

3 LEVEL 1 - CONTRACTOR ACCESS PLAN  
1" = 30'-0"

**INFECTION CONTROL KEYNOTES:**

① REMOVE CEILING AS NECESSARY TO REMOVE EXISTING MEP WORK ABOVE IN HATCHED AREA. FOLLOW HOSPITAL INFECTION CONTROL STANDARDS TO CONSTRUCTION DEBRIS CONTAINMENT. REPLACE CEILING AFTER COMPLETE AND REPLACE ANY DAMAGED TILES FROM CONSTRUCTION TO MATCH EXISTING.

**INFECTION CONTROL LEGEND:**

- NA** - NEGATIVE AIR EXHAUST
- CA** - CONTRACTOR ACCESS
- FB** - INFECTION CONTROL FLEXIBLE BARRIER  
THE BARRIER SHALL BE CONSTRUCTED OF 6-MIL FIRE-RESISTANT POLYETHYLENE EXTENDING FROM THE FLOOR TO CEILING. IF NECESSARY, NON-COMBUSTIBLE COMPONENTS (PIPSIES, ETC.) SHALL BE UTILIZED TO SUPPORT THE POLYETHYLENE. THE BARRIER SHALL BE ADEQUATELY SEALED (AND MAINTAINED THROUGHOUT THE PROJECT) AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. THERE SHALL BE NO PENETRATIONS IN THE BARRIER.
- RB** - INFECTION CONTROL RIGID BARRIER  
THE BARRIER SHALL EXTEND FROM THE FLOOR TO THE CEILING AND SHALL BE CONSTRUCTED UTILIZING 3/8" METAL STUDS AND 1/2" OR 5/8" GYPSUM BOARD ON THE CLEAN SIDE OF THE BARRIER. THE METAL STUDS SHALL BE PLACED AT NO LESS THAN 16" AND NO MORE THAN 24" O.C. THE SEAMS AND JOINTS ON THE GYPSUM BOARD MUST BE SEALED WITH TAPE. THE BARRIER SHALL BE ADEQUATELY SEALED AND MAINTAINED AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. IF REQUIRED, DOOR/FRAME ASSEMBLIES DO NOT HAVE TO BE FIRE RATED, HOWEVER, MUST BE HINGED SWING-TYPE, A MINIMUM WIDTH OF 36" AND BE SOLID WOOD OR METAL CLAD WITH A METAL FRAME. THE DOOR(S) SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7.9N CORE, WHICH WILL BE PROVIDED AND INSTALLED BY UNIVERSITY OF MISSOURI HEALTHCARE. A DOOR SWEEP MAY BE REQUIRED. THE BARRIER DOOR SHALL REMAIN CLOSED AND LOCKED DURING THE WORK PERIOD. AIR FILTRATION EQUIPMENT EXHAUST VENT HOSE MAY PASS THROUGH THE UPPER PORTION OF THE BARRIER. THE PENETRATION OPENING SHALL BE ADEQUATELY SEALED AND MAINTAINED THROUGHOUT THE PROJECT TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA.
- EW** - INFECTION CONTROL BARRIER TYPE EXISTING WALL  
BARRIER SHALL BE ACHIEVED UTILIZING AN EXISTING WALL/ROOM AS A BARRIER. THE OWNER WILL REMOVE ALL PORTABLE EQUIPMENT AND/OR SUPPLIES FROM THE WORK AREA PRIOR TO START OF WORK. PRIOR TO START OF WORK, REPORT ALL PENETRATIONS/OPENINGS TO THE OWNER. THE OWNER WILL BE RESPONSIBLE TO REPAIR PENETRATIONS/OPENINGS IN EXISTING WALLS. COMPLETELY COVER ALL REMAINING ITEMS IN THE WORK AREA WITH POLYETHYLENE. THE ROOM DOOR(S) SHALL REMAIN CLOSED DURING THE WORK PERIOD.
- INFECTION CONTROL MODULAR BARRIER SYSTEM TYPE RB-1 OR RB-2**  
THE BARRIER SHALL BE ACHIEVED UTILIZING AN APPROVED MODULAR SYSTEM. THE SYSTEM SHALL BE COMPOSED OF ALUMINUM FRAMING EQUIPPED WITH WALL, CEILING AND FLOOR PANELS. THE SYSTEM SHALL BE EQUIPPED WITH MAGNETIC SEALS THAT ATTACH THE SYSTEM TO THE METAL DOOR FRAME ASSEMBLY. THE SYSTEM SHALL BE EQUIPPED WITH AN INTEGRATED DOOR PANEL AND AN INTEGRATED AIR MANAGEMENT PANEL TO ACCEPT A NEGATIVE AIR EXHAUST DISCHARGE HOSE AND BE EQUIPPED WITH A MAGNETIC NEGATIVE AIR INDICATOR. THE DOOR SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7.9N CORE, WHICH WILL BE PROVIDED AND INSTALLED BY THE UNIVERSITY OF MISSOURI HEALTHCARE.
- INFECTION CONTROL BARRIER TYPE ROOM**  
BARRIER SHALL BE ACHIEVED UTILIZING AN EXISTING ROOM AS A BARRIER. THE OWNER WILL REMOVE ALL PORTABLE EQUIPMENT AND/OR SUPPLIES FROM THE WORK AREA PRIOR TO START OF WORK. PRIOR TO START OF WORK, REPORT ALL PENETRATIONS/OPENINGS TO THE OWNER. THE OWNER WILL BE RESPONSIBLE TO REPAIR PENETRATIONS/OPENINGS IN EXISTING WALLS. COMPLETELY COVER ALL REMAINING ITEMS IN THE WORK AREA WITH POLYETHYLENE. THE ROOM DOOR(S) SHALL REMAIN CLOSED DURING THE WORK PERIOD.
- INFECTION CONTROL BARRIER TYPE NA**  
NO INFECTION CONTROL IS REQUIRED.

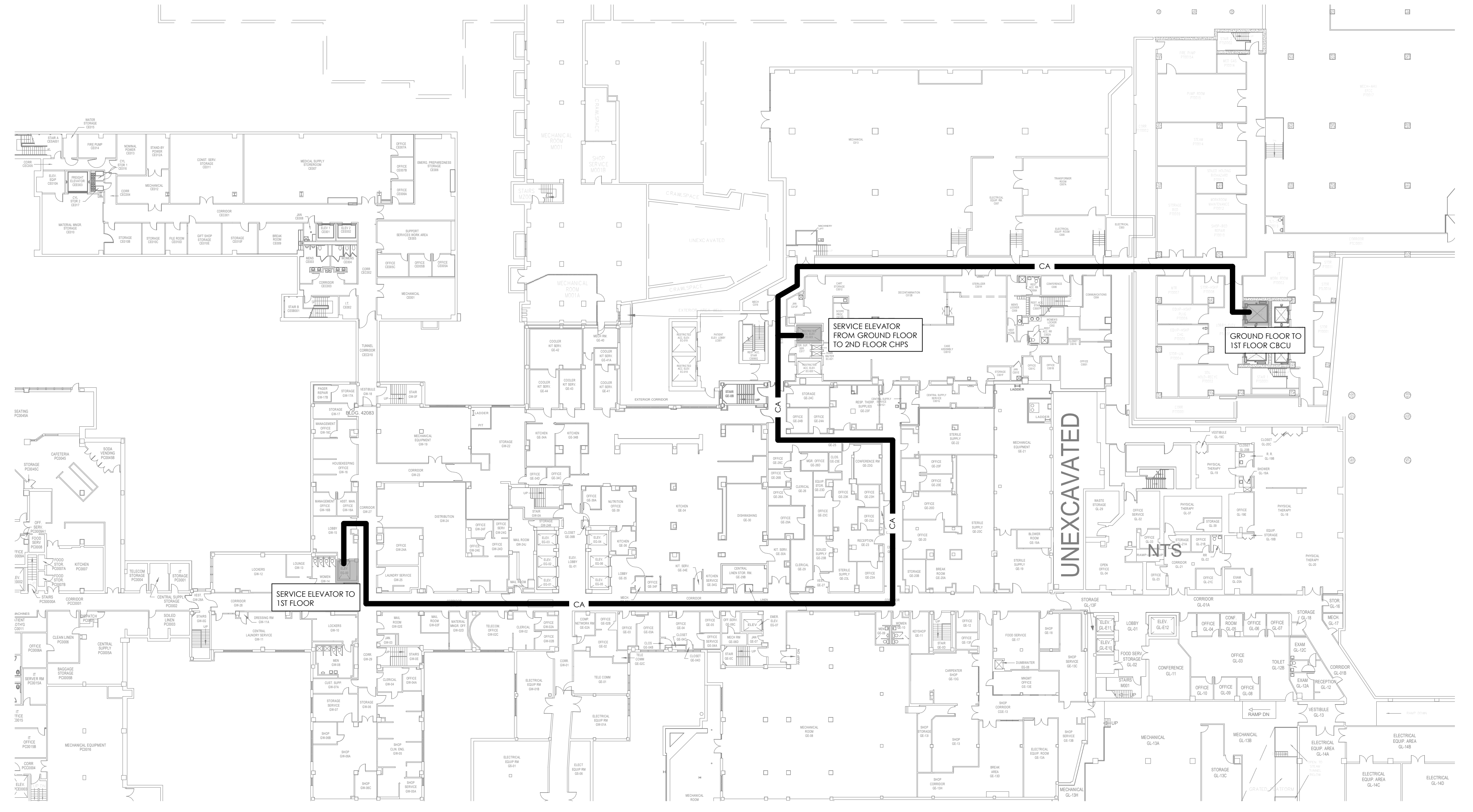
**bcDESIGN GROUP**  
12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102792

**Project Team:**  
**ROSS & BARUZZINI, INC.**  
6 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
**SPELLMAN BRADY & COMPANY**  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105  
**BOB D. CAMPBELL 7 CO.**  
4338 Bellevue Avenue  
Kansas City, MO 64111

