10" dia.
331 - 440	24"x24"	12" dia.
441 - 580	24"x24"	14" dia.
580 - 1000	24"x24"	15" dia.

ALL BRANCH RUN OUTS SHALL BE THE SAME AS THE DIFFUSER NECK SIZE OR EQUIVALENT

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

TYPE	SERVICE	MANUFACTURER AND MODEL NO.	VOLUME DAMPER	FINISH	FRAME AND BORDER TYPE	MATERIAL	DESCRIPTION	REFER TO NOTES
CD	CEILING DIFFUSER	TITUS TMSA	---	WHITE ENAMEL	NOTE 1	STEEL	24x24 MODULAR FULL-FACE DIFFUSER WITH ROUND NECK	1, 2
CG	CEILING GRILLE	TITUS 50F	---	WHITE ENAMEL	NOTE 1	ALUMINUM	1/2"x1/2"x1/2" EGGRATE GRID.	1, 2
LSD	LINEAR SLOT DIFFUSER	TITUS ML-38	PATTERN CONTROLLERS	WHITE ENAMEL	NOTE 1	ALUMINUM	PROVIDE MP-38 INSULATED PLenums SIZED FOR 1, 2, 3, OR 4 SLOTS AS REQUIRED. 3/4" SLOTS	
TG	TRANSFER GRILLE	TITUS 301RL-HD	---	STANDARD WHITE	NOTE 1	STEEL	0 DEG. DEFLECTION, 1/2" SPACING	1, 2
E/G	EXH/TRANSFER GRILLE	PRICE LG	---	STANDARD WHITE	NOTE 1	STAINLESS STEEL	LATTICE, 1/2" SQUARE MESH	1, 2
LCG	LAMINAR CEILING GRILLE	TITUS TLF	---	STANDARD WHITE	NOTE 1	STEEL	PERFORATED LAMINAR FLOW GRILLE. INTERNAL BAFFLES	1, 2

NOTES:

- CONTRACTOR TO VERIFY CEILING/WALL/FLOOR TYPE AND PROVIDE PROPER FRAME AND BORDER TYPE.
- REFER TO SPECIFICATION SECTION 23 3713 FOR ADDITIONAL REQUIREMENTS.

EXHAUST/TRANSFER FAN SCHEDULE

UNIT NO.	SERVICE	MANUFACTURER	MODEL NO.	TYPE	DRIVE	CFM	ESP (IN. W.C.)	MAX. FAN RPM	HP	REFER TO NOTES
TF-1	N15 - ANTE N16 - COMPOUNDING	COOK	135SQN17DEC	INLINE	ECM	600	0.75	1330	3/4	1, 2, 3
EF-14	N06 - MED RECEIVING N14 - CONTR SUBST	GREENHECK	VEKTOR-H-10	LAB EXHAUST	DIRECT	500	1.00	4000	3/4	1, 2, 4, 5

NOTES:

- REFER TO SPECIFICATION SECTION 233423 FOR ADDITIONAL REQUIREMENTS.
- REFER TO ELECTRICAL PLANS FOR ELECTRICAL REQUIREMENTS (VOLTS AND PHASE).
- PROVIDE WITH FAN SPEED CONTROLLER FOR AIR BALANCING.
- PROVIDE WITH 12" HIGH LAB EXHAUSTER CURB, ISOLATION BOX, GRAVITY ISOLATION DAMPER.
- OVERALL FAN ASSEMBLY CONE NOZZLE DISCHARGE HEIGHT SHALL BE MINIMUM 10 FT ABOVE ROOF DECK.
- DIVISION 26 TO PROVIDE VFD.

ELECTRIC BASEBOARD RADIATOR SCHEDULE

UNIT NO.	LOCATION	MANUFACTURER	MODEL	HEATING TYPE	ENCLOSURE HEIGHT (IN)	LENGTH OF UNIT (FT)	CAPACITY REQUIRED (WATTS)	CAPACITY REQUIRED (BTUH)
EBB-1	SEE PLAN	TRANE	DBF	ELECTRIC	6"	4	617	4265

NOTES:

- REFER TO SPECIFICATION SECTION 23 82 36 FOR ADDITIONAL REQUIREMENTS.
- UNIT COLOR TO BE SELECTED BY ARCHITECT FROM STANDARD COLOR CHART.
- UNIT SHALL BE FLOOR MOUNTED.
- PROVIDE WITH INTEGRAL 20 AMP, 120-277 VOLT, DOUBLE POLE DISCONNECT SWITCH.
- REFER TO ELECTRICAL PLANS FOR ELECTRICAL REQUIREMENTS.
- PROVIDE BUILT-IN THERMOSTAT.

PLUMBING ROUGH-IN SCHEDULE

FIXTURE TAG	FIXTURE TYPE	WASTE	VENT	CW	HW	REMARKS
SK-1	SINK	2	1-1/2	1/2	1/2	
SK-2	SINK	2	1-1/2	1/2	1/2	
SK-3	DOUBLE BOWL SINK	---	---	---	---	EXISTING WASTE, VENT, CW AND HW
EEW-1	EMERGENCY EYE WASH	-	-	-	1/2 TW	COUNTER MOUNT/TEMPERED HW INLET
ETMV-1	EMERGENCY THERMOSTATIC MIXING VALVE	-	-	1/2	1/2	1/2 TEMPERED HW OUTLET

NOTES:

- REFER TO DIVISION 22 SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

FAN FILTER UNIT SCHEDULE

UNIT NO.	AREA(S) SERVED	MANUFACTURER	MODEL	VOLUME (CFM)	E.S.P (IN WC)	OPERATING POWER (WATTS)
FFU-1	N15 - ANTE	CAMFIL	PHARMASEAL	400	0.5	78
FFU-2	N16 - COMPOUNDING	CAMFIL	PHARMASEAL	400	0.5	78

NOTES:

- REFER TO SPECIFICATION SECTION 23 4100 FOR ADDITIONAL INFORMATION.
- REFER TO ELECTRICAL PLANS FOR ELECTRICAL REQUIREMENTS.