**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 University of Missouri, Columbia, Missouri



1 LEVEL 2 - CONTRACTOR ACCESS PLAN  
1/16" = 1'-0"



2 BASEMENT - CONTRACTOR ACCESS PLAN  
1" = 30'-0"



Issue Date: 12/09/2020  
Issue #: \_\_\_\_\_ Date: \_\_\_\_\_

Drawn by: Author

bcgd Project #: 12275.43  
MU Project #: CP210751

**G100**  
CONTRACTOR ACCESS PLAN

**CODE REVIEW INFORMATION**

FACILITY NAME AND ADDRESS:  
UNIVERSITY OF MISSOURI HEALTH CARE  
ONE HOSPITAL DRIVE  
COLUMBIA, MISSOURI 65212

TYPE OF CONSTRUCTION:  
RENOVATION OF EXISTING HOSPITAL

AUTHORITY HAVING JURISDICTION:  
UNIVERSITY OF MISSOURI SYSTEM

CITY, COUNTY, STATE:  
CITY OF COLUMBIA  
BOONE COUNTY  
STATE OF MISSOURI

ARCHITECT:  
bcDESIGN GROUP  
12101 W 110TH STREET, SUITE 100  
OVERLAND PARK, KS 66210

APPLICABLE CODES/REGULATIONS:  
INTERNATIONAL BUILDING CODE - 2018  
INTERNATIONAL PLUMBING CODE - 2018  
INTERNATIONAL MECHANICAL CODE - 2018  
INTERNATIONAL EXISTING BUILDING CODE - 2018 (LEVEL 1 & LEVEL 2 ALTERATIONS ONLY WITH PER-APPROVAL OF AHJ)  
INTERNATIONAL FIRE CODE - 2018  
INTERNATIONAL FUEL GAS CODE - 2018  
INTERNATIONAL SWIMMING POOL AND SPA CODE - 2018  
NATIONAL ELECTRIC CODE - 2011 & 2017  
NFPA 110 STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS - 2010 & 2016  
NFPA 101 LIFE SAFETY CODE - 2012  
NFPA 99 STANDARD FOR HEALTH CARE FACILITIES - 2012  
NFPA 96 STANDARD FOR VENTILATING CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS - 2011 & 2017  
NFPA 90A INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS - 2012 & 2018  
NFPA 72 NATIONAL FIRE ALARM CODE - 2010 & 2016  
NFPA 518 STANDARD FOR FIRE PREVENTION DURING WELDING, CUTTING, AND OTHER HOT WORK - 2014  
NFPA 45 STANDARD ON FIRE PROTECTION FOR LABORATORIES USING CHEMICALS - 2011 & 2015  
NFPA 20 STANDARD FOR THE INSTALLATION OF STATIONARY FIRE PUMPS FOR FIRE PROTECTION - 2010  
NFPA 14 STANDARD FOR THE INSTALLATION OF STANDPIPE, PRIVATE HYDRANTS AND HOSE SYSTEMS - 2010 & 2016  
NFPA 13 INSTALLATION OF FIRE SPRINKLER SYSTEMS - 2010 & 2016  
ASHRAE 90.1 - ENERGY STANDARD FOR BUILDINGS - 2016  
ASHRAE 170 - VENTILATION OF HEALTHCARE FACILITIES - 2017  
ASHRAE 171 - SAFETY CODE FOR ELEVATORS AND ESCALATORS (PER STATE OF MISSOURI)  
AMERICANS WITH DISABILITIES ACT - STANDARDS FOR ACCESSIBLE DESIGN 2010  
FACILITY GUIDELINES INSTITUTE - 2018

CONSTRUCTION TYPE (EXISTING):  
TYPE I-A (EXISTING)  
TYPE I-A (NEW)

ALLOWABLE BUILDING HEIGHT/ AREA:  
UNLIMITED

RENOVATED AREA:  
PCT 1ST FLOOR: 3,498 SF  
PCT 2ND FLOOR: 1,543 SF  
CCA 2ND FLOOR: 5,983 SF

TOTAL RENOVATED AREA: 11,424 SF

OCCUPANCY:  
PCT 1ST FLOOR: GROUP I-2 AMBULATORY CARE  
CCA 2ND FLOOR: GROUP I-2 HEALTHCARE  
PCT 2ND FLOOR: GROUP B BUSINESS

FIRE SUPPRESSION:  
FULLY SPRINKLED

ACTIVE FIRE SAFETY SYSTEMS:  
EXISTING BUILDING IS FULLY SPRINKLED

STRUCTURAL FIRE PROTECTION:

ITEM:	EXISTING:
EXTERIOR BEARING WALLS	3 HR
INTERIOR BEARING WALLS	3 HR
EXTERIOR NON-BEARING WALLS	1 HR
STRUCTURAL FRAME	3 HR
SHAFT ENCLOSURES	2 HR
FLOORS	2 HR
ROOF	1.5 HR
EXTERIOR OPENINGS	NA
STAIRWAY CONSTRUCTION	2 HR

CODE LEGEND

3HR	3HR	3 HOUR FIRE BARRIER
2HR	2HR	2 HOUR FIRE BARRIER
1HR	1HR	1 HOUR FIRE BARRIER
2HR	2HR	2 HOUR FIRE SMOKE BARRIER
SM	SM	SMOKE PENETRATION RESISTANT
---	---	TRAVEL DISTANCE
EXT	←	FIRE EXTINGUISHER CABINET
HO	←	HOLD OPEN
VP	←	VISION PANEL
# RUM	←	MINUTE FIRE RATED OPENING
HAZ	←	HAZARDOUS AREA
HAZ (M)	←	HAZARDOUS AREA (MULTIPLE ROOMS)
←	←	BUILDING EXIT
←	←	EXIT STAIRS
←	←	EXIT DISCHARGE PASSAGE
←	←	SUITE ID

**1ST FLOOR - OCCUPANCY INFORMATION**

EXISTING AMBULATORY OCCUPANCY

COMPARTMENT ID	COMPARTMENT LOAD	OCCUPANT	SPRINKLER SYSTEM	AREA USE	DISTANCE TO EXIT	DISTANCE TO EXIT
PCT-1NW	17,887	179	FULL	TREATMENT	43'	43'

EXISTING BUSINESS OCCUPANCY

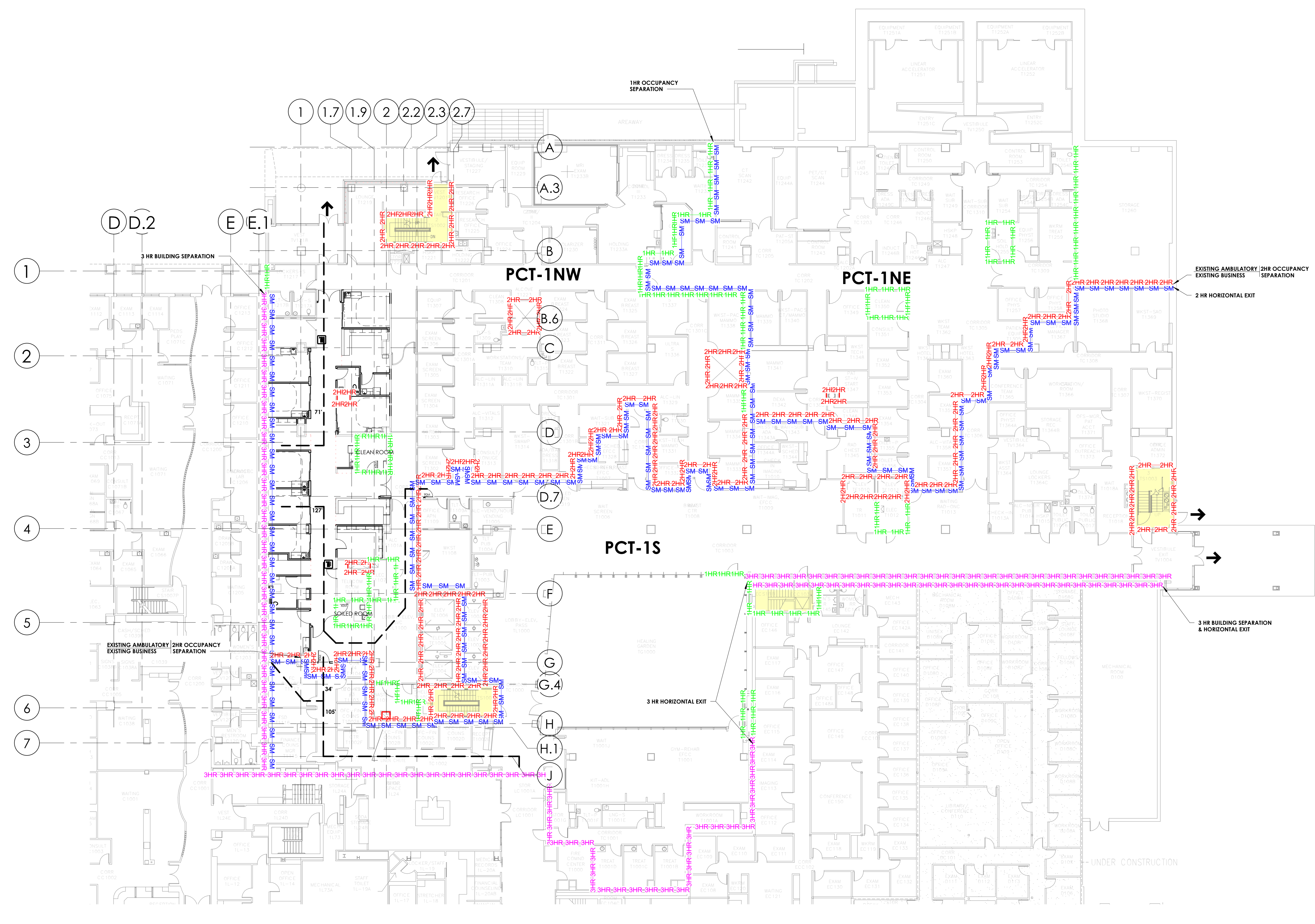
COMPARTMENT ID	COMPARTMENT LOAD	OCCUPANT	SPRINKLER SYSTEM	AREA USE	DISTANCE TO EXIT
PCT-1S	17,946	180	FULL	BUSINESS	105'

OCCUPANCY LOAD:  
I-2 OUTPATIENT TREATMENT AREAS 100 GROSS  
BUSINESS AREAS 100 GROSS  
STORAGE AREA 300 GROSS

I-2 OCCUPANCY:  
MAX. TRAVEL DISTANCE: 200 FT.  
MAX. DEAD END CORRIDOR: 20' 0"  
MAX. COMMON PATH OF TRAVEL: 50' 0"

CBCU PROJECT AREA:  
OCCUPANT LOAD = 3,845/100 = 39 OCCUPANTS  
EGRESS WIDTH = 39 OCCUPANTS x 2 = 78'

BUSINESS OCCUPANCY:  
MAX. TRAVEL DISTANCE: 300'  
MAX. DEAD END CORRIDOR: 50' 0"  
MAX. COMMON PATH OF TRAVEL: 100' 0"



1 PARTIAL 1ST FLOOR LIFE SAFETY PLAN  
1/16" = 1'-0"

FIRST FLOOR KEYPLAN



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201100729

Project Team:  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellevue Avenue  
Kansas City, MO 64111

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020  
Date:

Drawn by: Author  
bcgd Project #: 12275.43  
MU Project #: CP210751

**G101**  
1ST FLOOR LIFE SAFETY

**CODE REVIEW INFORMATION**

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INTERNATIONAL MECHANICAL CODE - 2018  
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FACILITY GUIDELINES INSTITUTE - 2018

CONSTRUCTION TYPE (EXISTING):  
TYPE I-A (EXISTING)  
TYPE I-A (NEW)

ALLOWABLE BUILDING HEIGHT/ AREA:  
UNLIMITED

RENOVATED AREA:  
PCT 1ST FLOOR: 3,698 SF  
PCT 2ND FLOOR: 1,742 SF  
CCA 2ND FLOOR: 6,550 SF

TOTAL RENOVATED AREA: 11,991 SF

OCCUPANCY:  
PCT 1ST FLOOR: GROUP I-2 AMBULATORY CARE  
CCA 2ND FLOOR: GROUP I-2 HEALTHCARE  
PCT 2ND FLOOR: GROUP B BUSINESS

FIRE SUPPRESSION:  
FULLY SPRINKLED

ACTIVE FIRE SAFETY SYSTEMS:  
EXISTING BUILDING IS FULLY SPRINKLED

STRUCTURAL FIRE PROTECTION:  
ITEM: EXISTING:  
EXTERIOR BEARING WALLS 3 HR  
INTERIOR BEARING WALLS 3 HR  
EXTERIOR NON-BEARING WALLS 1 HR  
STRUCTURAL FRAME 2 HR  
SHAFT ENCLOSURES 2 HR  
FLOORS 2 HR  
ROOF 1.5 HR  
EXTERIOR OPENINGS NA  
STAIRWAY CONSTRUCTION 2 HR



**bcDESIGN GROUP**  
12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-20100792

**Project Team:**  
ROSS & BARUZZINI, INC.  
5 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
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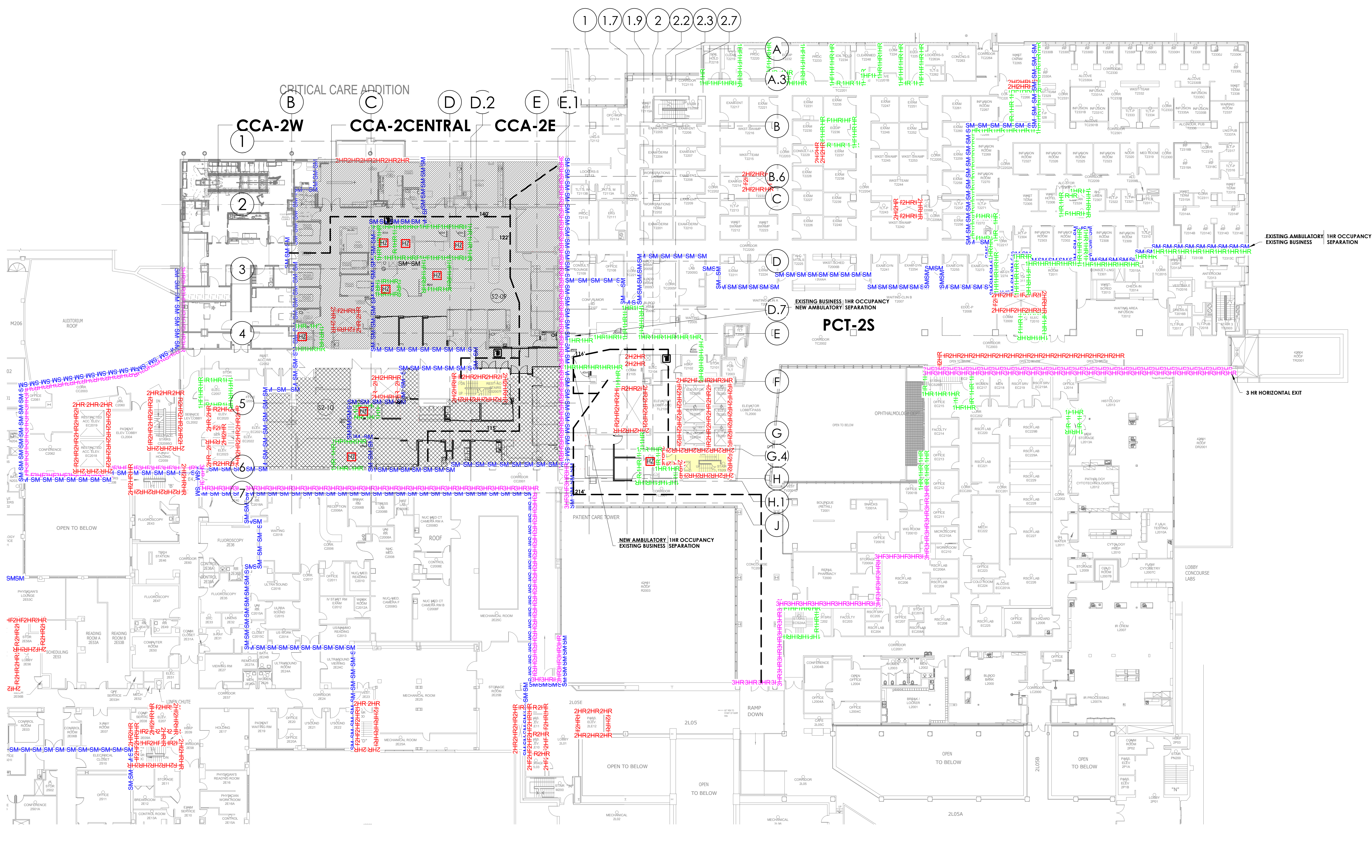


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Date:

Drawn by: Author

bcgd Project #: 12275.43  
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**G102**  
2ND FLOOR LIFE SAFETY



**2ND FLOOR - SUITE INFORMATION**

SUITE ID	SUITE NO.	SLEEPING/ NON SLEEPING	NUMBER OF INTERVENING RMS	REMOTE EXIT REQUIREMENTS	DISTANCE TO EXIT ACCESS DOOR
S2-09	9-246	NON SLEEPING	1	2 REMOTE EXITS	112'
S2-10	4-278	NON SLEEPING	1	2 REMOTE EXITS	87'

**2ND FLOOR - OCCUPANCY INFORMATION**

**EXISTING HEALTHCARE OCCUPANCY**

COMPARTMENT/COMPARTMENT ID	AREA SQ. FT.	OCCUPANT LOAD	SPRINKLER SYSTEM	AREA USE	DISTANCE TO EXIT	DISTANCE TO SMOKE EXIT
CCA-2W	8,696	33	FULL	TREATMENT	76'	135'
CCA-2CENTRAL	9,543	40	FULL	TREATMENT	64'	177'
CCA-2E	7,852 SF	87	FULL	TREATMENT	68'	122'

**EXISTING BUSINESS OCCUPANCY**

COMPARTMENT/COMPARTMENT ID	AREA SQ. FT.	OCCUPANT LOAD	SPRINKLER SYSTEM	AREA USE	DISTANCE TO EXIT
PCT-2S	21,713	218	FULL	BUSINESS	116'

**OCCUPANCY LOAD:**  
 12 OUTPATIENT TREATMENT AREAS 100 GROSS  
 BUSINESS AREAS 100 GROSS  
 STORAGE AREA 300 GROSS

**SUITE SLOP:**  
 OCCUPANT LOAD = 9,246/100 = 93 OCCUPANTS  
 EGRESS WIDTH = 93 OCCUPANTS x 2 = 18.6'

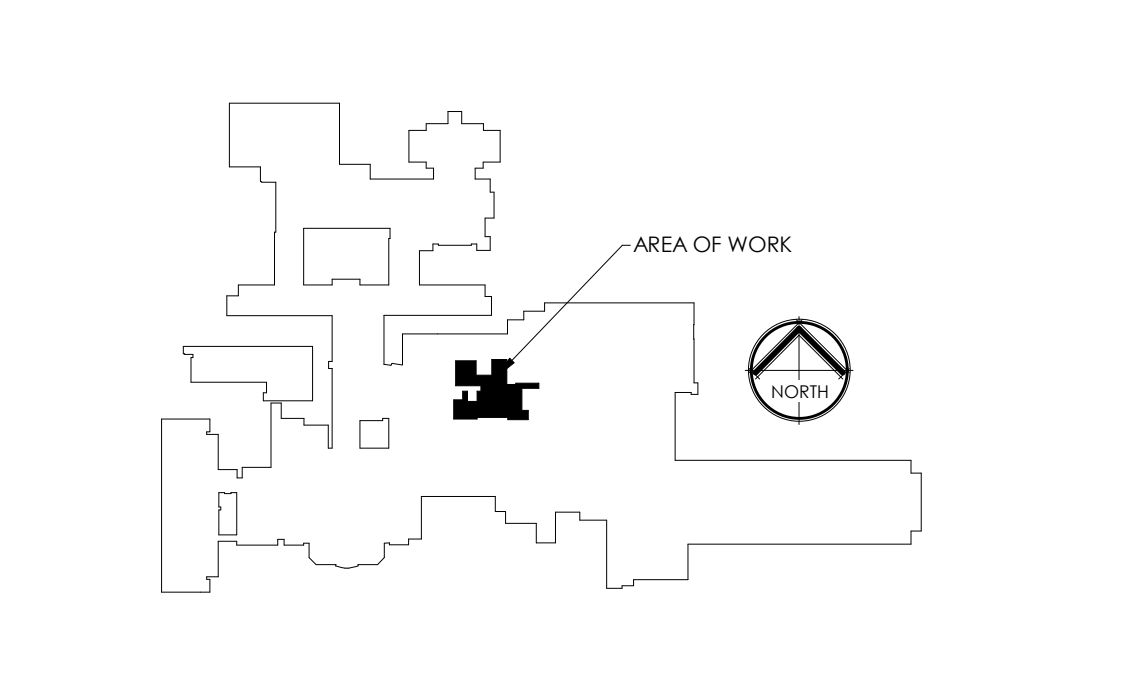
**SUITE S1-10:**  
 OCCUPANT LOAD = 4,278/100 = 43 OCCUPANTS  
 EGRESS WIDTH = 43 OCCUPANTS x 2 = 8.6'

**NEW PCT AMBULATORY OCCUPANCY:**  
 OCCUPANT LOAD = 1,743/100 = 18 OCCUPANTS  
 EGRESS WIDTH = 18 OCCUPANTS x 2 = 3.6'

**TOTAL PROJECT OCCUPANT LOAD = 154 OCCUPANTS**

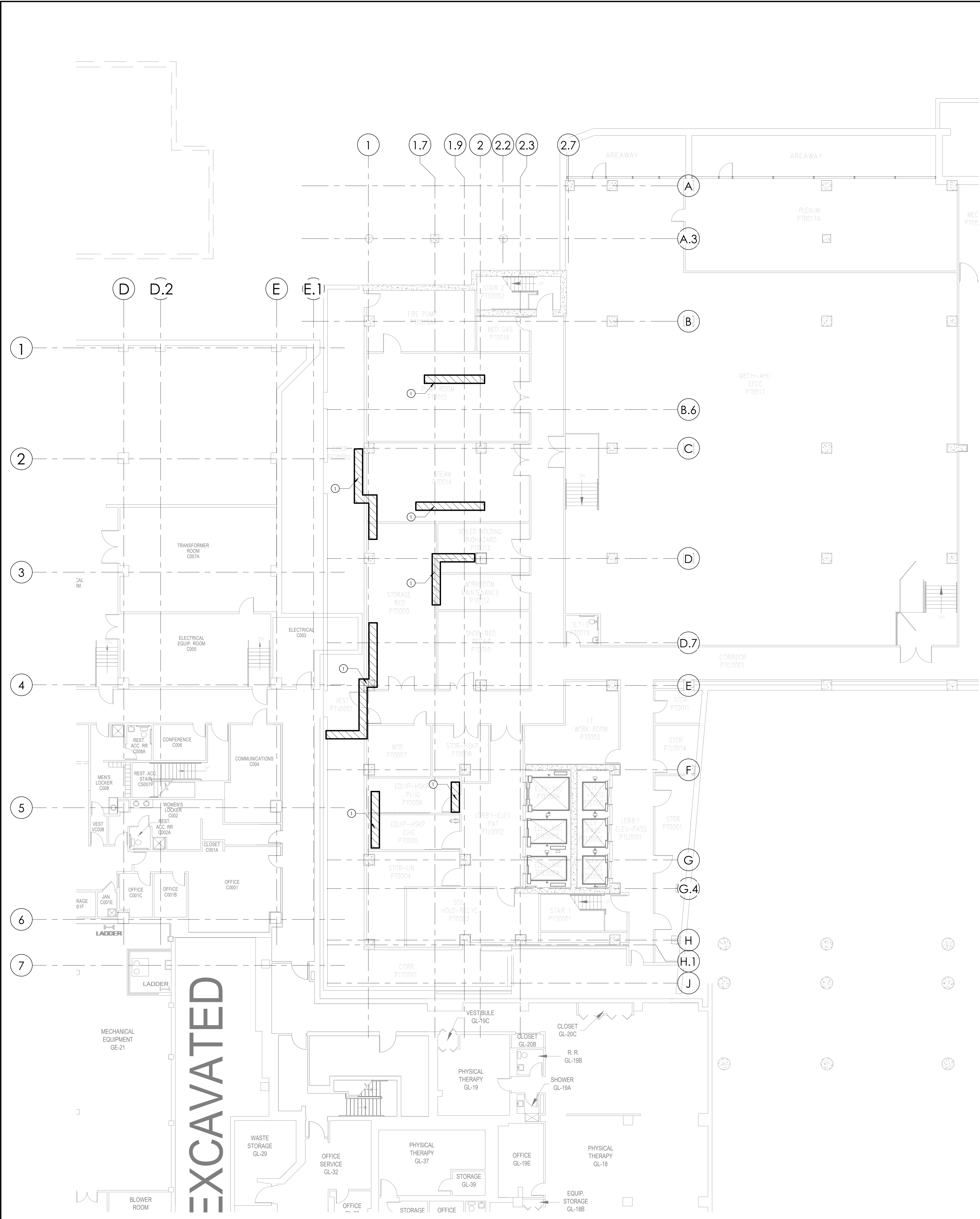
**12 OCCUPANCY:**  
 MAX. TRAVEL DISTANCE: 200 FT  
 MAX. DEAD END CORRIDOR: 20'-0"  
 MAX. COMMON PATH OF TRAVEL: 50'-0"