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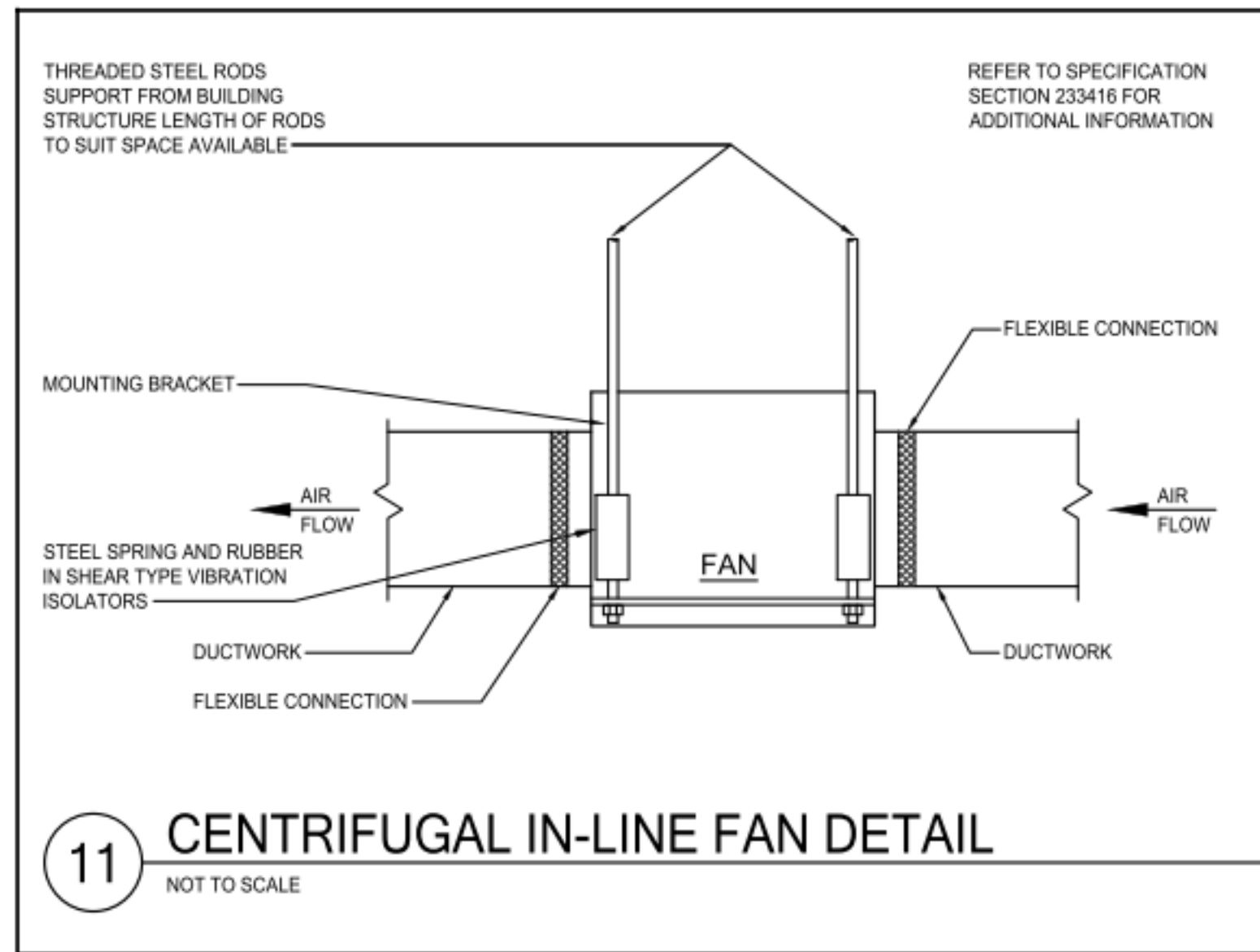
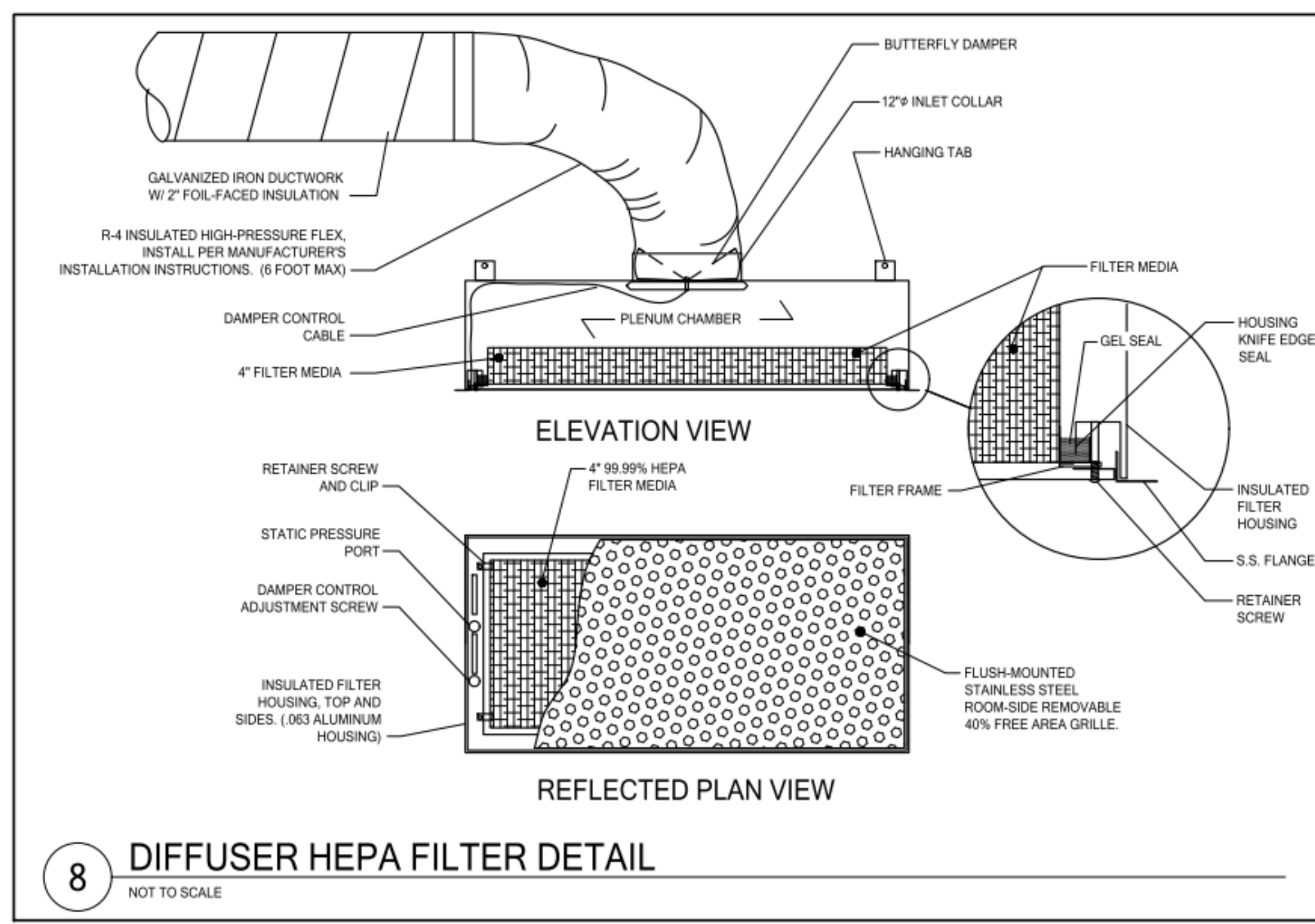
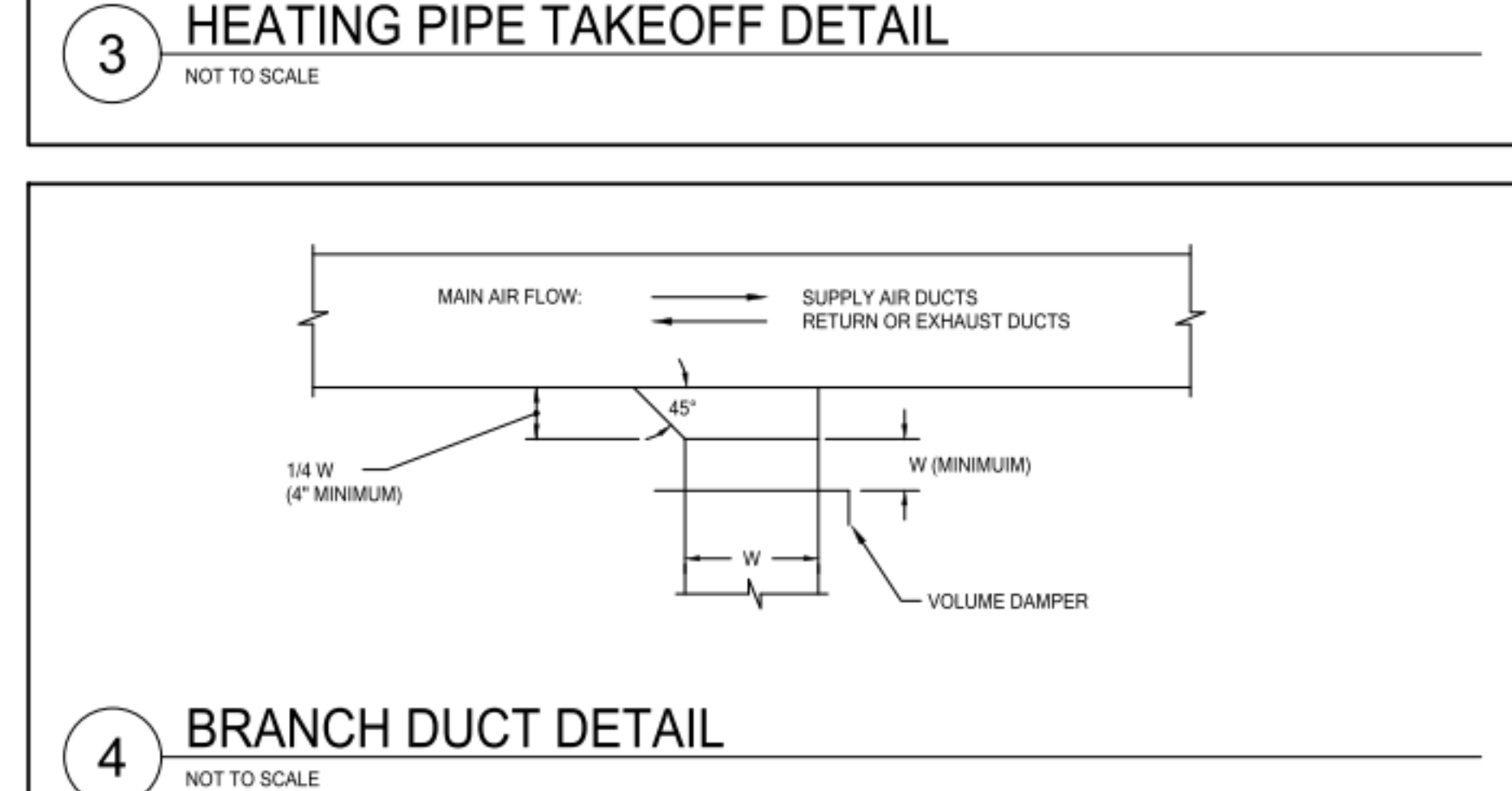
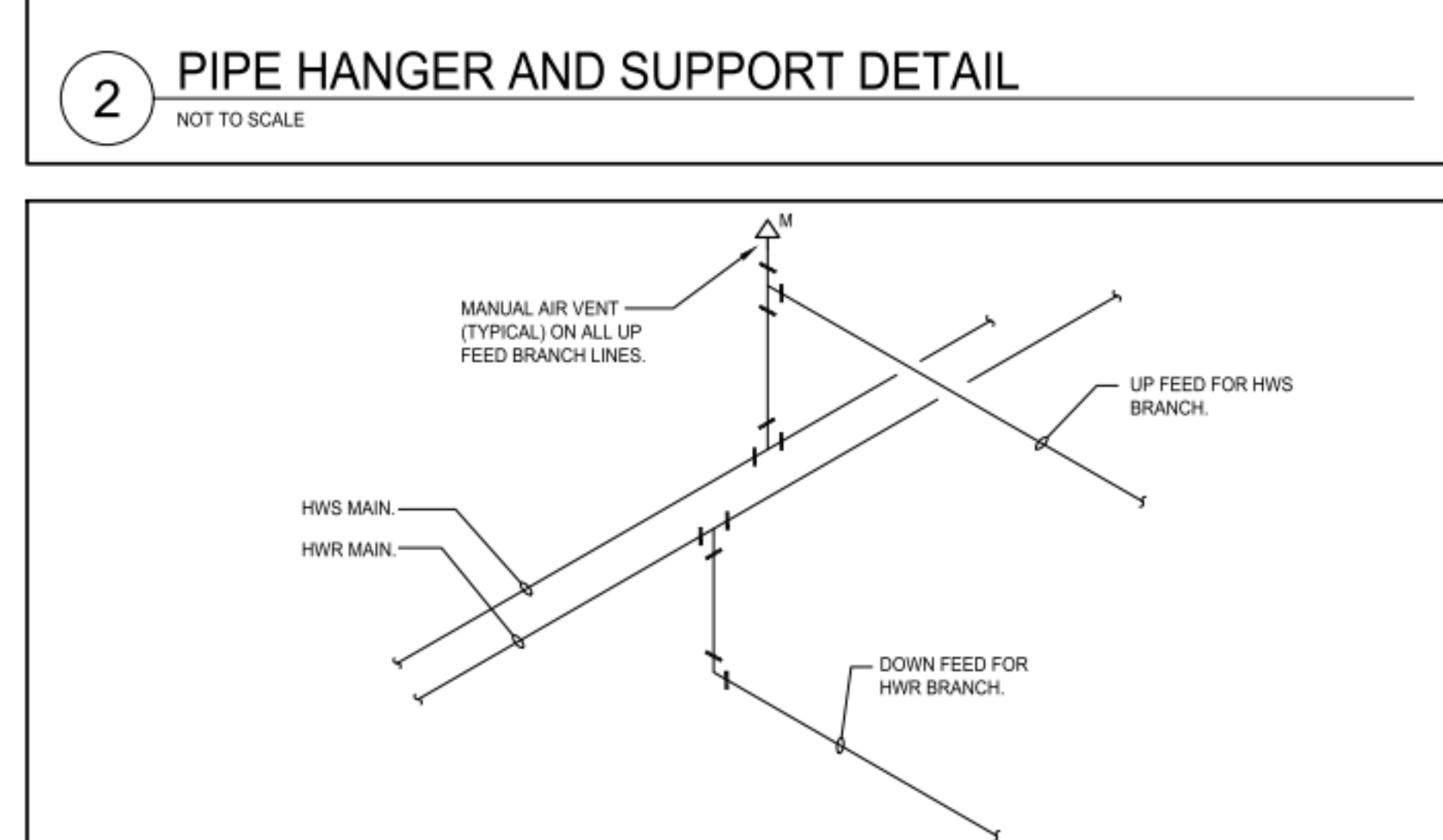
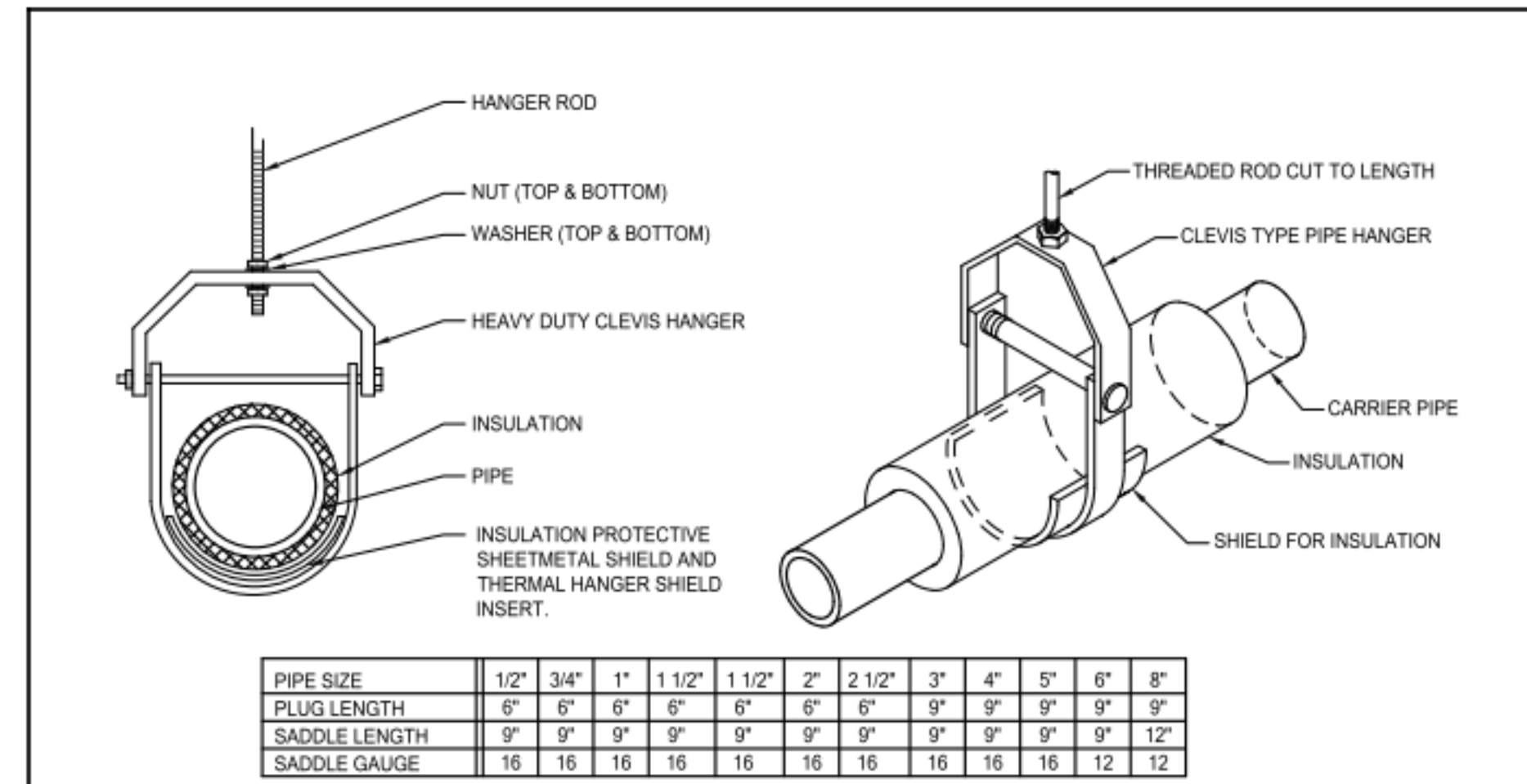
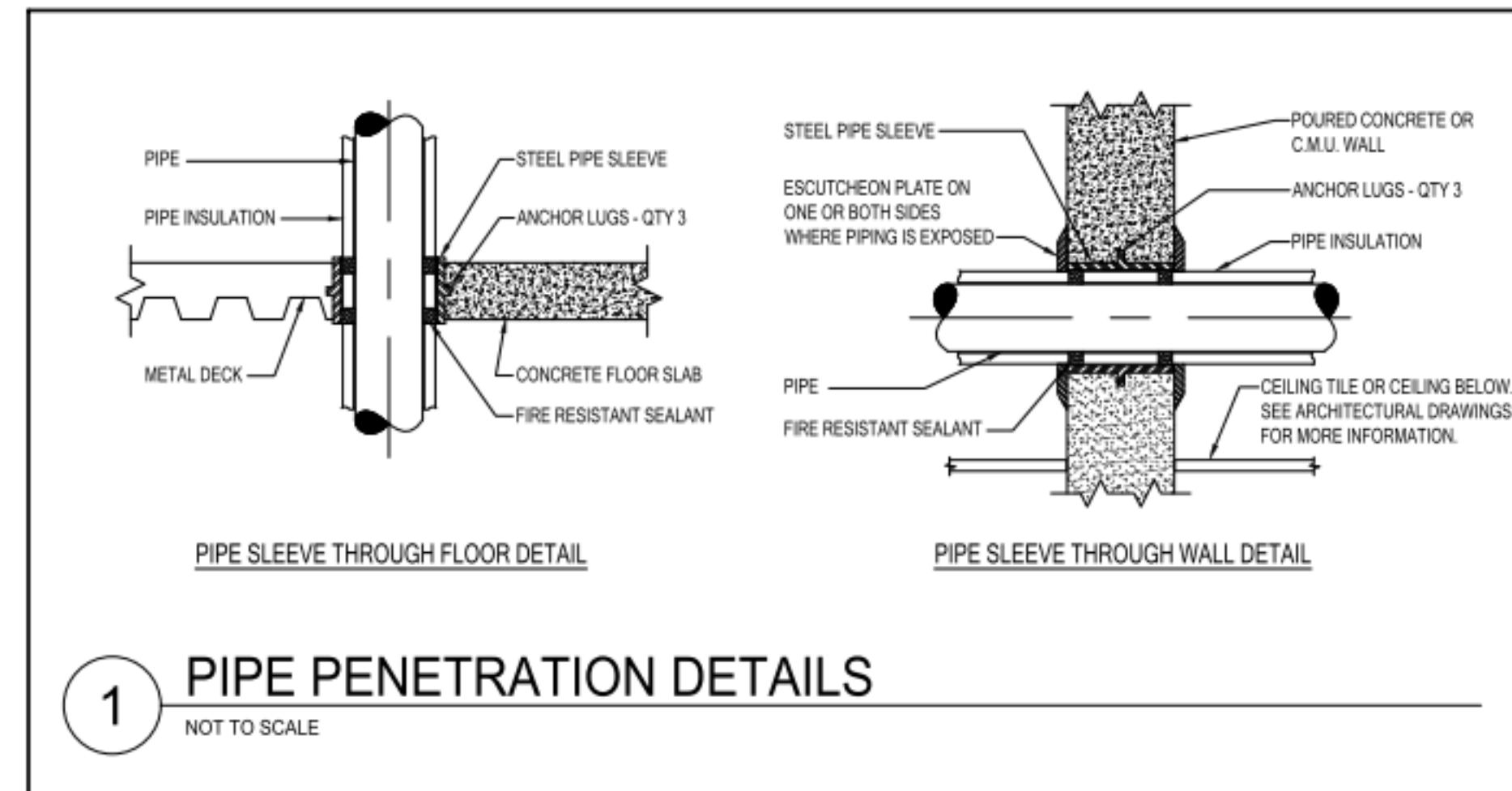
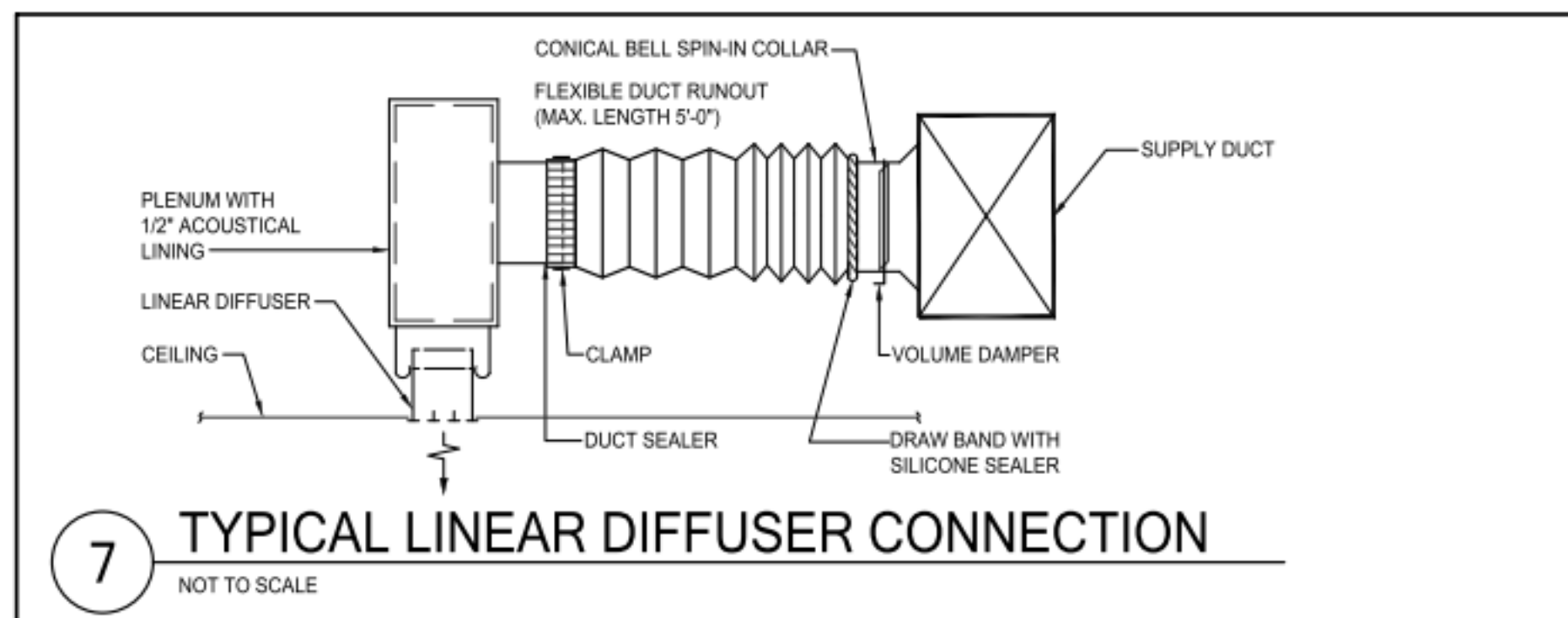
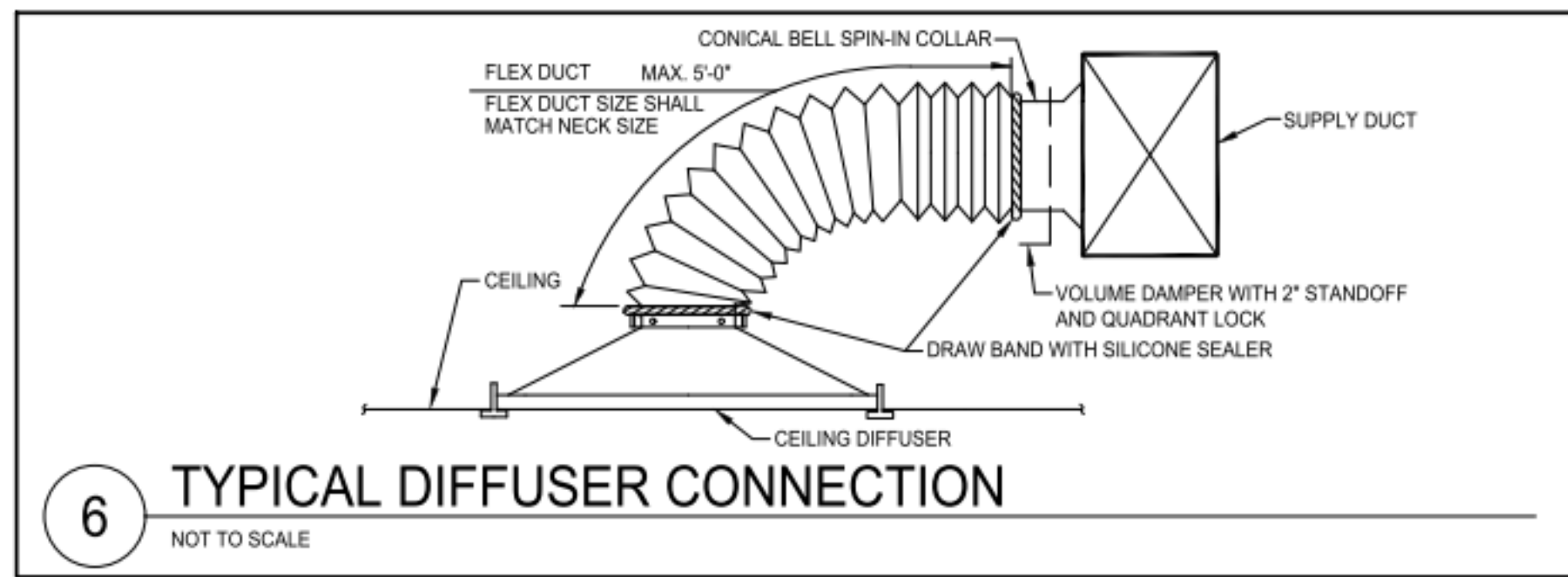
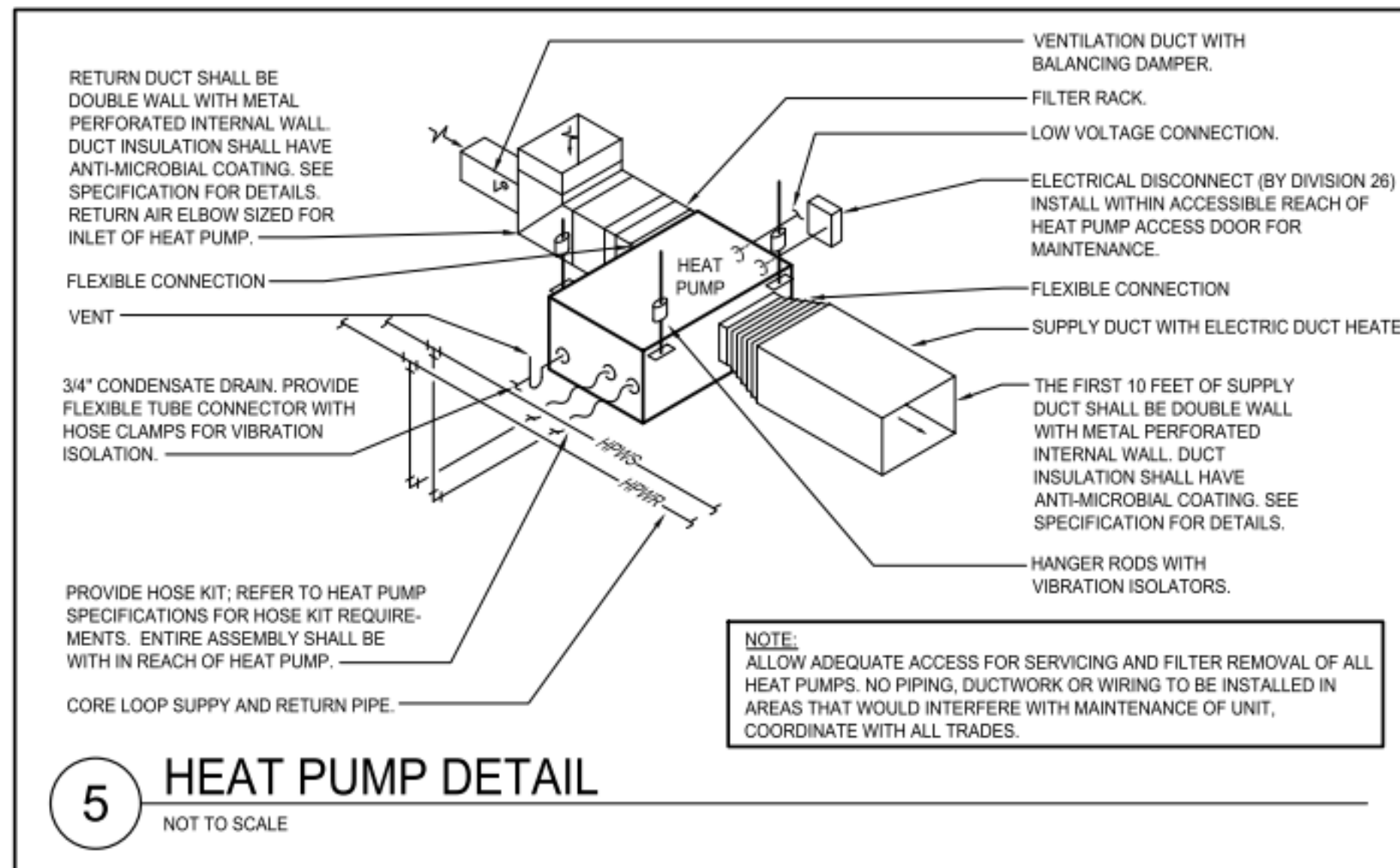
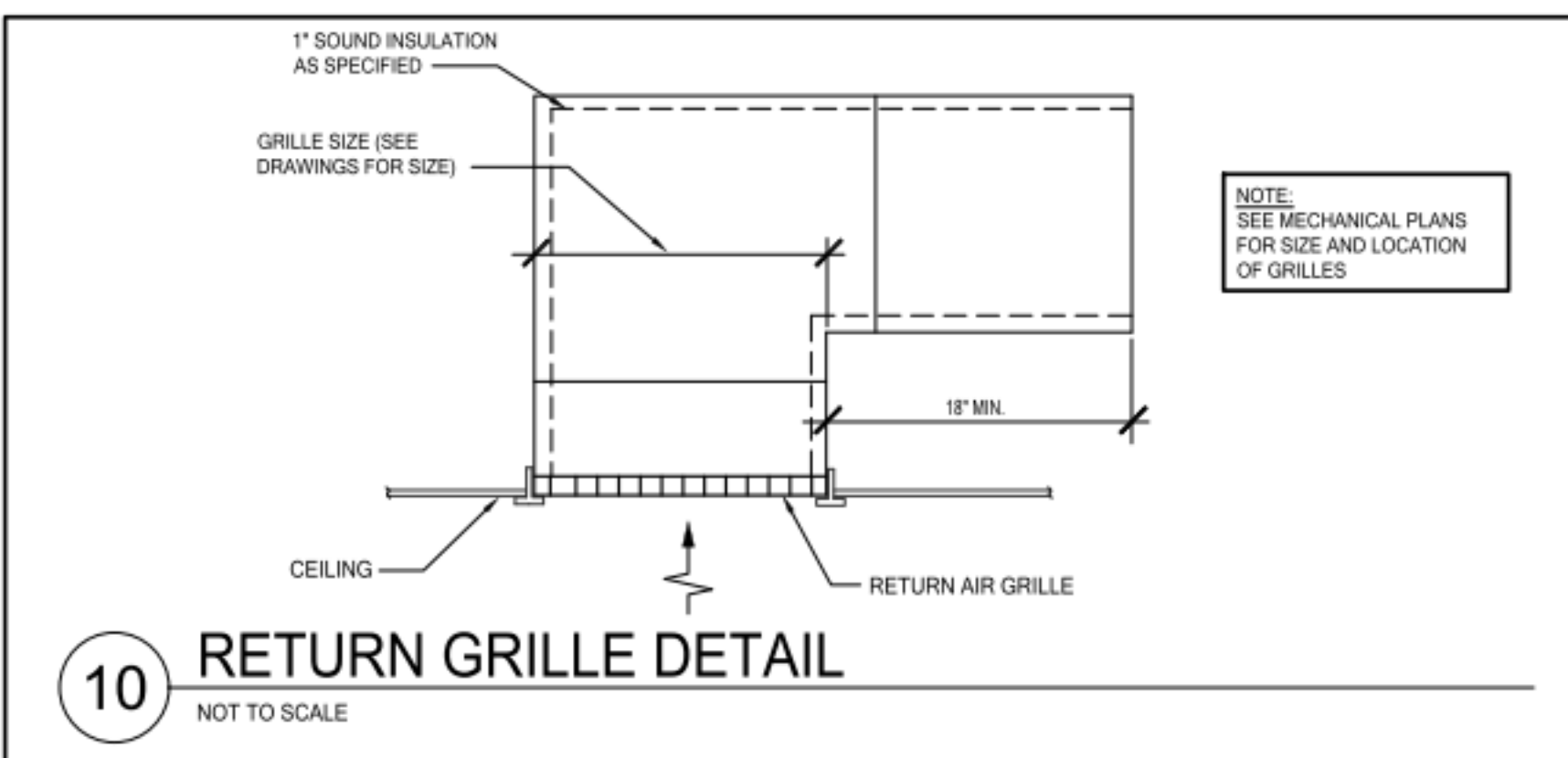
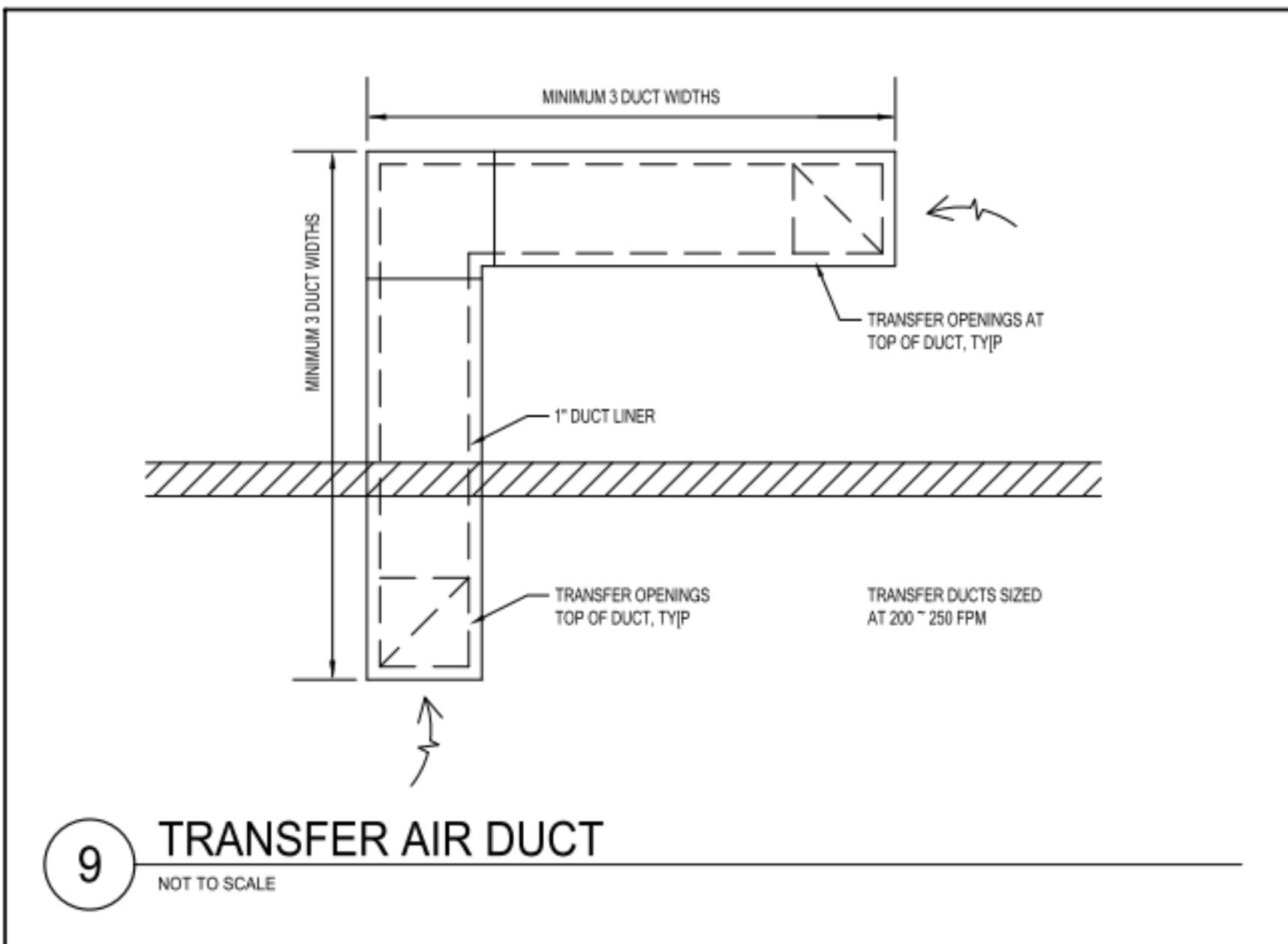
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

signature: *Mike Dolejs*
printed name: MIKE DOLEJS
reg. #: 14204
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Addendum #1	1	9/10/24

MECHANICAL DETAILS
sheet title:
sheet number:
M7.1



WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE

CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262
IHS PROJECT # GP19S1079C8

ELECTRICAL DRAWINGS



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WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

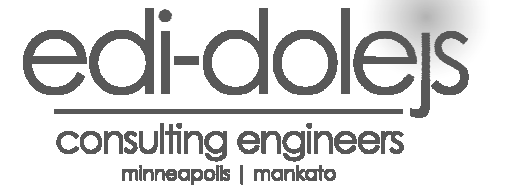
project #: 020053.00
date: 07/22/2022
drawn by: LLA
checked by: LDB

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

signature: *Janey S. Hruby*

printed name: JAY S. HRUBY P.E.
reg #: 8782

sign date: 07/22/2022



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E4.1	Schedules - Electrical
E4.2	Schedules - Electrical
E4.3	Schedules - Electrical

E5.1 Details - Electrical

ELECTRICAL TITLE SHEET
sheet number: **E0.1**

ELECTRICAL SYMBOL LEGEND

HT AFF	SYMBOL	DESCRIPTION	HT AFF	SYMBOL	DESCRIPTION	HT AFF	SYMBOL	DESCRIPTION	HT AFF	SYMBOL	DESCRIPTION
	○	SURFACE MOUNTED DOWNLIGHT (TYPE DENOTED)	20"	⊕	MULTIOUTLET ASSEMBLY (TYPE DENOTED)	90"	HEF1	FIRE ALARM HORN		PA	PUBLIC ADDRESS
AS NOTED	○	WALL MOUNTED LIGHT (TYPE DENOTED)	20"	⊕	MULTIOUTLET ASSEMBLY (TYPE DENOTED)	90"	HEF1 1104	FIRE ALARM HORN W/STROBE (CANDELAS)		PB	FULL BOX OR PUSHBUTTON
	○	RECESSED LIGHT (TYPE DENOTED)	84"	⊕	CLOCK (TYPE DENOTED)	90"	HEF2	CONDUIT CONCEALED BELOW FLOOR		PE	PNEUMATIC ELECTRICAL SWITCH DESIGNATION
PER SCHED	○	POLE MOUNTED LIGHT (TYPE DENOTED)		⊕	POWER POLE (OPEN OFFICE STYLE)	90"	HEF3	CONDUIT EXPOSED		PF	PHASE
PER SCHED	○	POLE MOUNTED FLOODLIGHT (TYPE DENOTED)	AS NOTED	⊕	SPECIAL RECEPT. OR CONN. (SEE SCHEDULE)	90"	HEF3 1104	CONDUIT TRANSITION UP		PIV	PIST INDICATING VALVE
	○	SURFACE LIGHT (TYPE DENOTED)	AS NOTED	⊕	SPECIAL CONNECTION (SEE SCHEDULE)	90"	HEF4	CONDUIT TRANSITION DOWN		PNL	PANEL
	○	SUSPENDED OR PENDANT LIGHT (TYPE DENOTED)	AS NOTED	⊕	JUNCTION BOX	90"	HEF5	CONDUIT STUBBED OUT		PP	POWER POLE
	○	RECESSED LIGHT (TYPE DENOTED)		⊕	GROUND ROD (PLAN VIEW)	90"	HEF5 1104	BRANCH CIRCUIT HOME RUN		PR	PAIR
	○	STRIP LIGHT (TYPE DENOTED)		⊕	LADDER RACK (TYPE DENOTED)	90"	HEF6	CONDUIT SLEEVE (SIZE DENOTED)		PRV	PRIMARY
AS NOTED	○	TRACK AND TRACK LIGHT (TYPES DENOTED)		⊕	GROUND CONNECTION - EXOTHERMIC WELD	90"	HEF7	CABLE TRAY (TYPE DENOTED)		PROJ	PROJECTION
96"	○	EMERGENCY BATTERY LIGHT (TYPE DENOTED)		⊕	UTILITY SERVICE POWER POLE (SITE)	80"	HEF8	LADDER RACK (TYPE DENOTED)		PRV	POWER ROOF VENTILATOR
12"	○	EXIT SIGN (TYPE DENOTED)		⊕	FLOOR BOX FURNITURE FEED (TYPE AS NOTED)	80"	HEF9	UNDERFLOOR RACEWAY SYSTEM		PT	POTENTIAL TRANSFORMER
AS NOTED	○	LIGHT FIXTURE WITH EMERGENCY BALLAST	VERIFY	⊕	SURFACE BRANCH CIRCUIT PANEL (250-V OR LESS)	48"	HEF10	FLOOR BOX WITH DATA (QUANTITIES AS NOTED)		PVC	POLYVINYL CHLORIDE (CONDUIT)
AS NOTED	○	NIGHT LIGHT FIXTURE WITH EMERGENCY BALLAST	VERIFY	⊕	RECESSED BRANCH CIRCUIT PANEL (250-V OR LESS)	48"	HEF11	FLOOR BOX WITH RECEPTACLE (QUANTITIES AS NOTED)		PWR	POWER
AS NOTED	○	LIGHT ON CORD REEL (TYPE DENOTED)	VERIFY	⊕	SURFACE BRANCH CIRCUIT PANEL (277/480 VOLT)	48"	HEF12	FLOOR BOX W/RECEPTACLE & DATA (QUANTITIES AS NOTED)		QUAN	QUANTITY
AS NOTED	○	LIGHTING CHANNEL WIRE (TYPE DENOTED)	VERIFY	⊕	RECESSED BRANCH PANEL (277/480 VOLT)	48"	HEF13	FLOOR BOX WITH RECEPTACLE & DATA (QUANTITIES AS NOTED)		RCPT	RECEPTACLE
	○	SINGLE POLE SW.	VERIFY	⊕	POWER OR DISTRIBUTION PANEL		HEF14	POKE THROUGH WITH DATA (QUANTITIES AS NOTED)		REQD	REQUIRED
	○	2 POLE SINGLE THROW SW.	VERIFY	⊕	SWITCHBOARD MAIN		HEF15	POKE THROUGH WITH RECEPTACLE (QUANTITIES AS NOTED)		RM	ROOM
	○	3-WAY SW.	VERIFY	⊕	SPECIAL CABINET (TYPE DENOTED)		HEF16	POKE THROUGH WITH RECEPTACLE & DATA (QUANTITIES AS NOTED)		RSC	RIGID STEEL CONDUIT
	○	4-WAY SW.	VERIFY	⊕	TRANSFORMER (TYPE DENOTED)		HEF17	TELEPHONE OUTLET (TYPE DENOTED)		RTU	ROOF TOP UNIT
	○	KEYED SW.	VERIFY	⊕	GROUND BAR	20"	HEF18	WALL TELEPHONE OUTLET (TYPE DENOTED)		SEC	SURFACE CONDUIT
	○	SW. W/PILOT	VERIFY	⊕	ADJUSTABLE SPEED DRIVE	48"	HEF19	INFORMATION OUTLET (TYPE DENOTED)		SEC	SECONDARY
	○	SEPARATE PILOT LIGHT	VERIFY	⊕	GENERATOR (KVA DENOTED)	20"	HEF20	INTERCOM OUTLET LOCATION		SH	SHIELD
	○	DIMMER SWITCH	VERIFY	⊕	MOTOR (SEE SCHEDULE)	20"	HEF21	TELEVISION OUTLET		SHM	SIMILAR
	○	MOMENTARY CONTACT SWITCH	VERIFY	⊕	DAMPEN MOTOR	48"	HEF22	INTERCOM OUTLET LOCATION		SIN	SOLID NEUTRAL
	○	OCCUPANCY SENSOR SWITCH	VERIFY	⊕	MANUAL MTR. STR. (W/OVERLOADS)	20"	HEF23	TELEVISION OUTLET		SPC	SPECIFICATION
	○	MOMENTARY CONTACT SWITCH	VERIFY	⊕	MAG. MOTOR STARTER OR CONTACTOR	20"	HEF24	TELEVISION OUTLET		SPR	SPEAKER
	○	TIMER SWITCH	VERIFY	⊕	COMB. MOTOR STARTER (NON-FUSED)	20"	HEF25	TELEVISION OUTLET		SP	SPARE
	○	TIME DELAY SWITCH	VERIFY	⊕	COMB. MOTOR STARTER (FUSED)	48"	HEF26	TELEVISION OUTLET		SR	SURFACE RACEWAY
	○	FAN SPEED CONTROL	VERIFY	⊕	EQUIPMENT GROUND OUTLET	20"	HEF27	TELEVISION OUTLET		SS	STAINLESS STEEL
	○	MOTOR HORSEPOWER RATED SWITCH	AS NOTED	⊕	SAFETY DISC. SW. (NON-FUSED)	20"	HEF28	TELEVISION OUTLET		STA	STATION
	○	PUSH BUTTON	VERIFY	⊕	SAFETY DISC. SW. (FUSED)	AS NOTED	HEF29	TELEVISION OUTLET		STD	STANDARD
	○	SINGLE RECEPT.	VERIFY	⊕	BUS DUCT WITH PLUG UNDISCONNECT (FUSED)	84"	HEF30	TELEVISION OUTLET		SURF	SURFACE MOUNTED
	○	DUPLEX RECEPT.	VERIFY	⊕	VARIABLE FREQUENCY DRIVE	84"	HEF31	TELEVISION OUTLET		SW	SWITCH
	○	SPLIT DUPLEX RECEPT.	VERIFY	⊕	RELAY	72"	HEF32	TELEVISION OUTLET		SWB	SWITCHBOARD
	○	ISOLATED GROUND RECEPT (DUPLEX SHOWN)	VERIFY	⊕	RELAY	72"	HEF33	TELEVISION OUTLET		SYM	SYMMETRICAL
	○	RECEPT ON EMERGENCY CXT (DUPLEX SHOWN)	VERIFY	⊕	ENCLOSED CIRCUIT BREAKER	48"	HEF34	TELEVISION OUTLET		SYS	SYSTEM
	○	FOURPLEX RECEPT.	VERIFY	⊕	PRESSURE SWITCH	84"	HEF35	TELEVISION OUTLET		TEL	TELEPHONE
	○	FOURPLEX RECEPTACLE ON EMERGENCY CIRCUIT	AS NOTED	⊕	FLOAT SWITCH	84"	HEF36	TELEVISION OUTLET		TELDA	TELEPHONE DATA
	○	240 VOLT RECEPT.	AS NOTED	⊕	ISOLATED GROUND RECEPT (DUPLEX SHOWN)	84"	HEF37	TELEVISION OUTLET		TERM	TERMINAL
	○	DUPLEX RECEPT. (RELAY CONTROLLED)	AS NOTED	⊕	RECEPT ON DROP CORD (DUPLEX SHOWN)	48"	HEF38	TELEVISION OUTLET		TL	TWIST LOCK
	○	RECEPT ON DROP CORD (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF39	TELEVISION OUTLET		TR	TAMPER RESISTANT
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF40	TELEVISION OUTLET		T-TAT	TELEPHONE TERMINAL
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF41	TELEVISION OUTLET		TV	TELEVISION
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF42	TELEVISION OUTLET		TVT	TELEVISION TERMINAL CABINET
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF43	TELEVISION OUTLET		TY	TYPE
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF44	TELEVISION OUTLET		UC	UNDER COUNTER
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF45	TELEVISION OUTLET		UG	UNDERGROUND ELECTRICAL UNDERGROUND
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF46	TELEVISION OUTLET		UH	UNIT HEATER
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF47	TELEVISION OUTLET		UGR	UNDERGROUND TELEPHONE UNDERGROUND
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF48	TELEVISION OUTLET		UL	UTILITY
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF49	TELEVISION OUTLET		UV	UNIT VENTILATOR OR ULTRAVIOLET
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF50	TELEVISION OUTLET		V	VOLT
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF51	TELEVISION OUTLET		VA	VOLT-AMPERES
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF52	TELEVISION OUTLET		VD	VIDEO DISPLAY TERMINAL
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF53	TELEVISION OUTLET		VERT	VERTICAL
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF54	TELEVISION OUTLET		VFL	VARIABLE FREQUENCY DRIVE
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF55	TELEVISION OUTLET		VOL	VOLUME
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF56	TELEVISION OUTLET		W	WATT
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF57	TELEVISION OUTLET		W	WITH
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF58	TELEVISION OUTLET		WG	WIRE GUARD
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF59	TELEVISION OUTLET		WH	WATER HEATER
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF60	TELEVISION OUTLET		WO	WITHOUT
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF61	TELEVISION OUTLET		WP	WEATHERPROOF
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF62	TELEVISION OUTLET		XFR	TRANSFORMER
	○	RECEPT ON CORD REEL (DUPLEX SHOWN)	AS NOTED	⊕	FOURPLEX RECEPT.	48"	HEF63	TELEVISION OUTLET		XFR	TRANSFER

ELECTRICAL ABBREVIATIONS

1P	1 POLE (3P, 4P, ETC.)	FU	FUSE	PA	PUBLIC ADDRESS
A	AMPERE	FUDS	FUSED SAFETY DISCONNECT SWITCH	PE	FALL BOX OR PUSHBUTTON
AC	ABOVE COUNTER OR AIR CONDITIONER	GA	GALVANEZED	PEE	PNEUMATIC ELECTRICAL SWITCH DESIGNATION
AQLG	AUTOMATIC LIGHTING	GAL	GALLON	PF	POWER FACTOR
ADO	AUTOMATIC DOOR OPENER	GALV	GALVANIZED	PH	PHASE
AF	AMP FRAME	GC	GENERAL CONTRACTOR	PIV	PIST INDICATING VALVE
AFF	ABOVE FINISHED FLOOR	GEN	GENERATOR	PNL	PANEL
AFG	ABOVE FINISHED GRADE	GF1	GROUND FAULT CIRCUIT INTERRUPTER	PP	POWER POLE
AFI	ARC FAULT CIRCUIT INTERRUPTER	GFP	GROUND FAULT PROTECTOR	PR	PAIR
AHU	AIR HANDLING UNIT	GSS	GROUNDING STRIP	PRV	PRIMARY
AL	ALUMINUM	GS	GROUNDING STRIP	PROJ	PROJECTION
ALT	ALTERNATE	GS	GROUNDING STRIP	PRV	POWER ROOF VENTILATOR
AMP	AMPERE	GYP	GYP BOARD	PT	POTENTIAL TRANSFORMER
AMPL	AMPLIFIER	HOA	HANDS-OFF AUTOMATIC SWITCH	PVC	POLYVINYL CHLORIDE (CONDUIT)
ANNUN	ANNUNCIATOR	HORIZ	HORIZONTAL	PWR	POWER
APPROX	APPROXIMATELY	HPF	HIGH POWER FACTOR	QUAN	QUANTITY
AQ-STAT	AQUASTAT	HT	HEIGHT	RCPT	RECEPTACLE
ARCHIT	ARCHITECT/ARCHITECTURAL	HTG	HEATING	REQD	REQUIRED
AS	AS NOTED	HTR	HEATER	RM	ROOM
AT	AMP TRIP	HV	HIGH VOLTAGE	RSC	RIGID STEEL CONDUIT
ATS	AUTOMATIC TRANSFER SWITCH	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	RTU	ROOF TOP UNIT
AUTO	AUTOMATIC	HWP	HYDRONIC WATER PUMP	SEC	SURFACE CONDUIT
AUX	AUXILIARY	IC	INTERLOCKING CAPACITY	SEC	SECONDARY
AV	AUDIO VISUAL	IG	ISOLATED GROUND	SH	SHIELD
AWG	AMERICAN WIRE GAUGE	IG	ISOLATED GROUND	SHM	SIMILAR
BATT	BATTERY	IC	ISOLATED GROUND	SIN	SOLID NEUTRAL
BD	BOARD	INCAND	INCANDESCENT	SPC	SPECIFICATION
BLDG	BUILDING	IR	INFRARED	SPR	SPEAKER
BMS	BUILDING MANAGEMENT SYSTEM	IW	INTERLOCK WITH	SP	SPARE
C	CONDUIT	J-BOX	JUNCTION BOX	SR	SURFACE RACEWAY
CAB	CABINET	KV	KILOVOLT	SS	STAINLESS STEEL
CAT	CATALOG	KVA	KILOVOLT-AMPERE	STA	STATION
CATV	CABLE TELEVISION	KVAR	KILOVOLT-AMPERE REACTIVE	STD	STANDARD
CB	CIRCUIT BREAKER	KWH	KILOWATT HOUR	SURF	SURFACE MOUNTED
CCTV	CLOSED CIRCUIT TELEVISION	LOC	LOCATE OR LOCATION	SW	SWITCH
CKT	CIRCUIT	LTG	LIGHTING	SWB	SWITCHBOARD
CLG	CEILING	LTNG	LIGHTNING	SYM	SYMMETRICAL
COMB	COMBINATION	LV	LOW VOLTAGE	SYS	SYSTEM
COMP	COMPRESSOR	MAX	MAXIMUM	TEL	TELEPHONE
CONN	CONNECTION	MAG S	MAGNETIC STARTER	TELDA	TELEPHONE DATA
CONSTR	CONSTRUCTION	MC	MOMENTARY CONTACT MECHANICAL CONTACTOR	TERM	TERMINAL
CONT	CONTINUATION OR CONTINUOUS	MCB	MAIN CIRCUIT BREAKER	T-TAT	TELEPHONE TERMINAL
CONTR	CONTRACTOR	MCC	MOTOR CONTROL CENTER	TV	TELEVISION
CONV	CONVECTOR	MCC	MOTOR CONTROL CENTER	TVT	TELEVISION TERMINAL CABINET
CP	CIRCULATING PUMP	MDP	MAIN DISTRIBUTION PANEL	TY	TYPE
CRT	CATHODE-RAY TUBE	MFR	MANUFACTURER	UC	UNDER COUNTER
CT	CURRENT TRANSFORMER	MFD	MANUF. DISCONNECT SWITCH	UG	UNDERGROUND ELECTRICAL UNDERGROUND
CTR	CENTER	MH	MANHOLE	UH	UNIT HEATER
CU	COPPER	MIC	MICROPHONE	UGR	UNDERGROUND TELEPHONE UNDERGROUND
DCP	DOMESTIC WATER CIRCULATING PUMP	MISC	MISCELLANEOUS	UL	UTILITY
DEPT	DEPARTMENT	MLO	MAIN LUGS ONLY	UV	UNIT VENTILATOR OR ULTRAVIOLET
DET	DETAIL	MNA	MANUAL MOTOR STARTER	V	VOLT
DA	DIAMETER	MNA	MANUAL MOTOR STARTER	VA	VOLT-AMPERES

WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

project #: 020053.00

date: 07/22/2022

drawn by: LLA

checked by: LDB

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

signature: *Jay S. Hruby*

printed name: JAY S. HRUBY P.E.