**BUSINESS OCCUPANCY:**  
 MAX. TRAVEL DISTANCE: 300'  
 MAX. DEAD END CORRIDOR: 50'-0"  
 MAX. COMMON PATH OF TRAVEL: 100'-0"



**1 PARTIAL 2ND FLOOR LIFE SAFETY PLAN**  
 1" = 20'-0"

**SECOND FLOOR KEYPLAN**



- PHASING LEGEND:**
- PHASE 1**  
-TRANSFER CLEAN UTILITY STORAGE WEST  
-MOVE SOUTH WALL IN CLEAN UTILITY
  - PHASE 2**  
-MOVE CLEAN UTILITY BACK  
-ADD SINK AND CASEWORK TO CREATE STAFF LOUNGE, NEW FLOORING & PAINT
  - PHASE 3**  
-MOVE STAFF LOUNGE ACROSS THE HALL  
-CREATE 3 NEW PREP/STORAGE ROOMS, ENCLOSE EXISTING RESTROOM  
-UPDATES NECESSARY TO MAKE ROOM SOLED HOLDING  
-CONVERT OFFICES TO REGISTRATION AND WAITING, CREATE OPENING FROM PCTO TO CCA
  - PHASE 3B**  
-MOVE EXISTING GI BATHROOM WALLS BACK  
-INSTALL BIPARTING DOORS INTO GI
  - PHASE 4**  
-BUILD OUT NEW CHPS SUITE  
-MAKE NECESSARY MODIFICATIONS TO ROOM 4 TO ALLOW MODERATE & DEEP SEDATION  
-ADD DOORWAY INTO NEW SCOPE CLEAN ROOM, REMOVE CASEWORK, PATCH WALLS AND FLOORS  
-UPDATE FINISHES IN EXISTING RESTROOM  
-CREATE NEW LACTATION ROOM
  - ABOVE CEILING WORK IN HATCHED AREA, REMOVE AND REPLACE CEILING TILES AS NECESSARY DUE TO CONSTRUCTION, PATCH AND REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION.

**INFECTION CONTROL KEYNOTES:**

○ REMOVE CEILING AS NECESSARY TO REMOVE EXISTING MEP WORK ABOVE IN HATCHED AREA, FOLLOW HOSPITAL INFECTION CONTROL STANDARDS TO CONSTRUCTION (DEBRIS CONTAINMENT, REPLACE CEILING AFTER COMPLETE AND REPLACE ANY DAMAGED TILES FROM CONSTRUCTION TO MATCH EXISTING.

- INFECTION CONTROL LEGEND:**
- NEGATIVE AIR EXHAUST**
  - CONTRACTOR ACCESS**
  - FB-FB** **INFECTION CONTROL FLEXIBLE BARRIER**  
THE BARRIER SHALL BE CONSTRUCTED OF 4-MIL FIRE-RESISTANT POLYETHYLENE EXTENDING FROM THE FLOOR TO CEILING. IF NECESSARY, NON-COMBUSTIBLE COMPONENTS (PIR POLES, ETC.) SHALL BE UTILIZED TO SUPPORT THE POLYETHYLENE. THE BARRIER SHALL BE ADEQUATELY SEALED (AND MAINTAINED THROUGHOUT THE PROJECT) AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. THERE SHALL BE NO PENETRATIONS IN THE BARRIER.
  - FB-RB** **INFECTION CONTROL RIGID BARRIER**  
THE BARRIER SHALL EXTEND FROM THE FLOOR TO THE CEILING AND SHALL BE CONSTRUCTED UTILIZING 3/8" METAL STUDS AND 1/2" OR 5/8" GYPSUM BOARD ON THE CLEAN SIDE OF THE BARRIER. THE METAL STUDS SHALL BE PLACED AT NO LESS THAN 16" AND NO MORE THAN 24" O.C. THE SEAMS AND JOINTS ON THE GYPSUM BOARD MUST BE SEALED WITH TAPE. THE BARRIER SHALL BE ADEQUATELY SEALED AND MAINTAINED AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. IF REQUIRED, DOOR/FRAME ASSEMBLIES DO NOT HAVE TO BE FIRE-RATED, HOWEVER, MUST BE HINGED SWING-TYPE, A MINIMUM WIDTH OF 36" AND BE SOLID WOOD OR METAL CLAD WITH A METAL FRAME. THE DOOR(S) SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7-PIN CORE, WHICH WILL BE PROVIDED AND INSTALLED BY UNIVERSITY OF MISSOURI HEALTHCARE. A DOOR SWEEP MAY BE REQUIRED. THE BARRIER DOOR SHALL REMAIN CLOSED AND LOCKED DURING THE WORK PERIOD. AIR FILTRATION EQUIPMENT EXHAUST/VENT HOSE MAY PASS THROUGH THE UPPER PORTION OF THE BARRIER. THE PENETRATION/OPENING SHALL BE ADEQUATELY SEALED AND MAINTAINED THROUGHOUT THE PROJECT TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA.
  - EW-EW** **INFECTION CONTROL BARRIER TYPE EXISTING WALL**  
BARRIER SHALL BE ACHIEVED UTILIZING AN EXISTING WALL/ROOM AS A BARRIER. THE OWNER WILL REMOVE ALL PORTABLE EQUIPMENT AND/OR SUPPLIES FROM THE WORK AREA PRIOR TO START OF WORK. PRIOR TO START OF WORK, REPORT ALL PENETRATIONS/OPENINGS TO THE OWNER. THE OWNER WILL BE RESPONSIBLE TO REPAIR PENETRATIONS/OPENINGS IN EXISTING WALLS, COMPLETELY COVER ALL REMAINING ITEMS IN THE WORK AREA WITH POLYETHYLENE. THE ROOM DOOR(S) SHALL REMAIN CLOSED DURING THE WORK PERIOD.
  - INFECTION CONTROL MODULAR BARRIER SYSTEM TYPE RB-1 OR RB-2**  
THE BARRIER SHALL BE ACHIEVED UTILIZING AN APPROVED MODULAR SYSTEM. THE SYSTEM SHALL BE COMPOSED OF ALUMINUM FRAMING EQUIPPED WITH WALL, CEILING AND FLOOR PANELS. THE SYSTEM SHALL BE EQUIPPED WITH MAGNETIC SEALS THAT ATTACH TO THE SYSTEM TO THE METAL DOOR FRAME ASSEMBLY. THE SYSTEM SHALL BE EQUIPPED WITH AN INTEGRATED DOOR PANEL AND AN INTEGRATED AIR MANAGEMENT PANEL TO ACCEPT A NEGATIVE AIR EXHAUST DISCHARGE HOSE AND BE EQUIPPED WITH A MAGNETIC NEGATIVE AIR INDICATOR. THE DOOR SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7-PIN CORE, WHICH WILL BE PROVIDED AND INSTALLED BY THE UNIVERSITY OF MISSOURI HEALTHCARE.
  - INFECTION CONTROL BARRIER TYPE ROOM**  
BARRIER SHALL BE ACHIEVED UTILIZING AN EXISTING ROOM AS A BARRIER. THE OWNER WILL REMOVE ALL PORTABLE EQUIPMENT AND/OR SUPPLIES FROM THE WORK AREA PRIOR TO START OF WORK. PRIOR TO START OF WORK, REPORT ALL PENETRATIONS/OPENINGS TO THE OWNER. THE OWNER WILL BE RESPONSIBLE TO REPAIR PENETRATIONS/OPENINGS IN EXISTING WALLS, COMPLETELY COVER ALL REMAINING ITEMS IN THE WORK AREA WITH POLYETHYLENE. THE ROOM DOOR(S) SHALL REMAIN CLOSED DURING THE WORK PERIOD.
  - INFECTION CONTROL BARRIER TYPE NA**  
NO INFECTION CONTROL IS REQUIRED.



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Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102792

**Project Team:**  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Belleview Avenue  
Kansas City, MO 64111

Project Title:  
 CP150492 | University of Missouri Teaching Hospital - West Wing - Expansion/Renovation  
 University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020  
Date:

Drawn by: Author  
bcgd Project #: 12275.15  
MU Project #: CP150492

**G103**  
BASEMENT LEVEL INFECTION CONTROL

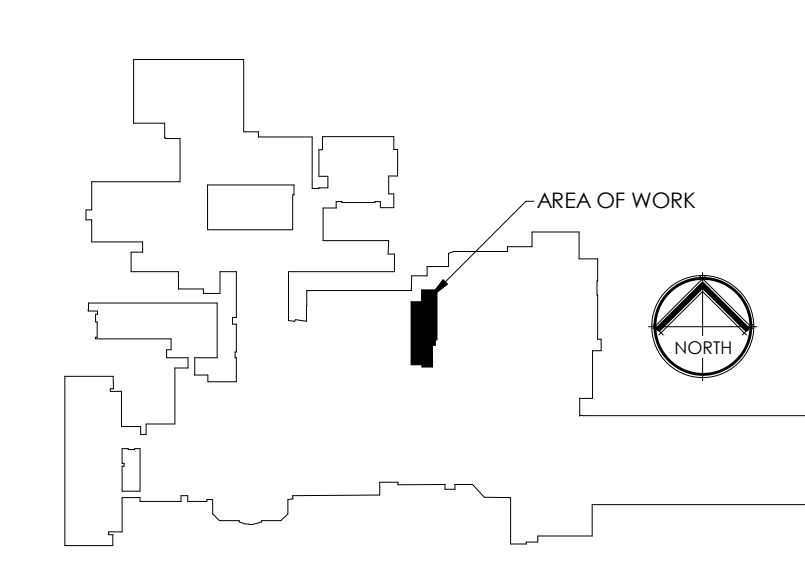


- PHASING LEGEND:**
- **PHASE 1**  
-TRANSFER CLEAN UTILITY STORAGE WEST  
-MOVE SOUTH WALL IN CLEAN UTILITY
  - **PHASE 2**  
-MOVE CLEAN UTILITY BACK  
-ADD SHW AND CASEWORK TO CREATE STAFF LOUNGE, NEW FLOORING & PAINT
  - **PHASE 3**  
-MOVE STAFF LOUNGE ACROSS THE HALL  
-CREATE 3 NEW PRE/POST ROOMS, ENCLOSE EXISTING RESTROOM  
-UPDATES NECESSARY TO MAKE ROOM SOLED HEADING  
-CONVERT OFFICES TO REGISTRATION AND WAITING - CREATE OPENING FROM PCT TO CCA
  - **PHASE 3B**  
-MOVE EXISTING GI BATHROOM WALLS BACK  
-INSTALL BIPARTING DOORS INTO GI
  - **PHASE 4**  
-BUILD OUT NEW CHPS SUITE  
-MAKE NECESSARY MODIFICATIONS TO ROOM 4 TO ALLOW MODERATE & DEEP SEPARATION  
-ADD DOORWAY INTO NEW SCOPE CLEAN ROOM, REMOVE CASEWORK, PATCH WALLS AND FLOORS  
-UPDATES FINISHES IN EXISTING RESTROOM  
-CREATE NEW LACTATION ROOM
  - ABOVE CEILING WORK IN HATCHED AREA REMOVE AND REPLACE CEILING LIGHTS AS NECESSARY DUE TO CONSTRUCTION, PATCH AND REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION.