reg. #: 8782

sign date: 07/22/2022

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FLOOR PLAN -
PHASE 2 -
ELECTRICAL
DEMOLITION

sheet title:
sheet number:

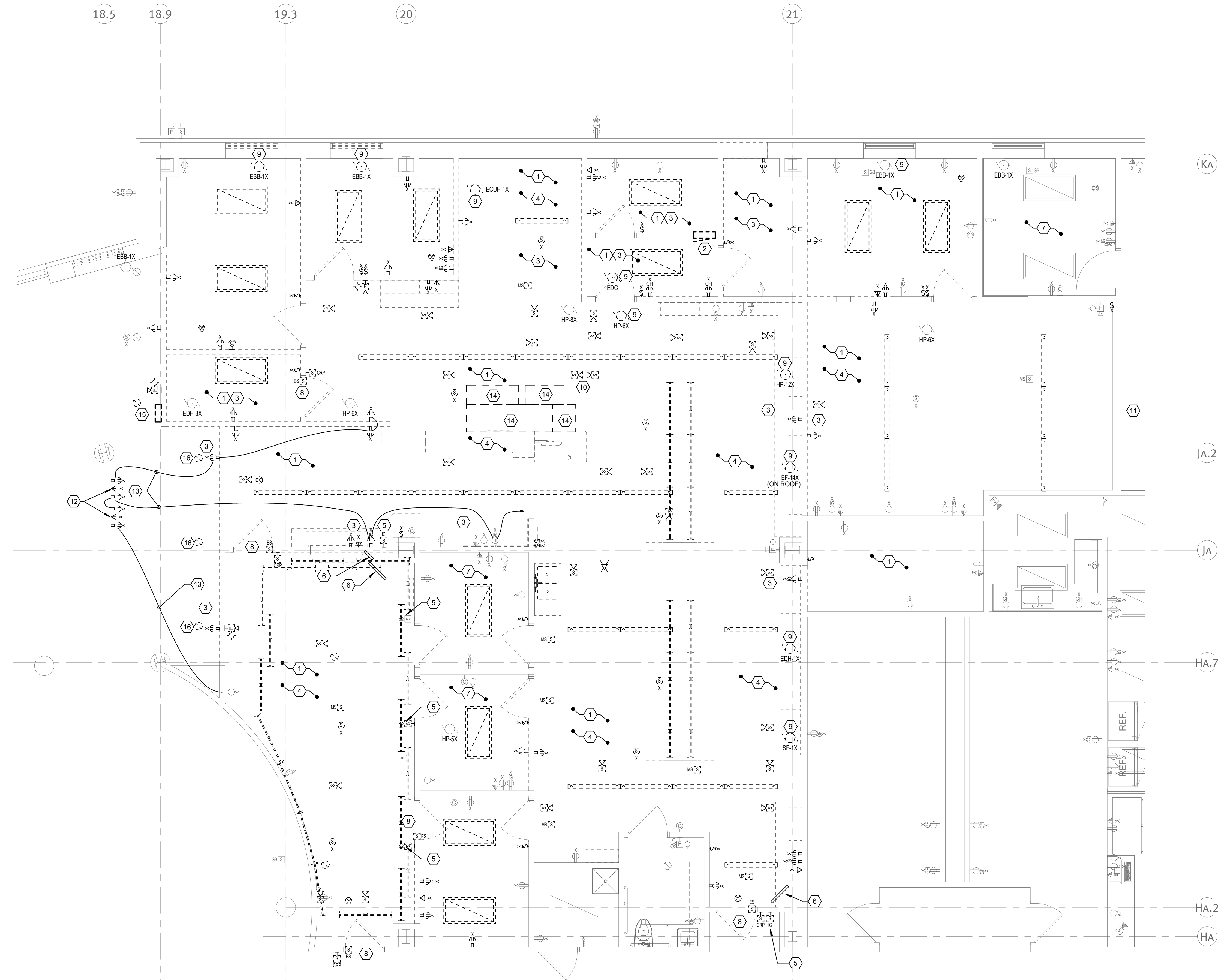
E1.3

GENERAL NOTES

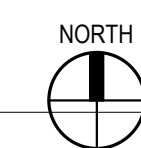
- FOR ITEMS TO BE REMOVED, REMOVE CONDUIT AND WIRING BACK TO NEAREST JUNCTION BOX UNLESS NOTED OTHERWISE. LABEL WIRES AS SPARE. IF DEVICES IS ON ITS OWN CIRCUIT, REMOVE WIRING FROM CIRCUIT BREAKER AND LABEL CIRCUIT BREAKER AS 'SPARE'. FOR DEVICES SHOWN TO BE REMOVED IN WALLS THAT REMAIN, REMOVE DEVICE AND PROVIDE BLANK STAINLESS STEEL COVER PLATE. REMOVE WIRING AND CONDUIT IN ALL WALLS AND CEILING BEING REMOVED. ENSURE CONTINUITY TO ALL EXISTING RECEPTACLES, LIGHTS AND ALL OTHER DEVICES THAT REMAIN.
- FIELD VERIFY EXISTING CONDITIONS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CHANGES WHICH OCCUR AFTER BIDS ARE SUBMITTED DUE TO EXISTING CONDITIONS.
- CUTTING AND PATCHING AS REQUIRED FOR COMPLETION OF ELECTRICAL WORK SHALL BE CARRIED OUT BY THIS CONTRACTOR.
- EXISTING BRANCH CIRCUITS FOR PHARMACY AREA ARE HOME RUN TO ELECTRICAL ROOM P10. EXISTING BRANCH CIRCUITS FOR THE AMBULANCE GARAGE AREA ARE HOME RUN TO ROOM W31.
- DATA/COMMUNICATION CIRCUITS FOR PHARMACY AREA ARE HOME RUN TO TELECOM ROOM T40P12. DATA/COMMUNICATION CIRCUITS FOR AMBULANCE GARAGE AREA ARE HOME RUN TO TELECOM ROOM W58.

PLAN NOTES

- DISCONNECT AND REMOVE LIGHTING EQUIPMENT IN THIS SPACE, INCLUDING LIGHT FIXTURES, SWITCHES, EMERGENCY AND NORMAL LIGHTING WIRING. ALSO FIRE ALARM DEVICES AS SHOWN. MAINTAIN CONTINUITY TO REMAINING CIRCUITS.
- RELOCATE EXISTING 100 AMP 480/277 VOLT 3 PHASE PANELBOARD H7HP AND ASSOCIATED CIRCUITS TO NEW LOCATION SHOWN. EXTEND CIRCUITS AS NEEDED. REFER TO PANELBOARD SCHEDULE.
- DISCONNECT AND REMOVE DEVICES AND CIRCUITS SHOWN IN WALLS TO BE REMOVED. WHERE CONDUITS FOR DEVICES COME FROM FLOOR SAW CUT AND PROVIDE FLOOR BOXES AND WIRING AT LOCATIONS TO ENABLE CIRCUIT CONTINUITY. UTILIZE ON GRADE BOXES SIMILAR TO WIREMOLD 880 SERIES ONE GANG OR TWO GANG WITH SOLID COVERS. COLOR BY ARCHITECT.
- EXISTING CEILING MOUNTED DEVICES SUCH AS CAMERAS, MOTION SENSORS, EXIT SIGNS, SPEAKERS, WIRELESS ACCESS ARE TO BE DISCONNECTED TO FACILITATE THE CEILING REPLACEMENT. RELOCATE AND RECONNECT AT NEW CEILING LOCATIONS AS SHOWN ON SHEET E3.2.
- DISCONNECT AND REMOVE EXISTING INTERCOM SYSTEM. REPLACE WITH NEW INTERCOM SYSTEM AS SHOWN ON SHEET E3.2.
- RELOCATE EXISTING MONITORS TO NEW LOCATIONS AS SHOWN ON SHEET E3.2.
- EXISTING SPACE TO REMAIN AS-IS UNLESS NOTED OTHERWISE.
- DISCONNECT AND REMOVE EXISTING DOOR CONTROLS TO ENABLE DOOR REPLACEMENT. SALVAGE EXISTING CARD READER FOR REUSE BY OWNER'S VENDOR.
- DISCONNECT POWER TO EXISTING MECHANICAL EQUIPMENT IN THIS SPACE TO ENABLE REMOVAL BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE ASSOCIATED ELECTRICAL EQUIPMENT. COORDINATE WITH MECHANICAL CONTRACTOR.
- CONTRACTOR TO RELOCATE EXISTING POWER POLE WITH FOUR (4) POWER AND SIX (6) DATA CIRCUITS FEEDING THE DISPENSING UNIT AND OTHER ADJACENT EQUIPMENT. RELOCATE POWER POLE AND CIRCUITS TO NEW LOCATION AS SHOWN ON SHEET E3.2.
- PROVIDE NEW WIRING CONNECTION FOR EMERGENCY LIGHTING CIRCUIT FROM EXISTING LAMP CIRCUIT TO EXISTING EXIT LIGHT. UTILIZE TWO (2) #12 AWG PLUS ONE (1) #12 AWG GROUND.
- EXISTING SECURITY DESK POWER AND DATA CIRCUITS TO BE DISCONNECTED AND REMOVED.
- MAINTAIN CIRCUIT CONTINUITY OF EXISTING REMAINING POWER AND DATA CIRCUITS TO THE SECURITY DESK.
- EXISTING DISPENSING EQUIPMENT TO BE RELOCATED BY OWNER. CONTRACTOR TO RELOCATE POWER AND DATA CIRCUITS AT NEW LOCATION AS PER PLAN NOTE 10.
- EXISTING GENERATOR ALARM AND ANNUNCIATOR PANELS TO BE RELOCATED BY CONTRACTOR TO NEW LOCATION AS SHOWN ON SHEET E3.2. EXTEND WIRING AS NEEDED.
- DISCONNECT AND REMOVE EXISTING CEILING MOUNTED LIGHTS FROM CEILING SPACE AT THE BACK OF THE EXISTING SECURITY DESK.



1 Floor Plan - Phase 2 - Electrical Demolition
E1.3 1/4" = 1'-0" 0 2' 4' 8'



WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

project #: 020053.00

date: 07/22/2022

drawn by: LLA

checked by: LDB

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

signature: 

printed name: JAY S. HRUBY P.E.

reg. #: 8782

sign date: 07/22/2022

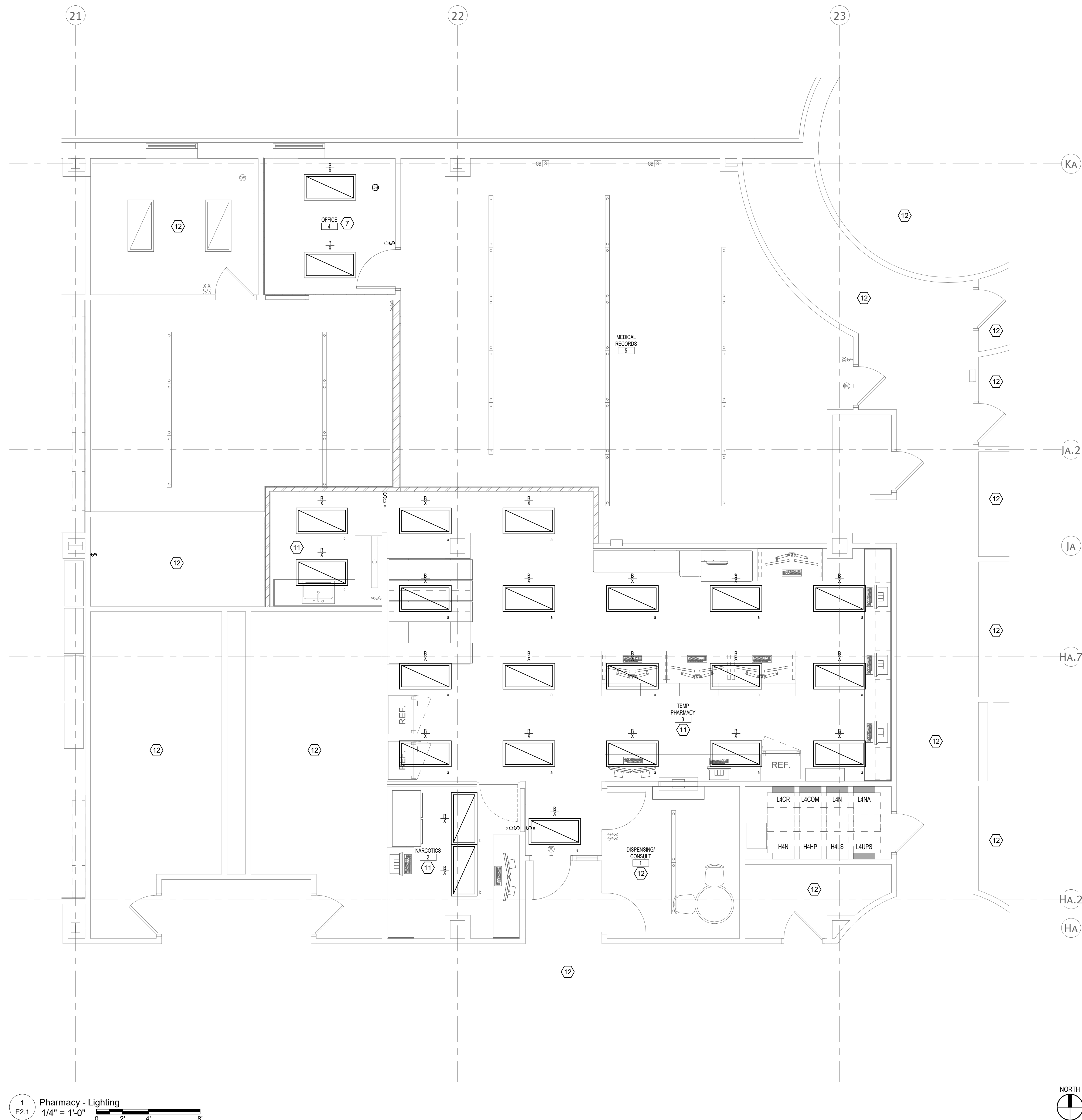
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FLOOR PLAN -
PHASE 1 -
LIGHTING

sheet number:
E2.1



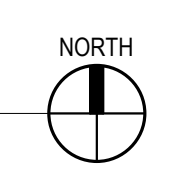
GENERAL NOTES

- PROVIDE AN ADDITIONAL ELECTRICAL CONNECTION TO ALL EMERGENCY LIGHT FIXTURES. ELECTRICAL CONNECTION TO BE FEED FROM UNSWITCHED LEG OF THE CIRCUIT FEEDING THE LIGHT FIXTURES IN THE ROOM/AREA THEY ARE LOCATED IN.
- PROVIDE PROPER NUMBER OF CONDUCTORS AND CONTROL WIRES TO ACHIEVE CIRCUITING AND LIGHTING CONTROL AS SHOWN.

PLAN NOTES

- WAITING:**
 - INTERIOR LIGHTING SHALL BE CONTROLLED WITH LOW-VOLTAGE OCCUPANCY SENSOR AND LOW-VOLTAGE SWITCH.
 - THE LOW-VOLTAGE WALL SWITCH/S AND SENSOR SHALL PROVIDE MANUAL (24 HOUR/7 DAYS A WEEK) CONTROL AS WELL AS, A TIME OF DAY "ON" SCHEDULE BETWEEN THE HOURS OF 7 A.M. TO 6 P.M. DURING THE WEEK-DAYS.
 - THE SENSOR/S SHALL ALSO PROVIDE AUTOMATIC "ON" (24 HOUR/7 DAYS A WEEK) CONTROL OF WITH A 15 MINUTE TIME-OUT SETTING AFTER HOURS WHICH WILL THEN TURN THE LIGHTS "OFF".
- STAFF ENTRY:**
 - THE LIGHTING SHALL BE CONTROLLED VIA CEILING MOUNTED OCCUPANCY SENSOR. THE CEILING MOUNTED OCCUPANCY SENSOR SHALL "TURN ON & OFF" ALL LIGHTING IN THE SPACE. WHEN NOT OCCUPIED THE TIME DELAY OFF SHALL BE SET AT 15 MINUTES.
- PROVIDE NEW WIRING BETWEEN THESE CIRCUITS AS PER PLAN NOTE #11 ON SHEET E1.1.
- FURNISH AND INSTALL (3)#12AWG IN 1/2" CONDUIT FROM PANEL H4N TO FEED NEW LIGHTING CIRCUITS AS NOTED IN AREA. SEE SHEET E3.1 FOR ADDITIONAL INFORMATION.
- FURNISH AND INSTALL (3)#12AWG IN 1/2" CONDUIT FROM PANEL H4N TO FEED NEW LIGHTING CIRCUITS AS NOTED IN AREA. SEE SHEET E3.1 FOR ADDITIONAL INFORMATION.
- FURNISH AND INSTALL (3)#12AWG IN 1/2" CONDUIT FROM PANEL H4LS TO FEED NEW EMERGENCY LIGHTING CIRCUITS AS NOTED IN PHARMACY AREA. SEE SHEET E3.1 FOR ADDITIONAL INFORMATION. PROVIDE CONNECTION TO EMERGENCY LIGHT CIRCUIT VIA GENERATOR TRANSFER DEVICE.
- SMALL OFFICE, EXAM & CONFERENCE/MEETING ROOMS:**
 - THE LIGHTING IN THE ROOM SHALL BE CONTROLLED VIA 0-10 VOLT DIMMER SWITCHES AND OCCUPANCY SENSOR/S.
 - THE 0-10 VOLT DIMMER SWITCHES SHALL "TURN ON/OFF/RAISE/LOWER" ALL LIGHTING IN THE SPACE.
 - THE OCCUPANCY SENSOR/S SHALL "TURN OFF" ALL LIGHTING IN THE SPACE WHEN THE OFFICE IS NOT OCCUPIED FOR A FIELD ADJUSTABLE TIME. TIME DELAY OFF SHALL BE SET AT 15 MINUTES.
 - THE SYSTEM SHALL BE CONFIGURED FOR MANUAL ON OPERATION.
- LARGE STORAGE ROOMS:**
 - LIGHTING SHALL BE CONTROLLED WITH LOW-VOLTAGE OCCUPANCY SENSOR AND LOW-VOLTAGE SWITCH.
 - THE LOW-VOLTAGE SWITCHES SHALL "TURN ON/OFF" ALL LIGHTING IN THE SPACE.
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- CORRIDORS:**
 - INTERIOR CORRIDOR LIGHTING LOW-VOLTAGE SWITCH AND TIME OF DAY.
 - THE LOW-VOLTAGE WALL SWITCH/S SHALL PROVIDE MANUAL "ON AND OFF" (24 HOUR/7 DAYS A WEEK) CONTROL OF SWITCH LEG (a). A TIME OF DAY "OFF" SCHEDULE BETWEEN THE HOURS OF 7 A.M. TO 6 P.M. DURING THE WEEK-DAYS.
 - WHEN SWITCH LEG (a) IS TURNED OFF LOW LEVEL WALKWAY NIGHT LIGHTING SWITCH LEG (b) SHALL BE TURNED ON. WHEN SWITCH LEG (a) IS TURNED ON LOW LEVEL WALKWAY NIGHT LIGHT SWITCH LEG (b) SHALL BE TURNED OFF.
- FURNISH AND INSTALL (3)#12AWG IN 1/2" CONDUIT FROM PANEL H5N TO FEED NEW LIGHTING CIRCUITS AS NOTED IN AREA. SEE SHEET E3.1 FOR ADDITIONAL INFORMATION.
- CONNECT NEW LIGHTING TO EXISTING ROOM LIGHTING CIRCUIT. PROVIDE NEW CONTROLS FOR FIXTURES AS SHOWN.
- NO ELECTRICAL WORK REQUIRED IN THIS ROOM/AREA, UNLESS NOTED ELSEWHERE.