**INFECTION CONTROL KEYNOTES:**

① REMOVE CEILING AS NECESSARY TO REMOVE EXISTING MEP WORK ABOVE IN HATCHED AREA. FOLLOW HOSPITAL INFECTION CONTROL STANDARDS TO CONSTRUCTION DEBRIS CONTAINMENT. REPLACE CEILING AFTER COMPLETE AND REPLACE ANY DAMAGED TILES FROM CONSTRUCTION TO MATCH EXISTING.

- INFECTION CONTROL LEGEND:**
- NA - NEGATIVE AIR EXHAUST
  - CA - CONTRACTOR ACCESS
  - FB - FB - **INFECTION CONTROL FLEXIBLE BARRIER**  
THE BARRIER SHALL BE CONSTRUCTED OF 6-MIL FIRE-RESISTANT POLYETHYLENE EXTENDING FROM THE FLOOR TO CEILING. IF NECESSARY, NON-COMBUSTIBLE COMPONENTS (PIP, PILES, ETC.,) SHALL BE UTILIZED TO SUPPORT THE POLYETHYLENE. THE BARRIER SHALL BE ADEQUATELY SEALED (AND MAINTAINED THROUGHOUT THE PROJECT) AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. THERE SHALL BE NO PENETRATIONS IN THE BARRIER.
  - RB - RB - **INFECTION CONTROL RIGID BARRIER**  
THE BARRIER SHALL EXTEND FROM THE FLOOR TO THE CEILING AND SHALL BE CONSTRUCTED UTILIZING 3/8" METAL STUDS AND 1/2" OR 5/8" GYPSUM BOARD ON THE CLEAN SIDE OF THE BARRIER. THE METAL STUDS SHALL BE PLACED AT NO LESS THAN 16" AND NO MORE THAN 24" O.C. THE SEAMS AND JOINTS ON THE GYPSUM BOARD MUST BE SEALED WITH TAPE. THE BARRIER SHALL BE ADEQUATELY SEALED AND MAINTAINED AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. IF REQUIRED, DOOR/FRAME ASSEMBLIES DO NOT HAVE TO BE FIRE-RATED, HOWEVER, MUST BE HINGED SWING-TYPE, A MINIMUM WIDTH OF 36" AND BE SOLID WOOD OR METAL CLAD WITH A METAL FRAME. THE DOOR(S) SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7-PIN CORE, WHICH WILL BE PROVIDED AND INSTALLED BY UNIVERSITY OF MISSOURI HEALTHCARE. A DOOR SWEEP MAY BE REQUIRED. THE BARRIER DOOR SHALL REMAIN CLOSED AND LOCKED DURING THE WORK PERIOD. AIR FILTRATION EQUIPMENT EXHAUST/VENT HOSE MAY PASS THROUGH THE UPPER PORTION OF THE BARRIER. THE PENETRATION/OPENING SHALL BE ADEQUATELY SEALED AND MAINTAINED THROUGHOUT THE PROJECT TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA.
  - EW - EW - **INFECTION CONTROL BARRIER TYPE EXISTING WALL**  
BARRIER SHALL BE ACHIEVED UTILIZING AN EXISTING WALL/ROOM AS A BARRIER. THE OWNER WILL REMOVE ALL PORTABLE EQUIPMENT AND/OR SUPPLIES FROM THE WORK AREA PRIOR TO START OF WORK. PRIOR TO START OF WORK, REPORT ALL PENETRATIONS/OPENINGS TO THE OWNER. THE OWNER WILL BE RESPONSIBLE TO REPAIR PENETRATIONS/OPENINGS IN EXISTING WALLS COMPLETELY COVER ALL REMAINING ITEMS IN THE WORK AREA WITH POLYETHYLENE. THE ROOM DOOR(S) SHALL REMAIN CLOSED DURING THE WORK PERIOD.
  - **INFECTION CONTROL MODULAR BARRIER SYSTEM TYPE RB-1 OR RB-2**  
THE BARRIER SHALL BE ACHIEVED UTILIZING AN APPROVED MODULAR SYSTEM. THE SYSTEM SHALL BE COMPOSED OF ALUMINUM FRAMING EQUIPPED WITH WALL, CEILING AND FLOOR PANELS. THE SYSTEM SHALL BE EQUIPPED WITH MAGNETIC SEALS THAT ATTACH THE SYSTEM TO THE METAL DOOR FRAME ASSEMBLY. THE SYSTEM SHALL BE EQUIPPED WITH AN INTEGRATED DOOR PANEL AND AN INTEGRATED AIR MANAGEMENT PANEL TO ACCEPT A NEGATIVE AIR EXHAUST DISCHARGE HOSE AND BE EQUIPPED WITH A MAGNETIC NEGATIVE AIR INDICATOR. THE DOOR SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7-PIN CORE, WHICH WILL BE PROVIDED AND INSTALLED BY THE UNIVERSITY OF MISSOURI HEALTHCARE.
  - **INFECTION CONTROL BARRIER TYPE ROOM**  
BARRIER SHALL BE ACHIEVED UTILIZING AN EXISTING ROOM AS A BARRIER. THE OWNER WILL REMOVE ALL PORTABLE EQUIPMENT AND/OR SUPPLIES FROM THE WORK AREA PRIOR TO START OF WORK. PRIOR TO START OF WORK, REPORT ALL PENETRATIONS/OPENINGS TO THE OWNER. THE OWNER WILL BE RESPONSIBLE TO REPAIR PENETRATIONS/OPENINGS IN EXISTING WALLS COMPLETELY COVER ALL REMAINING ITEMS IN THE WORK AREA WITH POLYETHYLENE. THE ROOM DOOR(S) SHALL REMAIN CLOSED DURING THE WORK PERIOD.
  - **INFECTION CONTROL BARRIER TYPE NA**  
NO INFECTION CONTROL IS REQUIRED.



**bcdg**  
bcdgDESIGN GROUP  
12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-20100790

**Project Team:**  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellevue Avenue  
Kansas City, MO 64111

**Project Title:**  
MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU  
University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020  
MU Project #: 12275.43  
CP210751

**G104**  
CBCU PHASING + INFECTION CONTROL

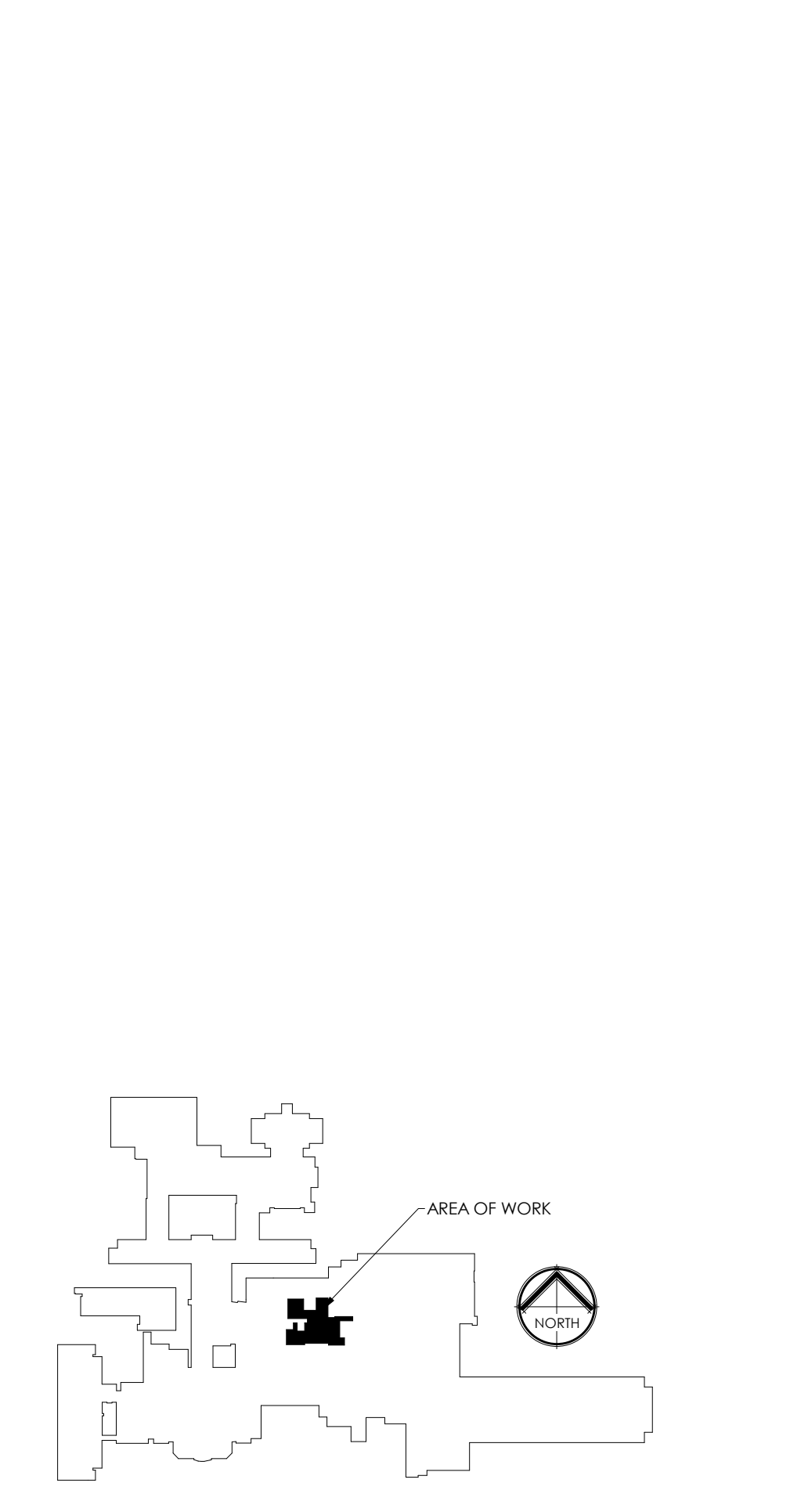
BID SET



- PHASING LEGEND:**
- **PHASE 1**  
-TRANSFER CLEAN UTILITY STORAGE WEST  
-MOVE SOUTH WALL IN CLEAN UTILITY
  - **PHASE 2**  
-MOVE CLEAN UTILITY BACK  
-ADD SINK AND CASEWORK TO CREATE STAFF LOUNGE, NEW FLOORING & PAINT
  - **PHASE 3**  
-MOVE STAFF LOUNGE ACROSS THE HALL  
-CREATE 3 NEW PRE/POST ROOMS, ENCLOSE EXISTING RESTROOM  
-UPDATES NECESSARY TO MAKE ROOM SOILED HOLDING  
-CONVERT OFFICES TO REGISTRATION AND WAITING - CREATE OPENING FROM PCT TO CCA
  - **PHASE 4**  
-MOVE EXISTING GI BATHROOM WALLS BACK  
-INSTALL BIPARTING DOORS INTO GI
  - **PHASE 4**  
-BUILD OUT NEW CHPS SUITE  
-MAKE NECESSARY MODIFICATIONS TO ROOM 4 TO ALLOW MODERATE & DEEP SEDATION  
-ADD DOORWAY INTO NEW SCOPE CLEAN ROOM, REMOVE CASEWORK, PATCH WALLS AND FLOORS  
-UPDATE FINISHES IN EXISTING RESTROOM  
-CREATE NEW LACTATION ROOM
  - ABOVE CEILING WORK IN HATCHED AREA, REMOVE AND REPLACE CEILING TILES AS NECESSARY DUE TO CONSTRUCTION, PATCH AND REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION.