1 Pharmacy - Lighting
E2.1 1/4" = 1'-0"



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100 LAKE TRAVERSE DRIVE
 SISSETON, SD 57262

project #: 020053.00

date: 07/22/2022

drawn by: LLA

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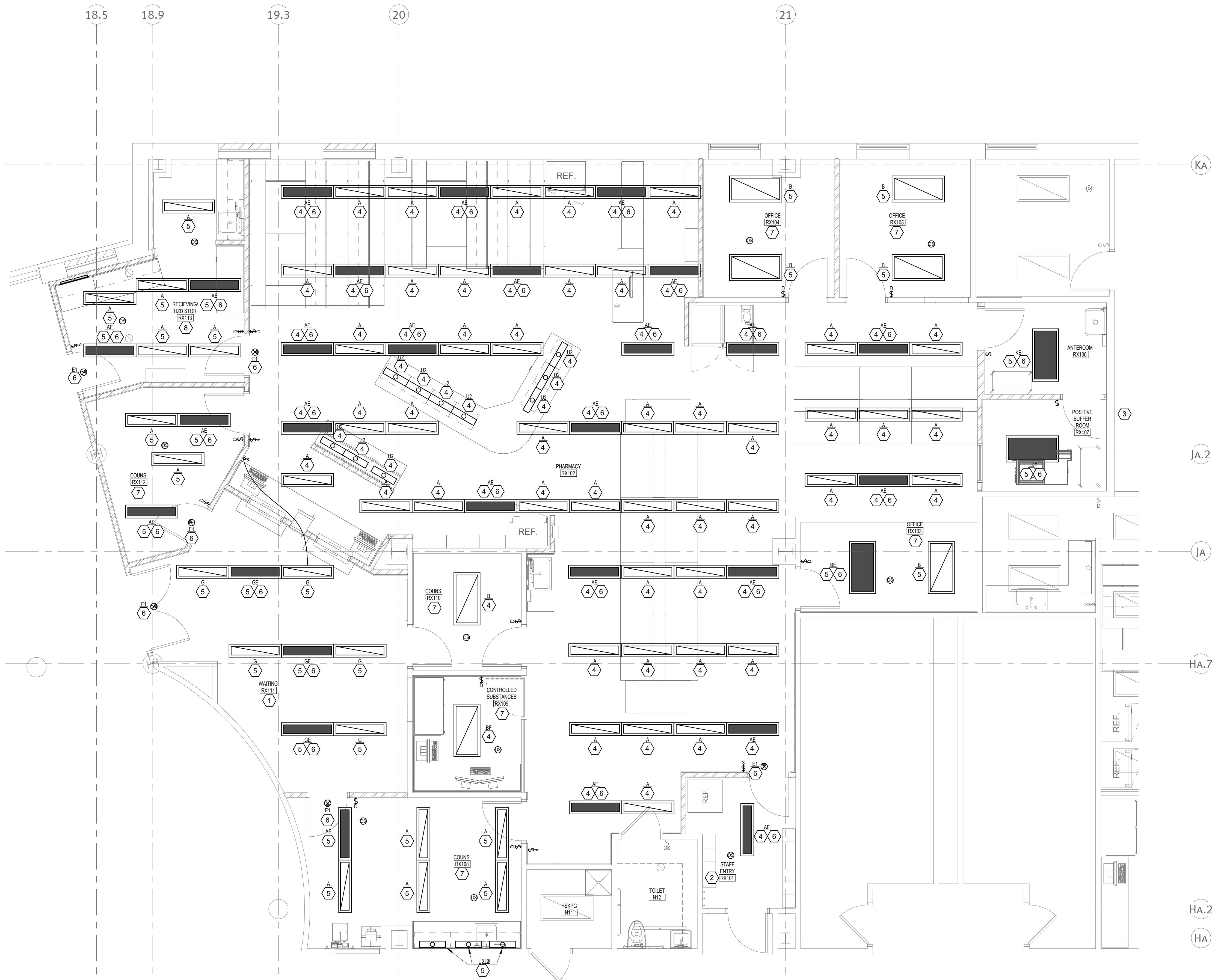
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FLOOR PLAN -
 PHASE 2 -
 LIGHTING

sheet number: **E2.3**



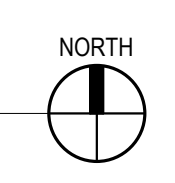
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PLAN NOTES

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- FURNISH AND INSTALL (3)#12AWG IN 1/2" CONDUIT FROM PANEL H4N TO FEED NEW LIGHTING CIRCUITS AS NOTED IN AREA. SEE SHEET E3.1 FOR ADDITIONAL INFORMATION.
- CONNECT NEW LIGHTING TO EXISTING ROOM LIGHTING CIRCUIT. PROVIDE NEW CONTROLS FOR FIXTURES AS SHOWN.
- NO ELECTRICAL WORK REQUIRED IN THIS ROOM/AREA, UNLESS NOTED ELSEWHERE.

1 Floor Plan - Phase 2 - Lighting
 E2.3 1/4" = 1'-0"



WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

project #: 020053.00

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FIRST FLOOR - POWER & SYSTEMS

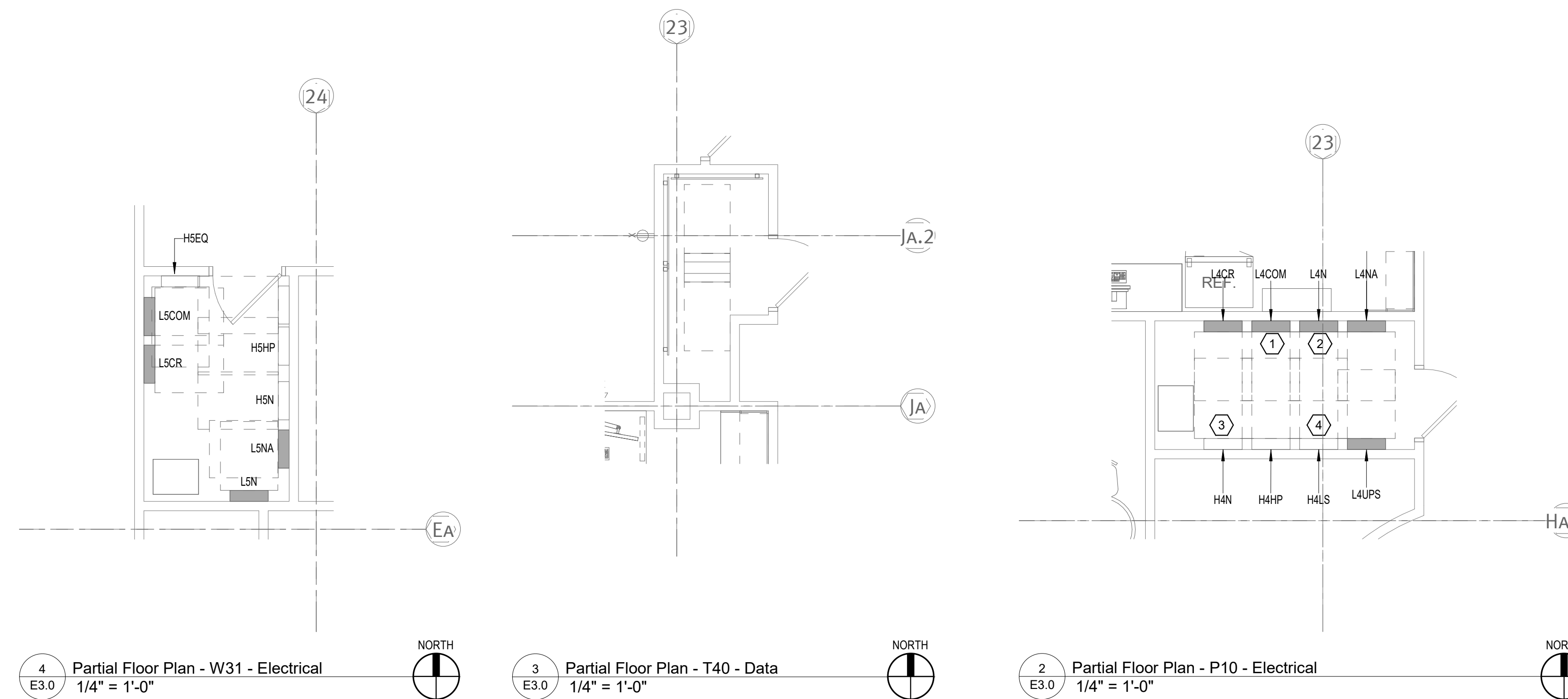
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sheet number: **E3.0**

GENERAL NOTES

- SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASES OF CONSTRUCTION. COORDINATE WITH GENERAL CONSTRUCTION.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THIS DRAWING.
- WHERE CONNECTED TO A 20A. BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.
- VERIFY LOCATIONS AND ROUGH-IN REQUIREMENTS OF ALL OWNER FURNISHED EQUIPMENT PRIOR TO ROUGH-IN.
- PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
- CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANEL BOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.
- USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET, UNLESS SPECIFICALLY INDICATED OTHERWISE. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.
- ELECTRICAL CONTRACTOR SHALL COORDINATE MOUNTING HEIGHTS OF ALL DEVICES WITH ARCHITECTURAL INTERIOR ELEVATIONS AND MILLWORK SHOP DRAWINGS.
- RECEPTACLES FED FROM UPS CIRCUITS SHALL BE RED IN COLOR. RECEPTACLES FED FROM L4COM PANEL SHALL BE ORANGE IN COLOR. NORMAL RECEPTACLES SHALL BE WHITE. COORDINATE WITH OWNER ON COLORS.
- DIVISION 26 CONTRACTOR SHALL PROVIDE ROUGH-IN BOXES, CABLING, AND 120-VOLT POWER FOR SECURITY AND ACCESS CONTROL EQUIPMENT. EQUIPMENT TERMINATIONS AND TESTING SHALL BE BY THE OWNER'S VENDOR. COORDINATE WIRING REQUIREMENTS WITH VENDOR SUPPLYING EQUIPMENT.
- DIVISION 26 SHALL PROVIDE ALL RACEWAYS FOR LOW-VOLTAGE WIRING SPECIFIED IN DIVISION 27.
- ELECTRICAL CONTRACTOR TO VERIFY POWER AND DATA LOCATIONS WITH OWNER'S FURNITURE LAYOUT PRIOR TO INSTALLATION.
- DIVISION 27 CONTRACTOR SHALL COORDINATE COLOR OF DATA/COM RECEPTACLES WITH OWNER.

PLAN NOTES

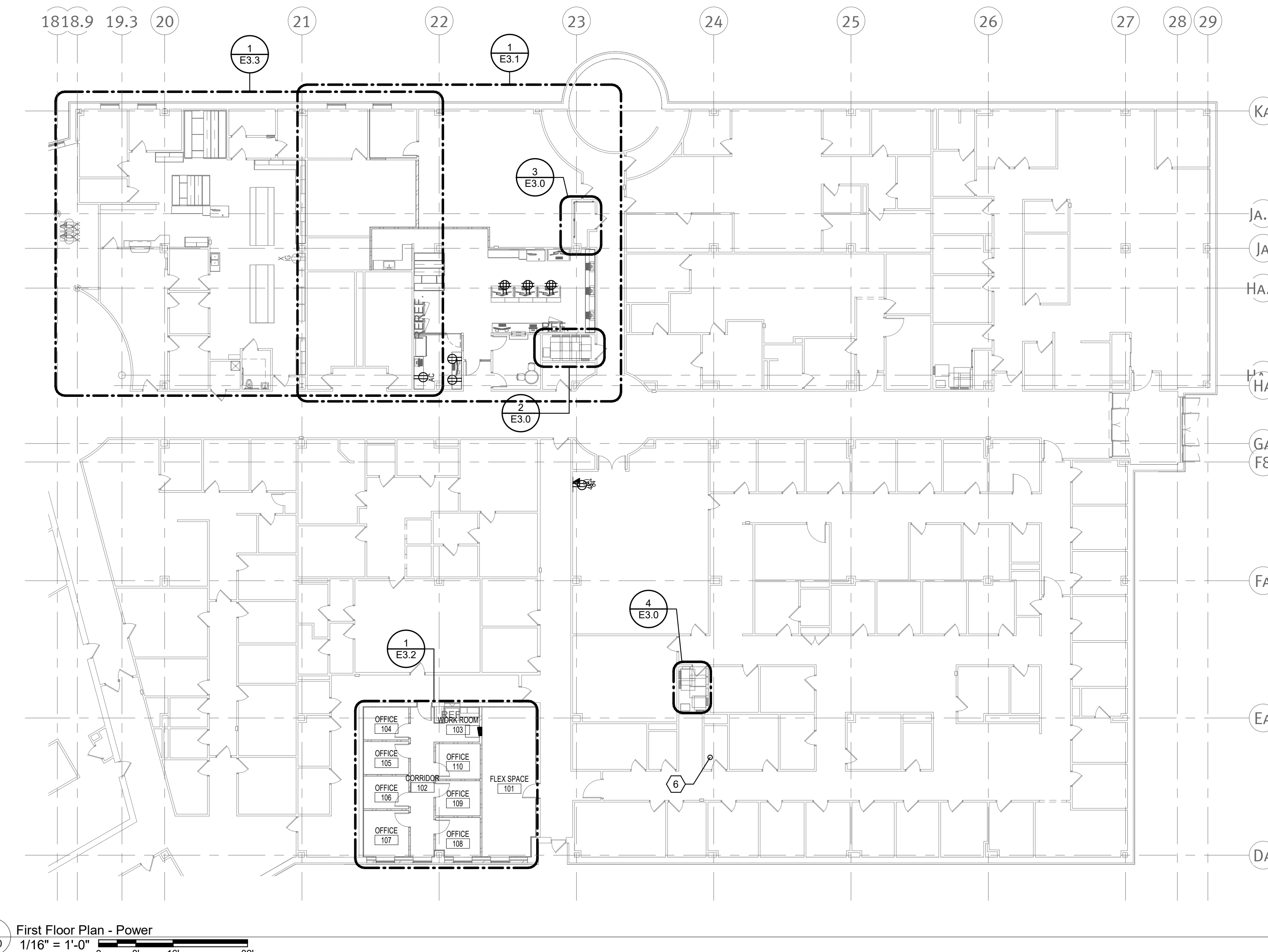
- EXISTING PANEL L4COM IS A SQUARE D 150 AMP 208/120 VOLT 3 PHASE PANEL. FURNISH AND INSTALL A 100/3 POLE BREAKER IN PANEL L4COM TO FEED NEW PANEL L4COM2 IN PHARMACY. SEE SHEET E3.2 PLAN NOTE 13 FOR MORE DETAILS.
- EXISTING PANEL L4N IS A SQUARE D 150 AMP 208/120 VOLT 3 PHASE PANEL. FURNISH AND INSTALL A 100/3 POLE BREAKER IN PANEL L4N TO FEED NEW PANEL L4N2 IN PHARMACY. SEE SHEET E3.2 PLAN NOTE 15 FOR MORE DETAILS.
- EXISTING PANEL H4N IS A SQUARE D 250 AMP 480/277 VOLT 3 PHASE PANEL. FURNISH AND INSTALL TWO (2) 20/1 POLE BREAKERS IN PANEL H4N TO FEED NEW LIGHTING CIRCUITS IN PHARMACY AREA.
- EXISTING PANEL H4LS IS A SQUARE D 100 AMP 480/277 VOLT 3 PHASE PANEL. FURNISH AND INSTALL TWO (2) 20/1 POLE BREAKERS IN PANEL H4LS TO FEED NEW EMERGENCY LIGHTING CIRCUITS IN PHARMACY AREA.
- EXISTING PANEL L5N IS A SQUARE D 225 AMP 208/120 VOLT 3 PHASE PANEL. FURNISH AND INSTALL A 100/3 POLE BREAKER IN PANEL L5N TO FEED NEW PANEL L5N2 IN FORMER AMBULANCE GARAGE. SEE SHEET E3.3 PLAN NOTE 1 FOR MORE DETAILS.
- EXISTING DATA/COMM ROOM W58. ROUTE ALL DATA/COMM CIRCUITS FROM UPGRADED AMBULANCE GARAGE SPACE TO THIS ROOM. PROVIDE PATCH PANELS AS NEEDED.



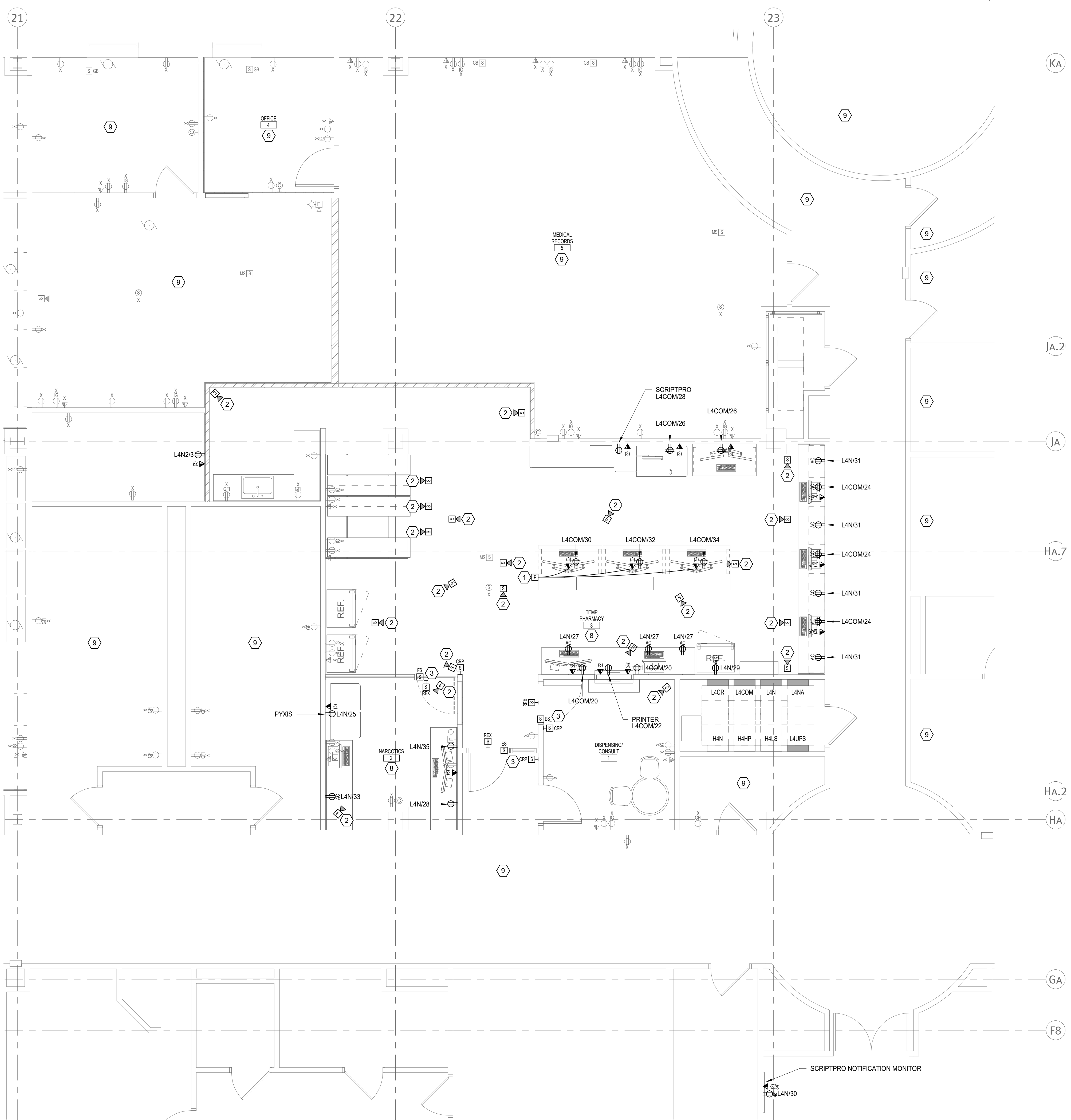
4 Partial Floor Plan - W31 - Electrical
E3.0 1/4" = 1'-0"

3 Partial Floor Plan - T40 - Data
E3.0 1/4" = 1'-0"

2 Partial Floor Plan - P10 - Electrical
E3.0 1/4" = 1'-0"



1 First Floor Plan - Power
E3.0 1/16" = 1'-0"



- GENERAL NOTES**
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 - VERIFY LOCATIONS AND ROUGH-IN REQUIREMENTS OF ALL OWNER FURNISHED EQUIPMENT PRIOR TO ROUGH-IN.
 - PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
 - CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANEL BOARD BREAKERS (SEE PANELBOARD SCHEDULES). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.
 - USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET, UNLESS SPECIFICALLY INDICATED OTHERWISE. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.
 - ELECTRICAL CONTRACTOR SHALL COORDINATE MOUNTING HEIGHTS OF ALL DEVICES WITH ARCHITECTURAL INTERIOR ELEVATIONS AND MILLWORK SHOP DRAWINGS.
 - RECEPTACLES FED FROM UPS CIRCUITS SHALL BE RED IN COLOR. RECEPTACLES FED FROM L4COM PANEL SHALL BE ORANGE IN COLOR. NORMAL RECEPTACLES SHALL BE WHITE. COORDINATE WITH OWNER ON COLORS.
 - DIVISION 26 CONTRACTOR SHALL PROVIDE ROUGH-IN BOXES, CABLING, AND 120-VOLT POWER FOR SECURITY AND ACCESS CONTROL EQUIPMENT. EQUIPMENT TERMINATIONS AND TESTING SHALL BE BY THE OWNER'S VENDOR. COORDINATE WIRING REQUIREMENTS WITH VENDOR SUPPLYING EQUIPMENT.
 - DIVISION 26 SHALL PROVIDE ALL RACEWAYS FOR LOW-VOLTAGE WIRING SPECIFIED IN DIVISION 27.
 - ELECTRICAL CONTRACTOR TO VERIFY POWER AND DATA LOCATIONS WITH OWNER'S FURNITURE LAYOUT PRIOR TO INSTALLATION.
 - DIVISION 27 CONTRACTOR SHALL COORDINATE COLOR OF DATA/COM RECEPTACLES WITH OWNER.

- PLAN NOTES**
- FURNISH AND INSTALL A POWER POLE FROM CEILING TO FLOOR TO FEED POWER AND DATA TO EACH WORKSTATION AS SHOWN. UTILIZE WIREMOLD SERIES 250TC BLANK POLE OR EQUAL. PROVIDE FOR CUSTOM COLOR. COORDINATE WITH ARCHITECT ON COLOR SELECTION.
 - FURNISH AND INSTALL ROUGH-IN BOXES AND CAT 6A CABLING FOR NEW CAMERAS AS SHOWN. RUN CABLING TO EXISTING NETWORK SYSTEM IN ROOM T40/P12 FOR MONITORING OF THE PHARMACY AREA. CAMERAS, OTHER EQUIPMENT, TERMINATIONS AND PROGRAMMING TO BE PROVIDED BY OWNER'S SECURITY VENDOR. COORDINATE WITH OWNER'S SECURITY ACCESS CONTROL SUPPLIER.
 - FURNISH AND INSTALL ROUGH-IN BOXES AND CABLING TO ROOM P10 FOR CARD READERS. CARD READERS, EQUIPMENT, TERMINATIONS AND PROGRAMMING TO BE PROVIDED BY OWNER'S SECURITY VENDOR. COORDINATE WITH THE OWNER'S SECURITY ACCESS CONTROL SUPPLIER.
 - FURNISH AND INSTALL AN AIPHONE MASTER STATION IX-AMV7 TO BE LOCATED ON WALL. PROVIDE A CAT 6 CABLE CONNECTION FROM NETWORK IN ROOM P12. WIRE AND PROGRAM FOR OPERATION WITH UNITS REF: PLAN NOTE 9.
 - FURNISH AND INSTALL A VANDAL RESISTANT AIPHONE DOOR STATION IX-DV UNIT TO BE SIP COMPATIBLE FOR OPERATION WITH AN AIPHONE MASTER STATION IX-AMV7 AS PER PLAN NOTE 8. PROVIDE A CAT 6 CONNECTION TO NETWORK IN ROOM P12. PROVIDE PROGRAMMING AND WIRING TO OPEN RESPECTIVE DOORS FROM THE MASTER STATION.
 - CONTRACTOR TO COORDINATE WITH OWNER'S SECURITY VENDOR ON THE DESIRED LOCATION OF THE EXISTING AND NEW CEILING MOUNTED CAMERAS, MOTION SENSORS AND OTHER SECURITY DEVICES. PROVIDE CABLING AS NEEDED TO ROOM T40/P12. COORDINATE LOCATIONS WITH LIGHTING AND HVAC EQUIPMENT.
 - FURNISH AND INSTALL A NEW CEILING SPEAKER. CONNECT TO EXISTING PHARMACY ZONE AREA. MATCH TO EXISTING SPEAKERS. COORDINATE LOCATIONS WITH LIGHTING AND HVAC EQUIPMENT.
 - ROUTE ALL DATA POINTS IN THESE SPACES TO RACKS IN ROOM T40/P12. COORDINATE WITH OWNER'S IT PERSONNEL.
 - NO ELECTRICAL WORK REQUIRED IN THIS ROOM/AREA, UNLESS NOTED ELSEWHERE.

1 Pharmacy - Power & Systems
E3.1 1/4" = 1'-0"



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SISSETON, SD 57262

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Addendum #1	1	9/10/24

FLOOR PLAN -
PHASE 1 - POWER & SYSTEMS
sheet title:
sheet number:
E3.1

WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

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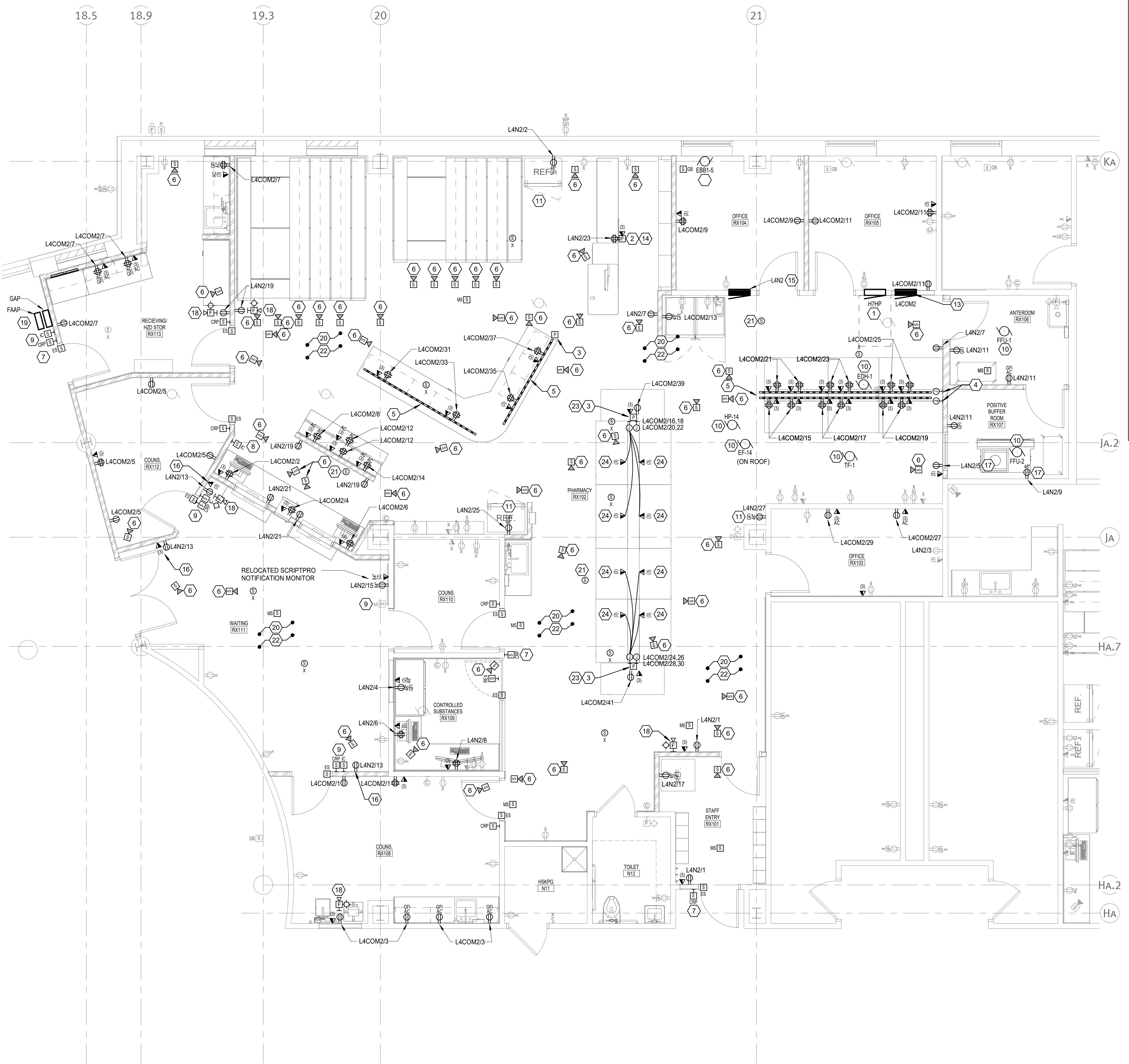
revision / issue	no.	date
Addendum #1	1	9/10/24

FLOOR PLAN -
PHASE 2 - POWER & SYSTEMS

sheet number: **E3.3**

- ### GENERAL NOTES
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 - USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET, UNLESS SPECIFICALLY INDICATED OTHERWISE. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.
 - ELECTRICAL CONTRACTOR SHALL COORDINATE MOUNTING HEIGHTS OF ALL DEVICES WITH ARCHITECTURAL INTERIOR ELEVATIONS AND MILLWORK SHOP DRAWINGS.
 - RECEPTACLES FED FROM UPS CIRCUITS SHALL BE RED IN COLOR. RECEPTACLES FED FROM L4COM PANEL SHALL BE ORANGE IN COLOR. NORMAL RECEPTACLES SHALL BE WHITE. COORDINATE WITH OWNER ON COLORS.
 - DIVISION 26 CONTRACTOR SHALL PROVIDE ROUGH-IN BOXES, CABLING, AND 120-VOLT POWER FOR SECURITY AND ACCESS CONTROL EQUIPMENT. EQUIPMENT TERMINATIONS AND TESTING SHALL BE BY THE OWNER'S VENDOR. COORDINATE WIRING REQUIREMENTS WITH VENDOR SUPPLYING EQUIPMENT.
 - DIVISION 26 SHALL PROVIDE ALL RACEWAYS FOR LOW-VOLTAGE WIRING SPECIFIED IN DIVISION 27.
 - ELECTRICAL CONTRACTOR TO VERIFY POWER AND DATA LOCATIONS WITH OWNER'S FURNITURE LAYOUT PRIOR TO INSTALLATION.
 - DIVISION 27 CONTRACTOR SHALL COORDINATE COLOR OF DATA/COM RECEPTACLES WITH OWNER.

- ### PLAN NOTES
- RELOCATE EXISTING PANELBOARD H7HP TO THIS LOCATION. EXTEND WIRING AND CONDUITS FOR CONNECTIONS TO EXISTING EQUIPMENT. REFER TO SCHEDULE FOR DETAILS.
 - RELOCATE EXISTING POWER POLE FOR DISPENSING UNIT AND ADJACENT EQUIPMENT TO NEW LOCATION SHOWN. PROVIDE POWER AND DATA CONNECTIONS FOR THE UNIT AND ADJACENT EQUIPMENT UTILIZING EXISTING L4UPS CIRCUITS AND SIX (6) DATA CONNECTIONS.
 - FURNISH AND INSTALL A POWER POLE FROM CEILING TO FLOOR TO FEED POWER AND DATA TO EACH WORKSTATION AS SHOWN. UTILIZE WIREMOLD SERIES 2507C BLANK POLE OR EQUAL. PROVIDE FOR CUSTOM COLOR. COORDINATE WITH ARCHITECT ON COLOR SELECTION.
 - PROVIDE JUNCTION BOXES FOR POWER AND DATA FEEDS TO WORKSTATION WIREMOLD RUNS. COORDINATE WITH WORKSTATION SUPPLIER FOR INSTALLATION. UTILIZE LFM CONDUIT AS NEEDED FOR CONNECTIONS FROM JUNCTION BOXES.
 - FURNISH AND INSTALL TWO (2) SETS OF WIREMOLD AL5000 SERIES RACEWAY TO ACCOMMODATE POWER AND DATA RECEPTACLES AS SHOWN. INSTALL ONE (1) SET TO FEED EACH SIDE OF RECEPTACLES AS SHOWN UNDER WORKSTATION COUNTER. COORDINATE WITH THE WORKSTATION SUPPLIER ON INSTALLATION. PROVIDE LFM FEED WHIPS AS NEEDED.
 - FURNISH AND INSTALL ROUGH-IN BOXES AND CAT 6 CABLING FOR NEW CAMERAS AS SHOWN. RUN CABLING TO EXISTING NETWORK SYSTEM IN ROOM T40P12 FOR MONITORING OF THE PHARMACY AREA. CAMERAS, OTHER EQUIPMENT, TERMINATIONS AND PROGRAMMING TO BE PROVIDED BY OWNER'S SECURITY VENDOR. COORDINATE WITH OWNER'S SECURITY VENDOR.
 - FURNISH AND INSTALL ROUGH-IN BOXES AND CABLING TO ROOM P10 FOR CARD READERS. CARD READERS, EQUIPMENT, TERMINATIONS AND PROGRAMMING TO BE PROVIDED BY OWNER'S SECURITY VENDOR. COORDINATE WITH THE OWNER'S SECURITY ACCESS CONTROL SUPPLIER.
 - FURNISH AND INSTALL AN AIPHONE MASTER STATION IX-MV7 TO BE LOCATED ON WALL. PROVIDE A CAT 6 CABLE CONNECTION FROM NETWORK IN ROOM T40P12. WIRE AND PROGRAM FOR OPERATION WITH UNITS REF. PLAN NOTE 9.
 - FURNISH AND INSTALL A VANDAL RESISTANT AIPHONE DOOR STATION IX-DV1 UNIT TO BE MOUNTED FOR OPERATION WITH AN AIPHONE MASTER STATION IX-MV7 AS PER PLAN NOTE 8. PROVIDE A CAT 6 CONNECTION TO NETWORK IN ROOM P12. PROVIDE PROGRAMMING AND WIRING TO OPEN RESPECTIVE DOORS FROM THE MASTER STATION.
 - PROVIDE POWER FEED AND CONNECTION TO MECHANICAL EQUIPMENT. COORDINATE WITH THE MECHANICAL CONTRACTOR.
 - EXISTING REFRIGERATOR. PROVIDE A 201 POLE GFI BREAKER IN PANEL L4N2 TO FEED UNIT.
 - RELOCATE EXISTING CAMERA AND ASSOCIATED EQUIPMENT TO NEW LOCATION SHOWN. PROVIDE NEW CABLING AS NEEDED FROM ROOM T40P12. TERMINATIONS AND PROGRAMMING FOR SATISFACTORY OPERATION TO BE PROVIDED BY OWNER'S SECURITY VENDOR.
 - FURNISH AND INSTALL A NEW 208/120 VOLT 3 PHASE 4 WIRE PANEL L4COM2. FEED THIS PANEL VIA A 100 AMP 3 PHASE 4 WIRE CIRCUIT FROM PANEL L4COM IN ROOM P10. UTILIZE FOUR (4) #2 AWG PLUS ONE (1) #8 GROUND IN 1 1/2" CONDUIT. PROVIDE FEEDS TO WORKSTATION CIRCUITS AS SHOWN. SEE SHEET E3.1 FOR PANEL L4COM LOCATION.
 - EXISTING RELOCATED DISPENSING EQUIPMENT. CONTRACTOR TO PROVIDE POWER AND DATA CONNECTIONS FROM POWER POLE AS PER PLAN NOTE 2.
 - FURNISH AND INSTALL A NEW 208/120 VOLT 3 PHASE 4 WIRE PANEL L4N2. FEED THIS PANEL VIA A 100 AMP 3 PHASE 4 WIRE CIRCUIT FROM PANEL L4N IN ROOM P10. UTILIZE FOUR (4) #2 AWG PLUS ONE (1) #8 GROUND IN 1 1/2" CONDUIT. PROVIDE FEEDS TO NORMAL CIRCUITS AS SHOWN. SEE SHEET E3.1 FOR PANEL L4N LOCATION.
 - PROVIDE TAMPER RESISTANT RECEPTACLE AT THIS LOCATION.
 - PROVIDE INDIVIDUAL CIRCUIT TO RECEPTACLE AS SHOWN FOR FEEDING MECHANICAL EQUIPMENT.
 - FURNISH AND INSTALL NEW FIRE ALARM DEVICES AS SHOWN. CONNECT TO EXISTING FIRE ALARM SYSTEM. EXISTING FIRE ALARM IS AN ADDRESSABLE UNIT KIDDE VS4 LOCATED IN ROOM H03.
 - EXISTING GENERATOR ALARM AND ANNUNCIATOR PANEL TO BE RELOCATED TO THIS LOCATION. EXTEND WIRING AS NEEDED. TEST AND VERIFY SATISFACTORY OPERATION.
 - CONTRACTOR TO COORDINATE WITH OWNER'S SECURITY VENDOR ON THE DESIRED LOCATION OF THE EXISTING AND NEW CEILING MOUNTED CAMERAS, MOTION SENSORS AND OTHER SECURITY DEVICES. PROVIDE CABLING AS NEEDED TO ROOM T40P12. COORDINATE LOCATIONS WITH LIGHTING AND HVAC EQUIPMENT.
 - FURNISH AND INSTALL A NEW CEILING SPEAKER. CONNECT TO EXISTING PHARMACY ZONE AREA. MATCH TO EXISTING SPEAKERS. COORDINATE LOCATIONS WITH LIGHTING AND HVAC EQUIPMENT.
 - ROUTE ALL DATA POINTS IN THESE SPACES TO RACKS IN ROOM T40P12. COORDINATE WITH OWNER'S IT PERSONNEL.
 - FURNISH AND INSTALL A FOUR (4) CIRCUIT FEED TO SYSTEM FURNITURE AS SHOWN. UTILIZE #10 AWG FOR PHASE, NEUTRAL AND GROUND CIRCUITS IN 1/2" CONDUIT. PROVIDE WHIPS AS NEEDED FOR FEEDS TO SYSTEM FURNITURE. COORDINATE WITH SUPPLIER. TIE HANDLES OF CIRCUIT BREAKERS FEEDING SYSTEM FURNITURE.
 - FURNISH AND INSTALL FOUR (4) 20 AMP DUPLEX RECEPTACLES PER STATION AS SHOWN. COORDINATE WITH SYSTEMS FURNITURE SUPPLIER.



1 Floor Plan - Phase 2 - Power & Systems
E3.3
1/4" = 1'-0"

WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

project #: 020053.00

date: 07/22/2022

drawn by: LLA

checked by: LDB

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

Jay S. Hruby

signature: *Jay S. Hruby*

printed name: JAY S. HRUBY P.E.

reg. #: 8782

sign date: 07/22/2022

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Addendum #1	1	9/10/24

ADDENDUM #1 1 9/10/24

SCHEDULES -
ELECTRICAL

sheet number: **E4.1**

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	LENS-LOUVER	MOUNTING	VOLT	WATT	LAMP COLOR	LUMENS	LUMENS PER WATT	BALLAST	MANUFACTURERS	CATALOG SERIES	APPROVED ALTERNATE MANUFACTURES	NOTE
A	1' X 4' HIGH PERFORMANCE TROFFER	HOURLASS LENS	RECESSED IN GRID	120 V	65 W	4000K	6718 lm	103 lm/W	0-10V LED DRIVER	LITHONIA	ENVX-1X4-HRG-7200LM-90CRI-40K-MIN10-ZT-M VOLT-DWAM		2
AE	1' X 4' HIGH PERFORMANCE TROFFER (EMERGENCY)	HOURLASS LENS	RECESSED IN GRID	120 V	65 W	4000K	6718 lm	103 lm/W	0-10V LED DRIVER	LITHONIA	ENVX-1X4-HRG-7200LM-90CRI-40K-MIN10-ZT-M VOLT-GTD-DWAM		1,2
B	2' X 4' HIGH PERFORMANCE TROFFER	HOURLASS LENS	RECESSED IN GRID	120 V	40 W	4000K	4197 lm	105 lm/W	0-10V LED DRIVER	LITHONIA	ENVX-2X4-HRG-4800LM-90CRI-40K-MIN10-ZT-M VOLT-DWAM		2
BE	2' X 4' HIGH PERFORMANCE TROFFER (EMERGENCY)	HOURLASS LENS	RECESSED IN GRID	120 V	40 W	4000K	4197 lm	105 lm/W	0-10V LED DRIVER	LITHONIA	ENVX-2X4-HRG-4800LM-90CRI-40K-MIN10-ZT-M VOLT-GTD-DWAM		1,2
BF	2' X 4' HIGH PERFORMANCE TROFFER (WITH DRYWALL GRID ADAPTER)	HOURLASS LENS	RECESSED IN GYP	120 V	40 W	4000K	4197 lm	105 lm/W	0-10V LED DRIVER	LITHONIA	ENVX-2X4-HRG-4800LM-90CRI-40K-MIN10-ZT-M VOLT-DWAM-DGA24		2
E1	<varies>	---	RECESSED	120 V	5 W	RED	---	---	---	LITHONIA	EDGR-1-R		
G	1' X 4' HIGH PERFORMANCE TROFFER	HOURLASS LENS	RECESSED IN GRID	120 V	33 W	4000K	3684 lm	112 lm/W	0-10V LED DRIVER	LITHONIA	ENVX-1X4-HRG-4000LM-80CRI-40K-MIN10-ZT-M VOLT-DWAM		2
GE	1' X 4' HIGH PERFORMANCE TROFFER (EMERGENCY)	HOURLASS LENS	RECESSED IN GRID	120 V	33 W	4000K	3684 lm	112 lm/W	0-10V LED DRIVER	LITHONIA	ENVX-1X4-HRG-4000LM-90CRI-40K-MIN10-ZT-M VOLT-GTD-DWAM		1,2
H	2' X 4' HIGH PERFORMANCE TROFFER	HOURLASS LENS	RECESSED IN GRID	120 V	40 W	4000K	4882 lm	122 lm/W	0-10V LED DRIVER	LITHONIA	ENVX-2X4-HRG-4800LM-80-CRI-40K-MIN10-ZT-M VOLT-DWAM		2
J	2' X 2' HIGH PERFORMANCE TROFFER	HOURLASS LENS	RECESSED IN GRID	120 V	36 W	4000K	4228 lm	117 lm/W	0-10V LED DRIVER	LITHONIA	ENVX-2X2-HRG-4000LM-80CRI-40K-MIN10-ZT-M VOLT-DWAM		2
JE	2' X 2' HIGH PERFORMANCE TROFFER (EMERGENCY)	HOURLASS LENS	RECESSED IN GRID	120 V	36 W	4000K	4228 lm	117 lm/W	0-10V LED DRIVER	LITHONIA	ENVX-2X2-HRG-4000LM-80CRI-40K-MIN10-ZT-M VOLT-GTD-DWAM		2
KE	2' X 4' PHARMACY HAZARDOUS AREA TROFFER	SYMETRIC DIFFUSED IMPACT-RESISTANT ACRYLIC LENS	RECESSED IN CEILING	120 V	72 W	4000K	9331 lm	130 lm/W	0-10V LED DRIVER	KENALL	CSEDO-24-6T-40K-DIM1-DV-XF-XH-SYM-LEL-P 442		1,2
U2	2' LONG UNDERCABINET WITH WHITE STEEL HOUSING	100% DR ACRYLIC LENS	UNDERCABINET	120 V	14 W	4000K	1209 lm	86 lm/W	LED DRIVER	KENALL	MAUCLED-1MW-13C43K-24-DV		
U3	3' LONG UNDERCABINET WITH WHITE STEEL HOUSING	100% DR ACRYLIC LENS	UNDERCABINET	120 V	29 W	4000K	2390 lm	82 lm/W	LED DRIVER	KENALL	MAUCLED-1MW-25C43K-36-DV		

GENERAL NOTES:

- ALL LIGHT FIXTURE LUMEN VALUES LISTED ARE DELIVERED LUMEN.
- REFER TO DETAILS FOR INDEPENDENTLY SUPPORTING OF LIGHT FIXTURES LOCATED IN ACOUSTICAL TILE CEILING.
- ALL LED DRIVERS SHALL BE 0-10 VOLT DIMMING DRIVER UNLESS NOTED OTHERWISE.
- ALL ADDITIONAL HARDWARE FOR MOUNTING OF SURFACE, RECESSED, OR PENDANT FIXTURES SHALL BE INCLUDED UNDER THIS CONTRACT.
- REFER TO THE MANUFACTURES INSTALLATION INSTRUCTIONS FOR THE MOUNTING REQUIREMENTS OF EACH FIXTURE TYPE PRIOR TO THE INSTALLATION OF THE FIXTURES. GOOD WORKMANSHIP SHALL BE EVIDENT IN THE FINISHED INSTALLATION OR THE ELECTRICAL CONTRACTOR WILL BE REQUIRED TO CORRECT THE POOR WORKMANSHIP AT NO ADDITIONAL COST TO THE OWNER.
- EMERGENCY FIXTURES SHALL BE PROVIDED WITH AN INTEGRAL ILLUMINATED TEST SWITCH.
- REFER TO SPECIFICATION SECTION 26 5100 - INTERIOR LIGHTING, FOR ADDITIONAL FIXTURE REQUIREMENTS.
- COORDINATE WITH ARCHITECTURAL CEILING GRID TYPE WITH FIXTURES SPECIFIC GRID TYPE MOUNTING.