- INFECTION CONTROL KEYNOTES:**
- ① REMOVE CEILING AS NECESSARY TO REMOVE EXISTING AEP WORK ABOVE IN HATCHED AREA, FOLLOW HOSPITAL INFECTION CONTROL STANDARDS TO CONSTRUCTION DEBRIS CONTAINMENT, REPLACE CEILING AFTER COMPLETE AND REPLACE ANY DAMAGED TILES FROM CONSTRUCTION TO MATCH EXISTING.

- INFECTION CONTROL LEGEND:**
- **NEGATIVE AIR EXHAUST**    ■ **CA** **CONTRACTOR ACCESS**
  - FB** **INFECTIOUS CONTROL FLEXIBLE BARRIER**  
THE BARRIER SHALL BE CONSTRUCTED OF 6-MIL FIRE-RESISTANT POLYETHYLENE EXTENDING FROM THE FLOOR TO CEILING. IF NECESSARY, NON-COMBUSTIBLE COMPONENTS (ZIP POLES, ETC.) SHALL BE UTILIZED TO SUPPORT THE POLYETHYLENE. THE BARRIER SHALL BE ADEQUATELY SEALED (AND MAINTAINED THROUGHOUT THE PROJECT) AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. THERE SHALL BE NO PENETRATIONS IN THE BARRIER.
  - RB** **INFECTIOUS CONTROL RIGID BARRIER**  
THE BARRIER SHALL EXTEND FROM THE FLOOR TO THE CEILING AND SHALL BE CONSTRUCTED UTILIZING 3/8" METAL STUDS AND 1/2" OR 5/8" GYPSUM BOARD ON THE CLEAN SIDE OF THE BARRIER. THE METAL STUDS SHALL BE PLACED AT NO LESS THAN 16" AND NO MORE THAN 24" O.C. THE SEAMS AND JOINTS ON THE GYPSUM BOARD SHALL BE SEALED WITH TAPE. THE BARRIER SHALL BE ADEQUATELY SEALED AND MAINTAINED AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. IF REQUIRED, DOORFRAME ASSEMBLIES DO NOT HAVE TO BE FIRE-RATED, HOWEVER, MUST BE HINGED SWING-TYPE, A MINIMUM WIDTH OF 36" AND BE SOLID WOOD OR METAL CLAD WITH A METAL FRAME. THE DOOR(S) SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7-PIN CORE, WHICH WILL BE PROVIDED AND INSTALLED BY UNIVERSITY OF MISSOURI HEALTHCARE. A DOOR SWEEP MAY BE REQUIRED. THE BARRIER DOOR SHALL REMAIN CLOSED AND LOCKED DURING THE WORK PERIOD. AIR FILTRATION EQUIPMENT EXHAUSTION HOSE MAY PASS THROUGH THE UPPER PORTION OF THE BARRIER. THE PENETRATION/OPENING SHALL BE ADEQUATELY SEALED AND MAINTAINED THROUGHOUT THE PROJECT TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA.
  - EW** **INFECTIOUS CONTROL BARRIER TYPE EXISTING WALL**  
BARRIER SHALL BE ACHIEVED UTILIZING AN EXISTING WALL/ROOM AS A BARRIER. THE OWNER WILL REMOVE ALL PORTABLE EQUIPMENT AND/OR SUPPLIES FROM THE WORK AREA PRIOR TO START OF WORK. PRIOR TO START OF WORK, REPORT ALL PENETRATIONS/OPENINGS TO THE OWNER. THE OWNER WILL BE RESPONSIBLE TO REPAIR PENETRATIONS/OPENINGS IN EXISTING WALLS. COMPLETELY COVER ALL REMAINING ITEMS IN THE WORK AREA WITH POLYETHYLENE. THE ROOM DOOR(S) SHALL REMAIN CLOSED DURING THE WORK PERIOD.
  - RB-1** **INFECTIOUS CONTROL MODULAR BARRIER SYSTEM TYPE RB-1 OR RB-2**  
THE BARRIER SHALL BE ACHIEVED UTILIZING AN APPROVED MODULAR SYSTEM. THE SYSTEM SHALL BE COMPOSED OF ALUMINUM FRAMING EQUIPPED WITH WALL, CEILING AND FLOOR PANELS. THE SYSTEM SHALL BE EQUIPPED WITH MAGNETIC SEALS THAT ATTACH TO THE METAL DOOR FRAME ASSEMBLY. THE SYSTEM SHALL BE EQUIPPED WITH AN INTEGRATED DOOR PANEL AND AN INTEGRATED AIR MANAGEMENT PANEL TO ACCEPT A NEGATIVE AIR EXHAUST DISCHARGE HOSE AND BE EQUIPPED WITH A MAGNETIC NEGATIVE AIR INDICATOR. THE DOOR SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7-PIN CORE, WHICH WILL BE PROVIDED AND INSTALLED BY THE UNIVERSITY OF MISSOURI HEALTHCARE.
  - RB-2** **INFECTIOUS CONTROL BARRIER TYPE ROOM**  
BARRIER SHALL BE ACHIEVED UTILIZING AN EXISTING ROOM AS A BARRIER. THE OWNER WILL REMOVE ALL PORTABLE EQUIPMENT AND/OR SUPPLIES FROM THE WORK AREA PRIOR TO START OF WORK. PRIOR TO START OF WORK, REPORT ALL PENETRATIONS/OPENINGS TO THE OWNER. THE OWNER WILL BE RESPONSIBLE TO REPAIR PENETRATIONS/OPENINGS IN EXISTING WALLS. COMPLETELY COVER ALL REMAINING ITEMS IN THE WORK AREA WITH POLYETHYLENE. THE ROOM DOOR(S) SHALL REMAIN CLOSED DURING THE WORK PERIOD.
  - NA** **INFECTIOUS CONTROL BARRIER TYPE NA**  
NO INFECTION CONTROL IS REQUIRED.



2CCA CHPS & GI PHASING  
1/8" = 1'-0"

**bcdesigngroup**  
12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790  
**Project Team:**  
**ROSS & BARUZZINI, INC.**  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
**SPELLMAN BRADY & COMPANY**  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105  
**BOB D. CAMPBELL 7 CO.**  
4338 Bellview Avenue  
Kansas City, MO 64111

**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020  
Date:  
Drawn by: Author  
bcdg Project #: 12275.43  
MU Project #: CP210751  
**G105**  
CHPS PHASING + INFECTION CONTROL  
BID SET

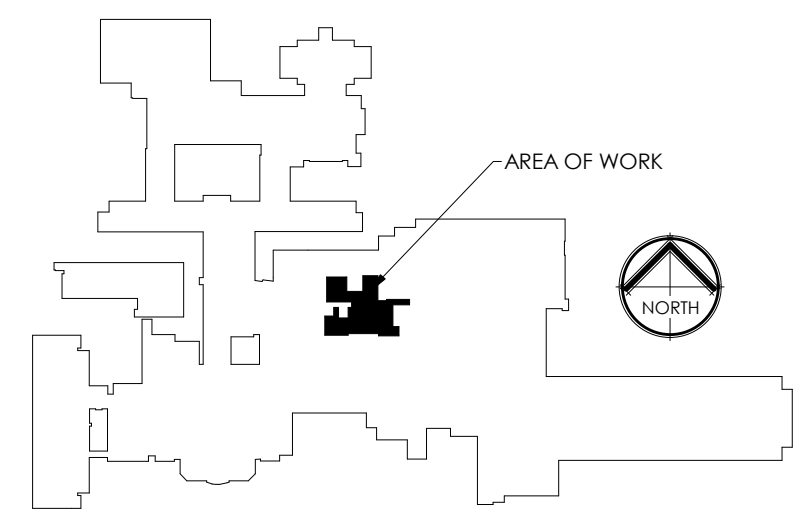


- PHASING LEGEND:**
- **PHASE 1**  
-TRANSFER CLEAN UTILITY STORAGE WEST  
-MOVE SOUTH WALL IN CLEAN UTILITY
  - **PHASE 2**  
-MOVE CLEAN UTILITY BACK  
-ADD SINK AND CASEWORK TO CREATE STAFF LOUNGE, NEW FLOORING & PAINT
  - **PHASE 3**  
-MOVE STAFF LOUNGE ACROSS THE HALL  
-CREATE 3 NEW PRE/POST ROOMS, ENCLOSE EXISTING RESTROOM  
-UPDATES NECESSARY TO MAKE ROOM SOILED HOLDING  
-CONVERT OFFICES TO REGISTRATION AND WAITING - CREATE OPENING FROM PCT TO CCA
  - **PHASE 3B**  
-MOVE EXISTING GI BATHROOM WALLS BACK  
-INSTALL BIPARTING DOORS INTO GI
  - **PHASE 4**  
-BUILD OUT NEW CHPS SUITE  
-MAKE NECESSARY MODIFICATIONS TO ROOM 4 TO ALLOW MODERATE & DEEP SEDATION  
-ADD DOORWAY INTO NEW SCOPE CLEAN ROOM, REMOVE CASEWORK, PATCH WALLS AND FLOORS  
-UPDATE FINISHES IN EXISTING RESTROOM  
-CREATE NEW LACTATION ROOM
  - ABOVE CEILING WORK IN HATCHED AREA, REMOVE AND REPLACE CEILING TILES AS NECESSARY DUE TO CONSTRUCTION, PATCH AND REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION.

**INFECTION CONTROL KEYNOTES:**

① REMOVE CEILING AS NECESSARY TO REMOVE EXISTING AEP WORK ABOVE IN HATCHED AREA. FOLLOW HOSPITAL INFECTION CONTROL STANDARDS TO CONSTRUCTION DEBRIS CONTAINMENT. REPLACE CEILING AFTER COMPLETE AND REPLACE ANY DAMAGED TILES FROM CONSTRUCTION TO MATCH EXISTING.

- INFECTION CONTROL LEGEND:**
- **NA** - NEGATIVE AIR EXHAUST
  - **CA** - CONTRACTOR ACCESS
  - FB** - **FB** - INFECTION CONTROL FLEXIBLE BARRIER  
THE BARRIER SHALL BE CONSTRUCTED OF 6-MIL FIRE-RESISTANT POLYETHYLENE EXTENDING FROM THE FLOOR TO CEILING, IF NECESSARY, NON-COMBUSTIBLE COMPONENTS (PIP POLES, ETC.) SHALL BE UTILIZED TO SUPPORT THE POLYETHYLENE. THE BARRIER SHALL BE ADEQUATELY SEALED (AND MAINTAINED THROUGHOUT THE PROJECT) AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. THERE SHALL BE NO PENETRATIONS IN THE BARRIER.
  - RB** - **RB** - INFECTION CONTROL RIGID BARRIER  
THE BARRIER SHALL EXTEND FROM THE FLOOR TO THE CEILING AND SHALL BE CONSTRUCTED UTILIZING 3-5/8" METAL STUDS AND 1/2" OR 5/8" GYPSUM BOARD ON THE CLEAN SIDE OF THE BARRIER. THE METAL STUDS SHALL BE PLACED AT NO LESS THAN 14" AND NO MORE THAN 24" O.C. THE SEAMS AND JOINTS ON THE GYPSUM BOARD MUST BE SEALED WITH TAPE. THE BARRIER SHALL BE ADEQUATELY SEALED AND MAINTAINED AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. IF REQUIRED, DOOR/FRAME ASSEMBLIES DO NOT HAVE TO BE FIRE-RATED, HOWEVER, MUST BE HINGED SWING-TYPE, A MINIMUM WIDTH OF 36" AND BE SOLID WOOD OR METAL CLAD WITH A METAL FRAME. THE DOOR(S) SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7-PIN CORE, WHICH WILL BE PROVIDED AND INSTALLED BY UNIVERSITY OF MISSOURI HEALTHCARE. A DOOR SWEEP MAY BE REQUIRED. THE BARRIER DOOR SHALL REMAIN CLOSED AND LOCKED DURING THE WORK PERIOD. AIR FILTRATION EQUIPMENT EXHAUST VENT HOSE MAY PASS THROUGH THE UPPER PORTION OF THE BARRIER. THE PENETRATIONS/OPENINGS SHALL BE ADEQUATELY SEALED AND MAINTAINED THROUGHOUT THE PROJECT TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA.
  - EW** - **EW** - INFECTION CONTROL BARRIER TYPE EXISTING WALL  
BARRIER SHALL BE ACHIEVED UTILIZING AN EXISTING WALL/ROOM AS A BARRIER. THE OWNER WILL REMOVE ALL PORTABLE EQUIPMENT AND/OR SUPPLIES FROM THE WORK AREA PRIOR TO START OF WORK. PRIOR TO START OF WORK, REPORT ALL PENETRATIONS/OPENINGS TO THE OWNER. THE OWNER WILL BE RESPONSIBLE TO REPAIR PENETRATIONS/OPENINGS IN EXISTING WALLS. COMPLETELY COVER ALL REMAINING ITEMS IN THE WORK AREA WITH POLYETHYLENE. THE ROOM DOOR(S) SHALL REMAIN CLOSED DURING THE WORK PERIOD.
  - RB-1** - **RB-1** - INFECTION CONTROL MODULAR BARRIER SYSTEM TYPE RB-1 OR RB-2  
THE BARRIER SHALL BE ACHIEVED UTILIZING AN APPROVED MODULAR SYSTEM. THE SYSTEM SHALL BE COMPOSED OF ALUMINUM FRAMING EQUIPPED WITH WALL, CEILING AND FLOOR PANELS. THE SYSTEM SHALL BE EQUIPPED WITH MAGNETIC SEALS THAT ATTACH TO THE METAL DOOR FRAME ASSEMBLY. THE SYSTEM SHALL BE EQUIPPED WITH AN INTEGRATED DOOR PANEL AND AN INTEGRATED AIR MANAGEMENT PANEL TO ACCEPT A NEGATIVE AIR EXHAUST DISCHARGE HOSE AND BE EQUIPPED WITH A MAGNETIC NEGATIVE AIR INDICATOR. THE DOOR SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7-PIN CORE, WHICH WILL BE PROVIDED AND INSTALLED BY THE UNIVERSITY OF MISSOURI HEALTHCARE.



1 2CCA CHPS & GI PHASING  
1/8" = 1'-0"

SECOND FLOOR KEYPLAN



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123

**Project Team:**  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
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825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
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**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 University of Missouri, Columbia, Missouri



Issue Date: 11/25/2020  
Date:

Drawn by: Author  
bcdg Project #: 12275.43  
MU Project #: CP210751

**G106**  
CHPS PHASING - PHASE 1





bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123

MO Certificate of Authority Number  
A-201102790

Project Team:

ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
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4338 Bellview Avenue  
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Issue Date: 11/25/2020  
Date:

Drawn by: Author

bcdg Project #: 12275.43  
MU Project #: CP210751

**G107**

CHPS PHASING - PHASE 2

CONSTRUCTION DOCUMENT SUBMITTAL

**PHASING LEGEND:**

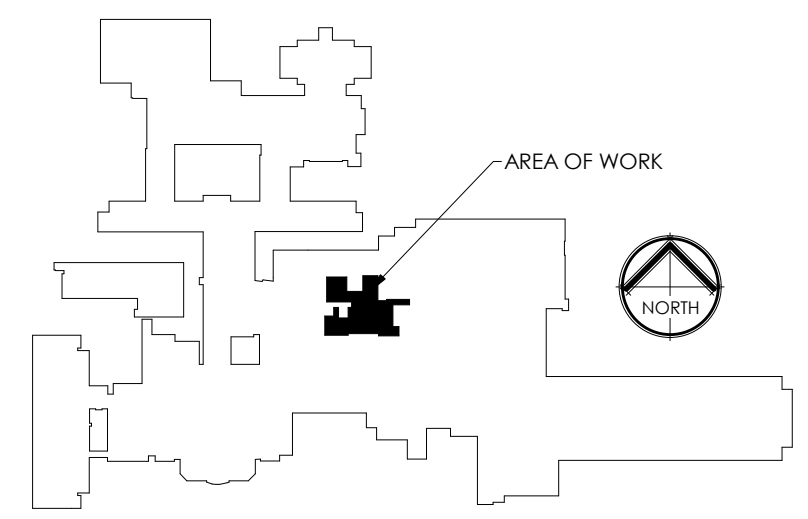
- PHASE 1**
  - TRANSFER CLEAN UTILITY STORAGE WEST
  - MOVE SOUTH WALL IN CLEAN UTILITY
- PHASE 2**
  - MOVE CLEAN UTILITY BACK
  - ADD SINK AND CASEWORK TO CREATE STAFF LOUNGE, NEW FLOORING & PAINT
- PHASE 3**
  - MOVE STAFF LOUNGE ACROSS THE HALL
  - CREATE 3 NEW PRE/POST ROOMS, ENCLOSE EXISTING RESTROOM
  - UPDATES NECESSARY TO MAKE ROOM SOILED HOLDING
  - CONVERT OFFICES TO REGISTRATION AND WAITING - CREATE OPENING FROM PCT TO CCA
- PHASE 3B**
  - MOVE EXISTING GI BATHROOM WALLS BACK
  - INSTALL BIPARTING DOORS INTO GI
- PHASE 4**
  - BUILD OUT NEW CHPS SUITE
  - MAKE NECESSARY MODIFICATIONS TO ROOM 4 TO ALLOW MODERATE & DEEP SEDATION
  - ADD DOORWAY INTO NEW SCOPE CLEAN ROOM, REMOVE CASEWORK, PATCH WALLS AND FLOORS
  - UPDATE FINISHES IN EXISTING RESTROOM
  - CREATE NEW LACTATION ROOM

**INFECTION CONTROL KEYNOTES:**

- 1 REMOVE CEILING AS NECESSARY TO REMOVE EXISTING AEP WORK ABOVE IN HATCHED AREA. FOLLOW HOSPITAL INFECTION CONTROL STANDARDS TO CONSTRUCTION DEBRIS CONTAINMENT. REPLACE CEILING AFTER COMPLETE AND REPLACE ANY DAMAGED TILES FROM CONSTRUCTION TO MATCH EXISTING.

**INFECTION CONTROL LEGEND:**

- NA** - NEGATIVE AIR EXHAUST
- CA** - CONTRACTOR ACCESS
- FB** - INFECTION CONTROL FLEXIBLE BARRIER  
THE BARRIER SHALL BE CONSTRUCTED OF 6-MIL FIRE-RESISTANT POLYETHYLENE EXTENDING FROM THE FLOOR TO CEILING, IF NECESSARY. NON-COMBUSTIBLE COMPONENTS (PIP POLES, ETC.) SHALL BE UTILIZED TO SUPPORT THE POLYETHYLENE. THE BARRIER SHALL BE ADEQUATELY SEALED (AND MAINTAINED THROUGHOUT THE PROJECT) AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. THERE SHALL BE NO PENETRATIONS IN THE BARRIER.
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THE BARRIER SHALL EXTEND FROM THE FLOOR TO THE CEILING AND SHALL BE CONSTRUCTED UTILIZING 3-5/8" METAL STUDS AND 1/2" OR 5/8" GYPSUM BOARD ON THE CLEAN SIDE OF THE BARRIER. THE METAL STUDS SHALL BE PLACED AT NO LESS THAN 14" AND NO MORE THAN 24" O.C. THE SEAMS AND JOINTS ON THE GYPSUM BOARD MUST BE SEALED WITH TAPE. THE BARRIER SHALL BE ADEQUATELY SEALED AND MAINTAINED AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. IF REQUIRED, DOOR/FRAME ASSEMBLIES DO NOT HAVE TO BE FIRE-RATED, HOWEVER, MUST BE HINGED SWING-TYPE, A MINIMUM WIDTH OF 36" AND BE SOLID WOOD OR METAL CLAD WITH A METAL FRAME. THE DOOR(S) SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7-PIN CORE, WHICH WILL BE PROVIDED AND INSTALLED BY UNIVERSITY OF MISSOURI HEALTHCARE. A DOOR SWEEP MAY BE REQUIRED. THE BARRIER DOOR SHALL REMAIN CLOSED AND LOCKED DURING THE WORK PERIOD. AIR FILTRATION EQUIPMENT EXHAUST VENT HOSE MAY PASS THROUGH THE UPPER PORTION OF THE BARRIER. THE PENETRATIONS/OPENINGS SHALL BE ADEQUATELY SEALED AND MAINTAINED THROUGHOUT THE PROJECT TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA.
- EW** - INFECTION CONTROL BARRIER TYPE EXISTING WALL  
BARRIER SHALL BE ACHIEVED UTILIZING AN EXISTING WALL/ROOM AS A BARRIER. THE OWNER WILL REMOVE ALL PORTABLE EQUIPMENT AND/OR SUPPLIES FROM THE WORK AREA PRIOR TO START OF WORK. PRIOR TO START OF WORK, REPORT ALL PENETRATIONS/OPENINGS TO THE OWNER. THE OWNER WILL BE RESPONSIBLE TO REPAIR PENETRATIONS/OPENINGS IN EXISTING WALLS. COMPLETELY COVER ALL REMAINING ITEMS IN THE WORK AREA WITH POLYETHYLENE. THE ROOM DOOR(S) SHALL REMAIN CLOSED DURING THE WORK PERIOD.
- RB-2** - INFECTION CONTROL MODULAR BARRIER SYSTEM TYPE RB-1 OR RB-2  
THE BARRIER SHALL BE ACHIEVED UTILIZING AN APPROVED MODULAR SYSTEM. THE SYSTEM SHALL BE COMPOSED OF ALUMINUM FRAMING EQUIPPED WITH WALL, CEILING AND FLOOR PANELS. THE SYSTEM SHALL BE EQUIPPED WITH MAGNETIC SEALS THAT ATTACH THE SYSTEM TO THE METAL DOOR FRAME ASSEMBLY. THE SYSTEM SHALL BE EQUIPPED WITH AN INTEGRATED DOOR PANEL AND AN INTEGRATED AIR MANAGEMENT PANEL TO ACCEPT A NEGATIVE AIR EXHAUST DISCHARGE HOSE AND BE EQUIPPED WITH A MAGNETIC NEGATIVE AIR INDICATOR. THE DOOR SHALL BE EQUIPPED WITH A COMMERCIAL GRADE LEVER HANDLE WITH A REMOVABLE KEY CORE. THE HARDWARE MUST BE POSITIVE LATCHING AND ACCEPT A BEST 7-PIN CORE, WHICH WILL BE PROVIDED AND INSTALLED BY THE UNIVERSITY OF MISSOURI HEALTHCARE.