SCHEDULE NOTES:

- PROVIDE EMERGENCY GENERATOR TRANSFER DEVICE TO CONTROL EMERGENCY POWER.
- PAINT AFTER FABRICATION.

ELECTRICAL EQUIPMENT SCHEDULE

NO.	DESCRIPTION	LOCATION (RM#)	LOAD			PHASE	PANEL	CIRCUIT NUMBER	CONDUIT & WIRE SIZE	STARTER		CONTROL DEVICE		DISCONNECT		NOTES
			HP	FLA	MCA					VOLT	COMPONENT	FURN. / INST.	COMPONENT	FURN. / INST.	COMPONENT	
EBB1-1	ELECTRIC BASEBOARD HEATER		4.6 A	6 A	277 V	1	H5HP	41	(1/2")C-2#12, #12 GND	---	---	---	---	MFGR	MFGR	1
EBB1-2	ELECTRIC BASEBOARD HEATER		4.6 A	6 A	277 V	1	H5HP	41	(1/2")C-2#12, #12 GND	---	---	---	---	MFGR	MFGR	1
EBB1-3	ELECTRIC BASEBOARD HEATER		4.6 A	6 A	277 V	1	H5HP	43	(1/2")C-2#12, #12 GND	---	---	---	---	MFGR	MFGR	1
EBB1-4	ELECTRIC BASEBOARD HEATER		4.6 A	6 A	277 V	1	H5HP	43	(1/2")C-2#12, #12 GND	---	---	---	---	MFGR	MFGR	1
EBB1-5	ELECTRIC BASEBOARD HEATER	RX104	4.6 A	6 A	277 V	1	H7HP	27	(1/2")C-2#12, #12 GND	---	---	---	---	MFGR	MFGR	1
EDH-1	ELECTRIC DUCT HEATER	RX102	6 A	8 A	480 V	3	H7HP	19,21,23	(1/2")C-3#12, #12 GND	---	---	---	---	30/3 FS NEMA 1	DIV. 26	1
EDH-2	ELECTRIC DUCT HEATER		6 A	8 A	480 V	3	H7HP	14,16,18	(1/2")C-3#12, #12 GND	---	---	---	---	30/3 FS NEMA 1	DIV. 26	1
EDH-3	ELECTRIC DUCT HEATER		6 A	8 A	480 V	3	H7HP	26,28,30	(1/2")C-3#12, #12 GND	---	---	---	---	30/3 FS NEMA 1	DIV. 26	1
EDH-4	ELECTRIC DUCT HEATER		6 A	8 A	480 V	3	H7HP	20,22,24	(1/2")C-3#12, #12 GND	---	---	---	---	30/3 FS NEMA 1	DIV. 26	1
EF-14	EXHAUST FAN #14	ON ROOF	3/4	1.6 A	2 A	480 V	3	H7HP	13,15,17	(1/2")C-3#12, #12 GND	VFD	DIV. 26	---	30/3 FS NEMA 1	DIV. 26	2
FFU-1	FAN FILTER UNIT #1	RX106	3.4 A	4 A	120 V	1	L4N2	29	(1/2")C-2#12, #12 GND	---	---	---	DIV. 23	MMS	DIV. 26	3
FFU-2	FAN FILTER UNIT #2	RX107	3.4 A	4 A	120 V	1	L4N2	31	(1/2")C-2#12, #12 GND	---	---	---	DIV. 23	MMS	DIV. 26	3
HP-14	HEAT PUMP	RX102	11.7 A	15 A	277 V	1	H7HP	25	(3/4")C-3#10, #10 GND	---	---	---	---	30/3 NFS NEMA1	DIV. 26	1
HP-15	HEAT PUMP		7.5 A	9 A	277 V	1	H5HP	47	(3/4")C-3#10, #10 GND	---	---	---	---	30/3 NFS NEMA1	DIV. 26	1
HP-16	HEAT PUMP		8.2 A	10 A	277 V	1	H5HP	45	(3/4")C-3#10, #10 GND	---	---	---	---	30/3 NFS NEMA1	DIV. 26	1
HP-17	HEAT PUMP		11.7 A	15 A	277 V	1	H5HP	53	(3/4")C-3#10, #10 GND	---	---	---	---	30/3 NFS NEMA1	DIV. 26	1
TF-1	TRANSFER FAN #1	RX102	3/4	6 A	8 A	277 V	1	H7HP	8	(1/2")C-2#12, #12 GND	---	---	---	30/3 FS NEMA 1	DIV. 26	1

STARTER TYPES:

FVNR FULL VOLTAGE NON-REVERSING
FVR FULL VOLTAGE REVERSING
2-SPD TWO SPEED
VFD VARIABLE FREQUENCY DRIVE
RVS REDUCED VOLTAGE

COMBINATION DISCONNECT TYPES:

FS FUSED SWITCH
NFS NON-FUSED SWITCH
MCP MOTOR CIRCUIT PROTECTOR
CB CIRCUIT BREAKER

CONTROL DEVICES:

HOA HAND-OFF-AUTO SWITCH
RP RED (RUN) PILOT LIGHT
GP GREEN (POWER) PILOT LIGHT
0/O ON-OFF SELECTOR SWITCH
S/S STOP-START PUSHBUTTONS

ABBREVIATIONS:

EC ELECTRICAL CONTRACTOR
MC MECHANICAL CONTRACTOR
GC GENERAL CONTRACTOR
TC TEMPERATURE CONTROL
OWN OWNER

NOTES:

- CONNECT POWER TO UNIT VIA DISCONNECT SWITCH. BAS CONTROL WIRING BY BAS CONTRACTOR.
- CONNECT POWER TO UNIT VIA STARTER AND FUSED DISCONNECT SWITCH. BAS CONTROL WIRING BY BAS CONTRACTOR.
- PROVIDE SINGLE POINT CONNECTION TO UNIT. DISCONNECT BY DIVISION 26.

WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

project #: 020053.00

date: 07/22/2022

drawn by: LLA

checked by: LDB

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

signature: *Jay S. Hruby*

printed name: JAY S. HRUBY P.E.

reg. #: 8782

sign date: 07/22/2022

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revision / issue	no.	date
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Addendum #1	1	9/10/24
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SCHEDULES -
ELECTRICAL

sheet number:
E4.2

NEW PANELBOARD: L4N2													
LOCATION: PHARMACY RX102				VOLTAGE: 208Y/120 V, 3 ø 4 W									
MOUNTING: RECESSED		NEMA1		A.I.C. RATING: 10,000 AMPS SYMMETRICAL		SPECIAL:							
MAIN DEVICE: 100 A		MAIN CB											
BUS AMPS: 225 AMPS													
LOAD DESCRIPTION	Notes	BKR	POLES	CKT	A	B	C	CKT	POLES	BKR	Notes	LOAD DESCRIPTION	
RCPT ROOM N10, N13		20 A	1	1	360	1200		2	1	20 A		REFRIGERATOR PHARMACY RX102	
RCPT CONTROLLED SUBSTANCES N14		20 A	1	3		180	1200	4	1	20 A		RCPT NON CONVENIENCE CONTROLLED	
RCPT ROOM N10		20 A	1	5				6	1	20 A		RCPT CONTROLLED SUBSTANCES RX109	
RCPT ROOM N10		20 A	1	7	360	360		8	1	20 A		RCPT CONTROLLED SUBSTANCES RX109	
RCPT HOOD RX107		20 A	1	9		180	0	10	1	20 A		SPARE	
RCPT ROOM RX106, RX107		20 A	1	11			540	12	1	20 A		SPARE	
RCPT WAITING N01		20 A	1	13	720	0		14	1	20 A		SPARE	
TV RCPT WAITING N01		20 A	1	15		180	0	15	1	20 A		SPARE	
REFRIGERATOR STAFF ENTRY RX101	1	20 A	1	17			1200	16	1	20 A		SPARE	
RCPT ROOM N10, N09		20 A	1	19	720	0		18	1	20 A		SPARE	
RCPT DISPENSING N09		20 A	1	21		360	0	22	1	20 A		SPARE	
PP DISPENSING EQUIP RM N10	1	20 A	1	23			360	24	1	20 A		SPARE	
REFRIGERATOR RM N10	1	20 A	1	25	1200	0		25	1	20 A		SPARE	
REFRIGERATOR RM N10	1	20 A	1	27		1200	0	26	1	20 A		SPARE	
FRU-1		20 A	1	29			408	28	1	20 A		SPARE	
FRU-2		20 A	1	31	408	0		32	1	20 A		SPARE	
SPARE		20 A	1	33		0	0	34	1	20 A		SPARE	
SPARE		20 A	1	35		0	0	35	1	20 A		SPARE	
SPARE		20 A	1	37	0	0	0	36	1	20 A		SPARE	
SPARE		20 A	1	39		0	0	38	1	20 A		SPARE	
SPARE		20 A	1	41			0	40	1	20 A		SPARE	
TOTAL LOAD:					5328 VA	3300 VA	3048 VA						
TOTAL AMPS:					45 A	28 A	25 A						
LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS									
RCPT	4860 VA	100.00%	4860 VA	CONNECTED LOAD:	11676 VA								
MTR	816 VA	100.00%	816 VA	ESTIMATED DEMAND:	11676 VA								
RCPT NON CONVENIENCE	6000 VA	100.00%	6000 VA	CONNECTED CURRENT:	32 A								
				EST. DEMAND CURRENT:	32 A								

GENERAL NOTES:
A. PROVIDE WITH INTEGRALLY MOUNTED TRANSIENT VOLTAGE SURGE SUPPRESSION.
B. MAIN BREAKER SHALL BE UL SERIES RATED TO BRANCH CIRCUIT PANELBOARD BREAKER/FUSES.
C. PROVIDE MAIN BREAKER WITH 120-VOLT SHUNT TRIP LABEL AS PER NEC.

NOTES:
1. PROVIDE GFCI BREAKER.
2. PROVIDE WITH 120-VOLT SHUNT TRIP

NEW PANELBOARD: L5NB													
LOCATION: WORK ROOM 103				VOLTAGE: 208Y/120 V, 3 ø 4 W									
MOUNTING: RECESSED		NEMA1		A.I.C. RATING: 10,000 AMPS SYMMETRICAL		SPECIAL:							
MAIN DEVICE: 200 A		MLO											
BUS AMPS: 200 AMPS													
LOAD DESCRIPTION	Notes	BKR	POLES	CKT	A	B	C	CKT	POLES	BKR	Notes	LOAD DESCRIPTION	
RCPT WORK ROOM 103		20 A	1	1	540	0		2	1	20 A		SPARE	
REFRIGERATOR RCPT WORK ROOM 103	1	20 A	1	3		1200	0	4	1	20 A		SPARE	
UC REFRIGERATOR RCPT WORK ROOM 103	1	20 A	1	5			1200	6	1	20 A		SPARE	
RCPT OFFICE 1 104		20 A	1	7	900	0		8	1	20 A		SPARE	
RCPT OFFICE 2 105		20 A	1	9		900	0	10	1	20 A		SPARE	
RCPT OFFICE 3 106		20 A	1	11			900	12	1	20 A		SPARE	
RCPT OFFICE 4 107		20 A	1	13	900	0		14	1	20 A		SPARE	
RCPT COORIDOR 102		20 A	1	15		540	0	15	1	20 A		SPARE	
RCPT OFFICE 5 108		20 A	1	17			900	16	2	20 A		SPARE	
RCPT OFFICE 6 109		20 A	1	19			900	18	1	20 A		SPARE	
RCPT OFFICE 7 110		20 A	1	21	900	0		20	1	20 A		SPARE	
RCPT FLEX SPACE 101		20 A	1	23		900	0	22	1	20 A		SPARE	
RCPT FLEX SPACE 101		20 A	1	25	360	0		23	1	20 A		SPARE	
RCPT FLEX SPACE 101		20 A	1	27		360	0	24	1	20 A		SPARE	
RCPT FLEX SPACE 101		20 A	1	29			360	25	1	20 A		SPARE	
RCPT FLEX SPACE 101		20 A	1	31	360	0		26	1	20 A		SPARE	
RCPT FLEX SPACE 101		20 A	1	33		540	0	27	1	20 A		SPARE	
SPARE		20 A	1	35		0	0	28	1	20 A		SPARE	
SPARE		20 A	1	37	0	0	0	29	1	20 A		SPARE	
SPARE		20 A	1	39		0	0	30	1	20 A		SPARE	
SPARE		20 A	1	41			0	31	1	20 A		SPARE	
TOTAL LOAD:					3960 VA	4440 VA	3720 VA						
TOTAL AMPS:					33 A	37 A	31 A						
LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS									
RCPT	9720 VA	100.00%	9720 VA	CONNECTED LOAD:	12120 VA								
RCPT NON CONVENIENCE	2400 VA	100.00%	2400 VA	ESTIMATED DEMAND:	12120 VA								
				CONNECTED CURRENT:	34 A								
				EST. DEMAND CURRENT:	34 A								

GENERAL NOTES:
A. PROVIDE WITH INTEGRALLY MOUNTED TRANSIENT VOLTAGE SURGE SUPPRESSION.
B. MAIN BREAKER SHALL BE UL SERIES RATED TO BRANCH CIRCUIT PANELBOARD BREAKER/FUSES.
C. PROVIDE MAIN BREAKER WITH 120-VOLT SHUNT TRIP LABEL AS PER NEC.

NOTES:
1. PROVIDE GFCI BREAKER.
2. PROVIDE WITH 120-VOLT SHUNT TRIP

EXISTING PANELBOARD: H7HP													
LOCATION: PHARMACY RX102				VOLTAGE: 480Y/277 V, 3 ø 4 W									
MOUNTING: RECESSED		NEMA1		A.I.C. RATING: 14,000 AMPS SYMMETRICAL		SPECIAL:							
MAIN DEVICE: 100 A		MAIN CB											
BUS AMPS: 125 AMPS													
LOAD DESCRIPTION	Notes	BKR	POLES	CKT	A	B	C	CKT	POLES	BKR	Notes	LOAD DESCRIPTION	
HP12		3	20 A	1	0	0		2	3	15 A		EDH-6	
HP6		3	30 A	1	0	0		4	--	--		--	
SPARE		3	20 A	1	5			6	--	--		--	
HEPA DIFFUSERS RM N09, N09A		3	20 A	1	7	0	1662	8	1	20 A		TF-1	
SPARE		3	20 A	1	9		0	10	1	20 A		SPARE	
SPARE		3	20 A	1	11		0	12	1	20 A		SPARE	
EF-14		4	15 A	3	13	443	1663	14	3	15 A		EDH-2 - FLEX SPACE 101	
--		--	--	--	--	--	--	16	--	--		--	
EDH-1		4	15 A	3	19	1663	1663	18	--	--		EDH-3 FLEX SPACE 101	
--		--	--	--	--	--	--	20	3	15 A		--	
--		--	--	--	--	--	--	22	--	--		--	
HP-14, PHARMACY RX102		20 A	1	25	3241	1663		24	--	--		--	
EBB1-5		20 A	1	27		1274	1663	26	3	15 A		EDH-4 COORIDOR 102	
								28	--	--		--	
								30	--	--		--	
TOTAL LOAD:					11997 VA	8368 VA	7094 VA						
TOTAL AMPS:					44 A	31 A	26 A						
LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS									
MTR	27460 VA	100.00%	27460 VA	CONNECTED LOAD:	27460 VA								
				ESTIMATED DEMAND:	27460 VA								
				CONNECTED CURRENT:	33 A								
				EST. DEMAND CURRENT:	33 A								

GENERAL NOTES:
A. PROVIDE WITH INTEGRALLY MOUNTED TRANSIENT VOLTAGE SURGE SUPPRESSION.
B. MAIN BREAKER SHALL BE UL SERIES RATED TO BRANCH CIRCUIT PANELBOARD BREAKER/FUSES.
C. PROVIDE MAIN BREAKER WITH 120-VOLT SHUNT TRIP LABEL AS PER NEC.

NOTES:
1. PROVIDE GFCI BREAKER.
2. PROVIDE WITH 120-VOLT SHUNT TRIP
3. EXISTING CIRCUIT.
4. NEW CIRCUIT PROVIDE NEW BREAKER.

NEW PANELBOARD: L4COM2													
LOCATION: PHARMACY RX102				VOLTAGE: 208Y/120 V, 3 ø 4 W									
MOUNTING: RECESSED		NEMA1		A.I.C. RATING: 10,000 AMPS SYMMETRICAL		SPECIAL:							
MAIN DEVICE: 100 A		MAIN CB											
BUS AMPS: 225 AMPS													
LOAD DESCRIPTION	Notes	BKR	POLES	CKT	A	B	C	CKT	POLES	BKR	Notes	LOAD DESCRIPTION	
RCPT DISP. RX108		20 A	1	1	540	360		2	1	20 A		RCPT DISPENSING N09	
RCPT DISP. RX108		20 A	1	3		720	360	4	1	20 A		RCPT DISPENSING N09	
RCPT HAZ STOR RX113		20 A	1	5			900	6	1	20 A		RCPT DISPENSING N09	
RCPT OFFICE RX112		20 A	1	7	1260	360		8	1	20 A		RCPT ROOM N10	
RCPT OFFICE RX104		20 A	1	9		540	360	10	1	20 A		RCPT ROOM N10	
RCPT OFFICE RX105		20 A	1	11			720	12	1	20 A		RCPT ROOM N10	
REFRIGERATOR PHARMACY RX102	1	20 A	1	13	1200	360		14	1	20 A		RCPT ROOM N10	
RCPT ROOM N10		20 A	1	15		720	0	16	2	20 A		FURN RCPT PHARMACY RX102	
RCPT ROOM N10		20 A	1	17			720	18	--	--		--	
RCPT ROOM N10		20 A	1	19	720	0		20	2	20 A			

WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

project #: 020053.00

date: 07/22/2022

drawn by: LLA

checked by: LDB

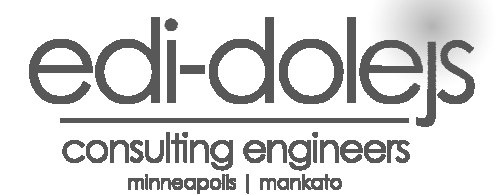
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

signature: 

printed name: JAY S. HRUBY P.E.

reg. #: 8782

sign date: 07/22/2022



1112 North 5th Street Minneapolis, MN 55411 (612) 343-5965
1624 North Riverfront Drive Markato, MN 56001 (507) 625-7869

revision / issue	no.	date
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Addendum #1	1	9/10/24
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SCHEDULES -
ELECTRICAL

sheet number: **E4.3**

PANELBOARD: L4N														EXISTING	
LOCATION: SURFACE MOUNTING: SURFACE MAIN DEVICE: 150 A BUS AMPS: 225 AMPS				NEMA 1 MAIN CB				VOLTAGE: 208Y/120 V, 3 @ 4 W. A.I.C. RATING: 10,000 AMPS SYMMETRICAL				SPECIAL:			
LOAD DESCRIPTION	Notes	BKR	POLES	CKT	A	B	C	CKT	POLES	BKR	Notes	LOAD DESCRIPTION			
EXISTING LOAD	2	20 A	1	1	0	0		2	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	3		0	0	4	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	5			0	6	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	7	0	0		8	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	9		0	0	10	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	11			0	12	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	13	0	0		14	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	15		0	0	16	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	17			0	18	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	19	0	0		20	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	21		0	0	22	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	23			0	24	1	20 A	2	EXISTING LOAD			
RCPT NARCOTICS 2		20 A	1	25	180	0		26	1	20 A	2	EXISTING LOAD			
RCPT TEMP PHARMACY 3		20 A	1	27		540	180	28	1	20 A		RCPT NARCOTICS 2			
RCPT NON CONVENIENCE TEMP...		20 A	1	29			1200	30	1	20 A		RCPT			
RCPT TEMP PHARMACY 3		20 A	1	31	720			32							
RCPT NARCOTICS 2		20 A	1	33		180		34							
RCPT NARCOTICS 2		20 A	1	35			180	36							
PANEL L4NA	2	100 A	3	37	0			38							
--	--	--	--	39				40							
--	--	--	--	41				42							
TOTAL LOAD:					900 VA		900 VA	1560 VA							
TOTAL AMPS:					8 A		8 A	13 A							
LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS											
RCPT	2160 VA	100.00%	2160 VA	CONNECTED LOAD:	3360 VA										
RCPT NON CONVENIENCE	1200 VA	100.00%	1200 VA	ESTIMATED DEMAND:	3360 VA										
				CONNECTED CURRENT:	9 A										
				EST. DEMAND CURRENT:	9 A										

PANELBOARD: L4COM															
LOCATION: SURFACE MOUNTING: SURFACE MAIN DEVICE: 150 A BUS AMPS: 225 AMPS				NEMA 1 MAIN CB				VOLTAGE: 208Y/120 V, 3 @ 4 W. A.I.C. RATING: 10,000 AMPS SYMMETRICAL				SPECIAL:			
LOAD DESCRIPTION	Notes	BKR	POLES	CKT	A	B	C	CKT	POLES	BKR	Notes	LOAD DESCRIPTION			
EXISTING LOAD	2	20 A	1	1	0	0		2	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	3		0	0	4	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	5			0	6	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	7	0	0		8	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	9		0	0	10	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	11			0	12	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	13	0	0		14	1	20 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	15		0	0	16	1	20 A	2	EXISTING LOAD			
SPARE		20 A	1	17				18	1	20 A		SPARE			
SPARE		20 A	1	19	0	720		20	1	20 A		RCPT TEMP PHARMACY 3			
SPARE		20 A	1	21			0	22	1	20 A		RCPT TEMP PHARMACY 3			
SPARE		20 A	1	23			0	24	1	20 A		RCPT TEMP PHARMACY 3			
SPARE		20 A	1	25	0	720		26	1	20 A		RCPT TEMP PHARMACY 3			
SPARE		20 A	1	27		0	180	28	1	20 A		RCPT TEMP PHARMACY 3			
SPARE		20 A	1	29				30	1	20 A		RCPT TEMP PHARMACY 3			
SPARE		20 A	1	31	0	360		32	1	20 A		RCPT TEMP PHARMACY 3			
SPARE		20 A	1	33		0	360	34	1	20 A		RCPT TEMP PHARMACY 3			
SPARE		20 A	1	35				36							
EXISTING LOAD	2	20 A	1	37	0	0		38	3	30 A	2	EXISTING LOAD			
EXISTING LOAD	2	20 A	1	39		0	0	40	--	--	--	--			
EXISTING LOAD	2	20 A	1	41			0	42	--	--	--	--			
TOTAL LOAD:					1800 VA		1740 VA	1440 VA							
TOTAL AMPS:					15 A		15 A	12 A							
LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS											
RCPT	3780 VA	100.00%	3780 VA	CONNECTED LOAD:	4980 VA										
RCPT NON CONVENIENCE	1200 VA	100.00%	1200 VA	ESTIMATED DEMAND:	4980 VA										
				CONNECTED CURRENT:	14 A										
				EST. DEMAND CURRENT:	14 A										

GENERAL NOTES:

A. EXISTING - SQUARE D

B. X

NOTES:

1. PROVIDE GFCI BREAKER

2. EXISTING LOAD TO REMAIN

WOODROW WILSON KEEBLE MEMORIAL HEALTH CARE CENTER USP COMPLIANCE

100 LAKE TRAVERSE DRIVE
SISSETON, SD 57262

project #: 020053.00

date: 07/22/2022

drawn by: LLA

checked by: LDB

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.

Jay S. Hruby

signature:

printed name: JAY S. HRUBY P.E.

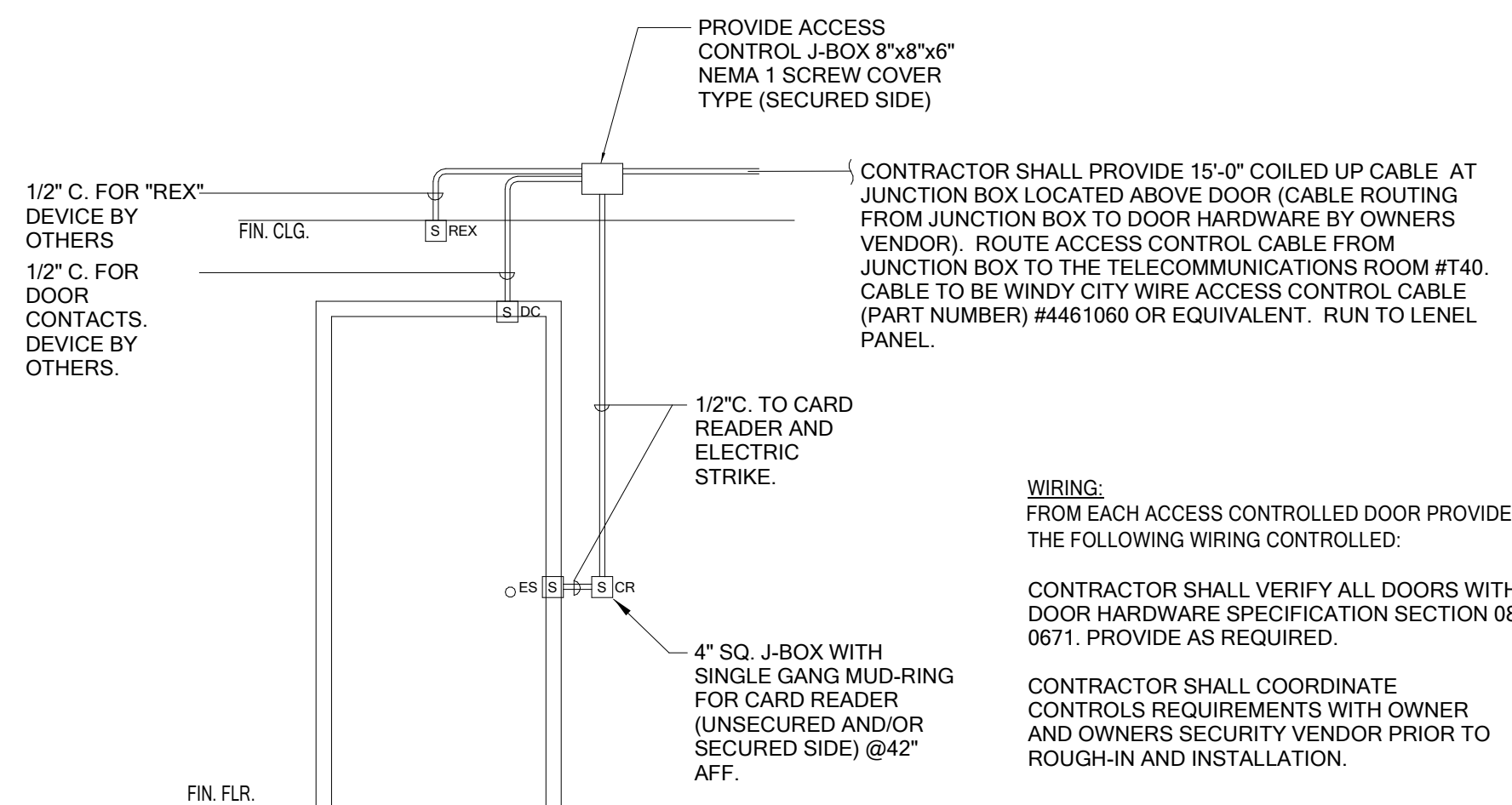
reg. #: 8782

sign date: 07/22/2022

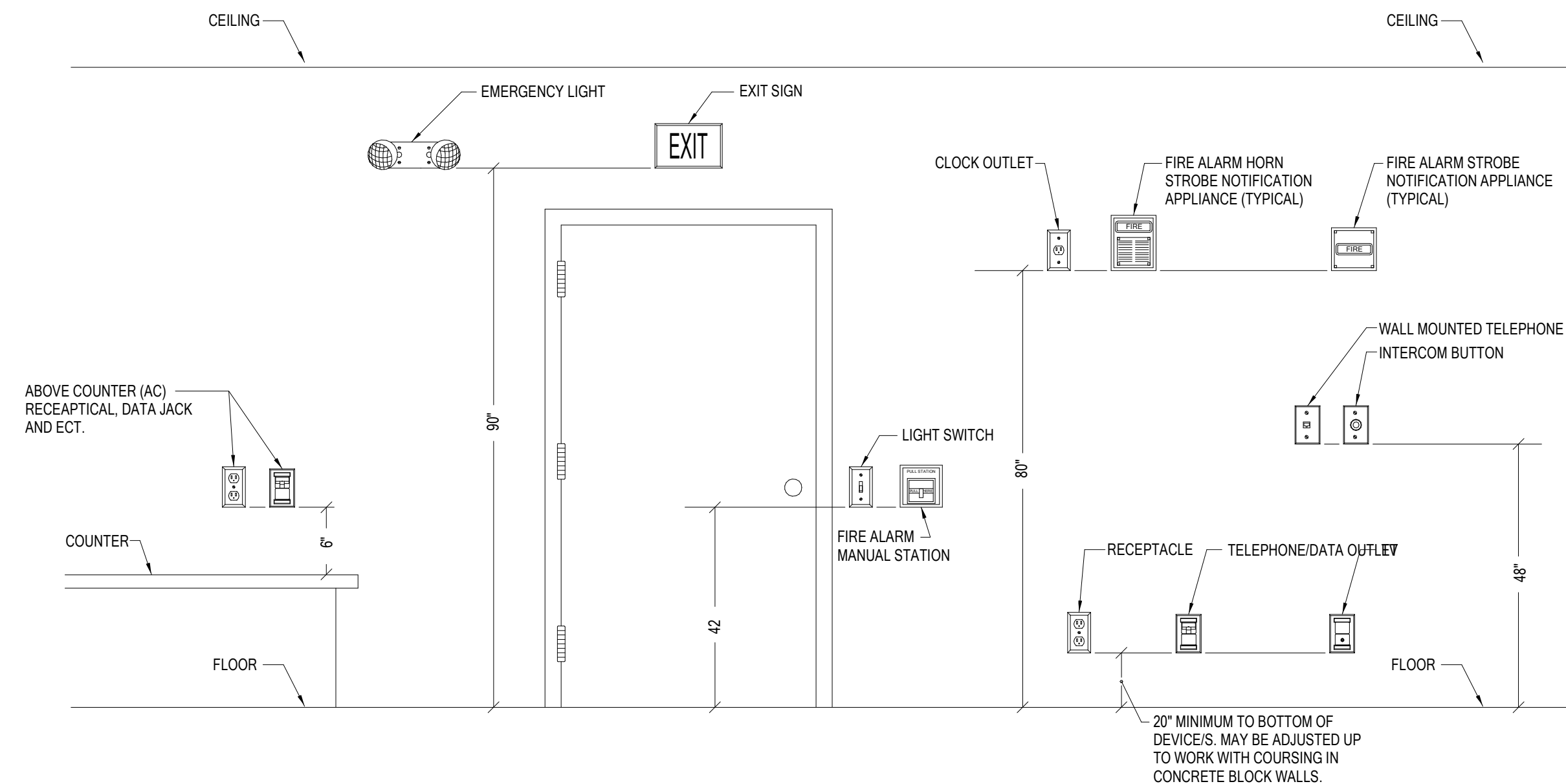
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minneapolis | markato

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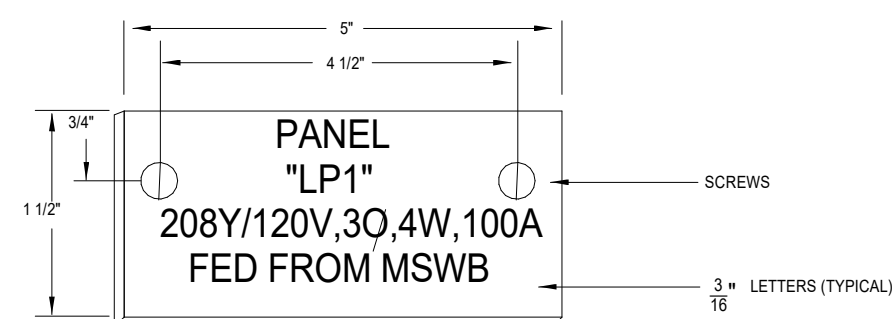
revision / issue	no.	date
Addendum #1	1	9/10/24



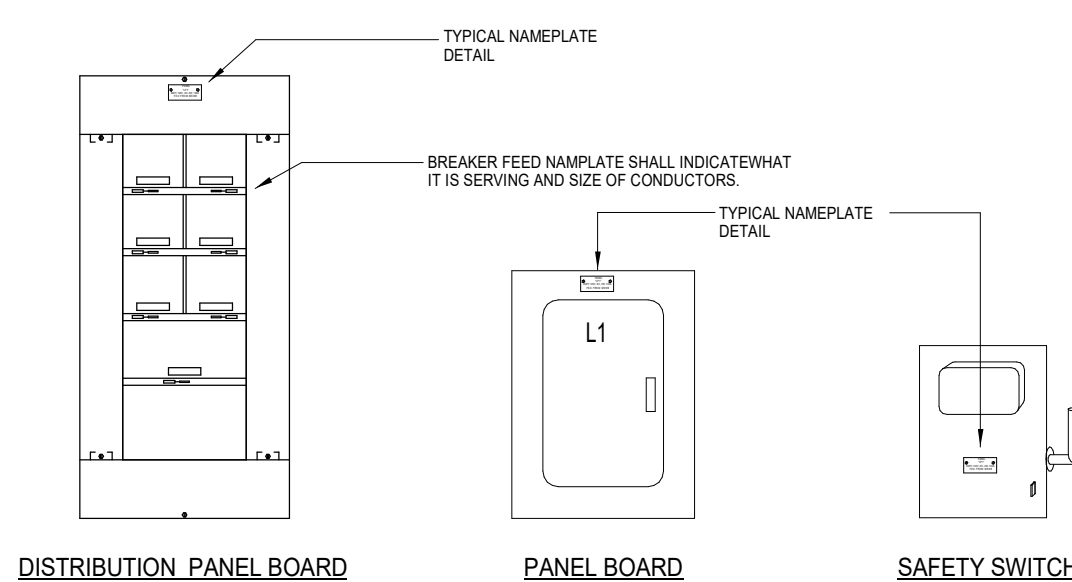
5 Access Control Rough-In Detail
SCALE: NO SCALE



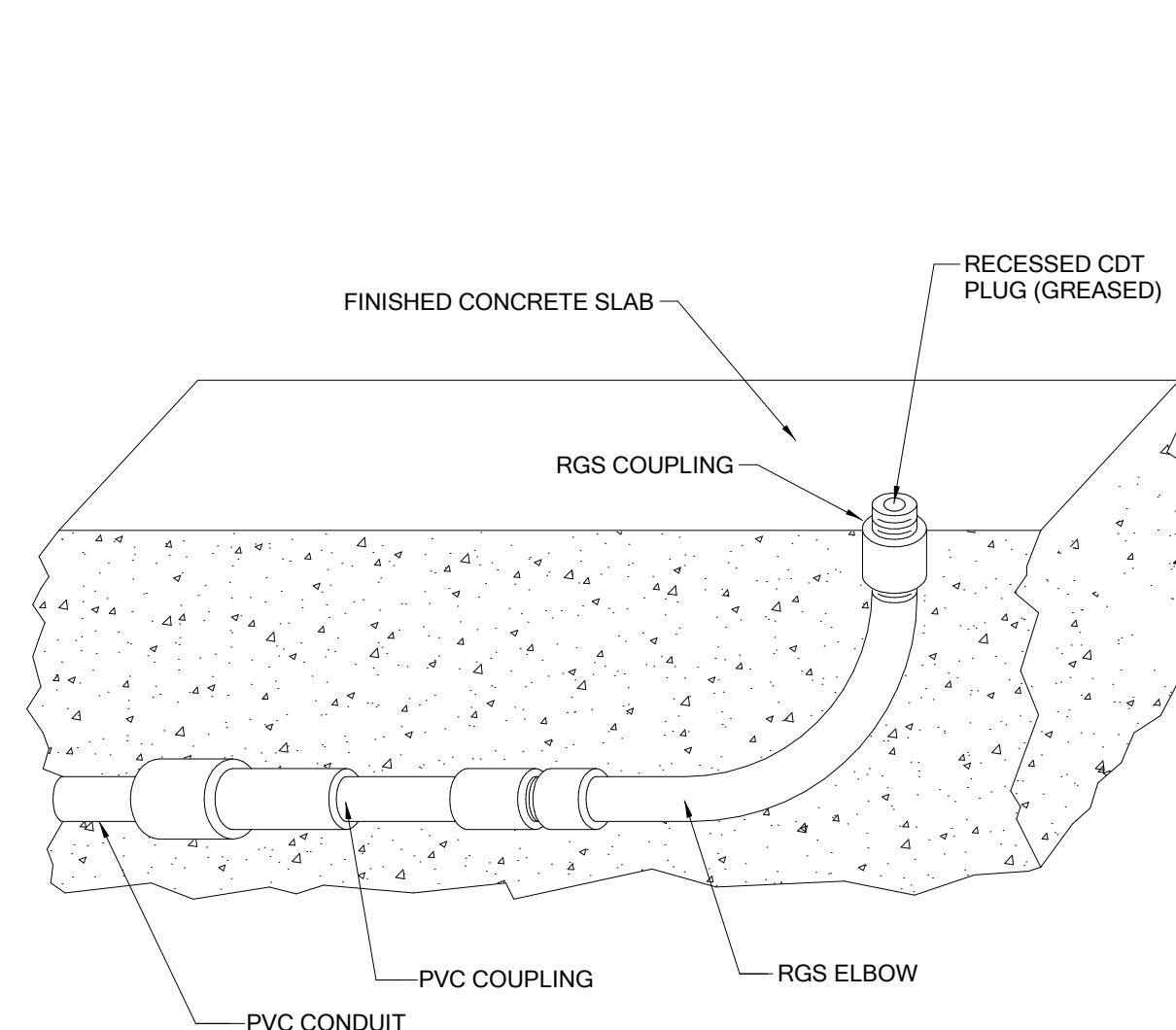
4 Typical Mounting Height Detail
NO SCALE



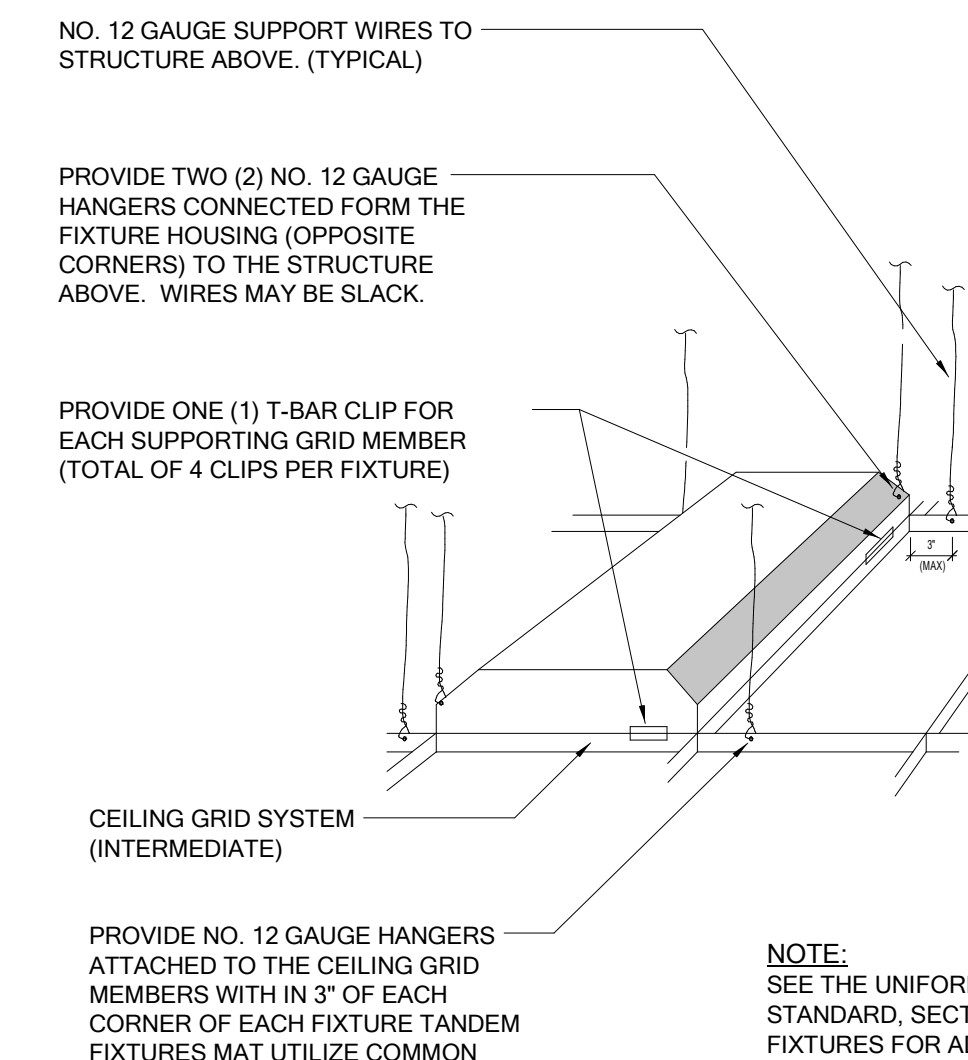
- NOTES:
- REFER TO SPECIFICATIONS FOR ADDITIONAL NAMEPLATE REQUIREMENTS.
 - NAMEPLATE TO BE 1/16" THICK WHITE PLASTIC WITH PLACARD CENTER LAMINATE. FACE SHALL BE WHITE, ENGRAVED LETTERS SHALL BE BLACK.
 - SECURE NAMEPLATE TO SURFACES WITH (2) FLAT HEAD BRASS SCREWS.
 - NAMEPLATE INFORMATION SHALL INCLUDE DEVICE NAME, SUPPLY VOLTAGE, AMPERAGE AND LOCATION FED FROM.



3 Typical Nameplate Detail
NO SCALE



2 Under Slab Conduit Turn Up Detail
NO SCALE



1 Light Support Detail
NO SCALE

DETAILS - ELECTRICAL
sheet number: **E5.1**