2CCA CHPS & GI PHASING  
1/8" = 1'-0"

**SECOND FLOOR KEYPLAN**

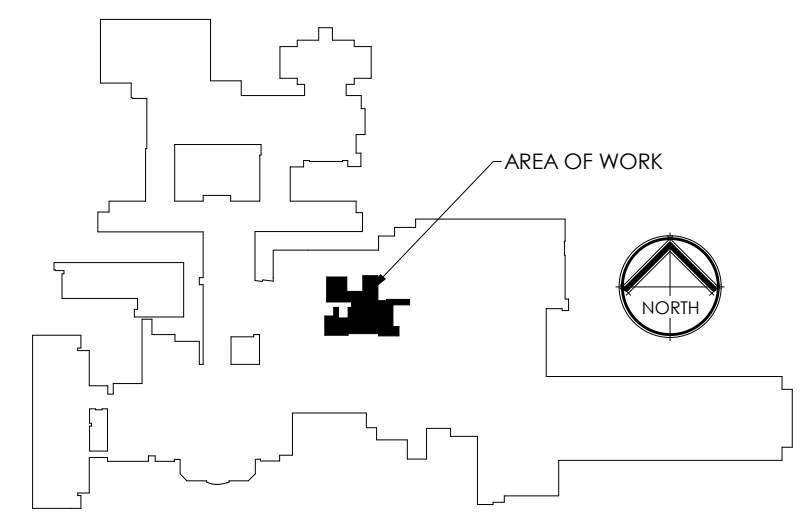


- PHASING LEGEND:**
- **PHASE 1**  
-TRANSFER CLEAN UTILITY STORAGE WEST  
-MOVE SOUTH WALL IN CLEAN UTILITY
  - **PHASE 2**  
-MOVE CLEAN UTILITY BACK  
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  - **PHASE 3**  
-MOVE STAFF LOUNGE ACROSS THE HALL  
-CREATE 3 NEW PRE/POST ROOMS, ENCLOSE EXISTING RESTROOM  
-UPDATES NECESSARY TO MAKE ROOM SOILED HOLDING  
-CONVERT OFFICES TO REGISTRATION AND WAITING - CREATE OPENING FROM PCT TO CCA
  - **PHASE 3B**  
-MOVE EXISTING GI BATHROOM WALLS BACK  
-INSTALL BIPARTING DOORS INTO GI
  - **PHASE 4**  
-BUILD OUT NEW CHPS SUITE  
-MAKE NECESSARY MODIFICATIONS TO ROOM 4 TO ALLOW MODERATE & DEEP SEDATION  
-ADD DOORWAY INTO NEW SCOPE CLEAN ROOM, REMOVE CASEWORK, PATCH WALLS AND FLOORS  
-UPDATE FINISHES IN EXISTING RESTROOM  
-CREATE NEW LACTATION ROOM
  - ABOVE CEILING WORK IN HATCHED AREA, REMOVE AND REPLACE CEILING TILES AS NECESSARY DUE TO CONSTRUCTION, PATCH AND REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION.

**INFECTION CONTROL KEYNOTES:**

① REMOVE CEILING AS NECESSARY TO REMOVE EXISTING AEP WORK ABOVE IN HATCHED AREA. FOLLOW HOSPITAL INFECTION CONTROL STANDARDS TO CONSTRUCTION DEBRIS CONTAINMENT. REPLACE CEILING AFTER COMPLETE AND REPLACE ANY DAMAGED TILES FROM CONSTRUCTION TO MATCH EXISTING.

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  - **CA** - CONTRACTOR ACCESS
  - FB** - **FB** - INFECTION CONTROL FLEXIBLE BARRIER  
THE BARRIER SHALL BE CONSTRUCTED OF 6-MIL FIRE-RESISTANT POLYETHYLENE EXTENDING FROM THE FLOOR TO CEILING, IF NECESSARY. NON-COMBUSTIBLE COMPONENTS (PIP POLES, ETC.) SHALL BE UTILIZED TO SUPPORT THE POLYETHYLENE. THE BARRIER SHALL BE ADEQUATELY SEALED (AND MAINTAINED THROUGHOUT THE PROJECT) AT THE FLOOR AND CEILING CONNECTIONS TO PREVENT THE MIGRATION OF DUST FROM THE WORK AREA. THERE SHALL BE NO PENETRATIONS IN THE BARRIER.
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1/8" = 1'-0"

SECOND FLOOR KEYPLAN



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790

**Project Team:**  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
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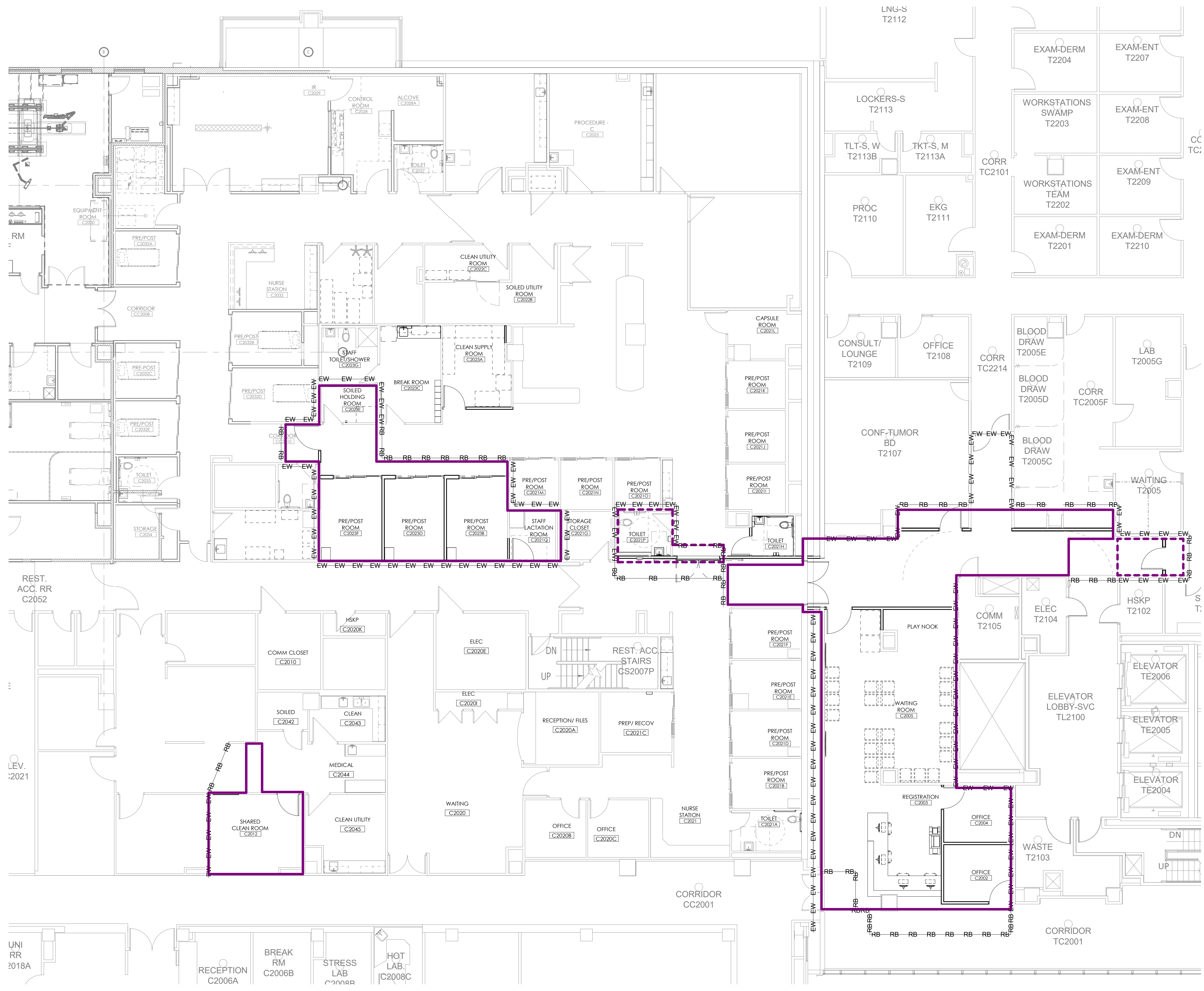
**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 University of Missouri, Columbia, Missouri



Issue Date: 11/25/2020  
Date:

Drawn by: Author  
bcdg Project #: 12275.43  
MU Project #: CP210751

**G108**  
CHPS PHASING - PHASE 3

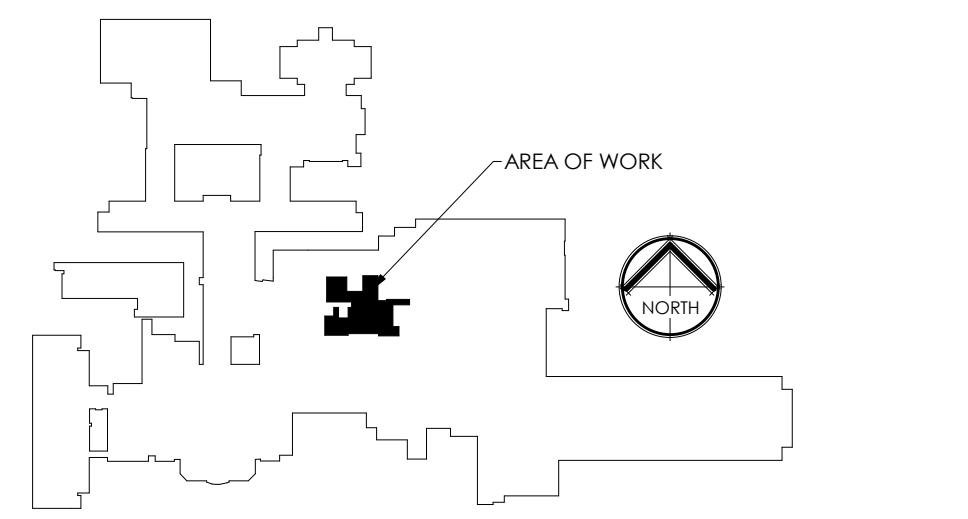


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1 2CCA CHPS & GI PHASING  
1/8" = 1'-0"

SECOND FLOOR KEYPLAN



**bcdesigngroup**

12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123

**Project Team:**  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
Kansas City, MO 64111

**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 University of Missouri, Columbia, Missouri



Issue Date: 11/25/2020  
Issue: Date:

Drawn by: Author  
bcdg Project #: 12275.43  
MU Project #: CP210751

**G109**  
CHPS PHASING - PHASE 3B



- PHASING LEGEND:**
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-MOVE SOUTH WALL IN CLEAN UTILITY
  - **PHASE 2**  
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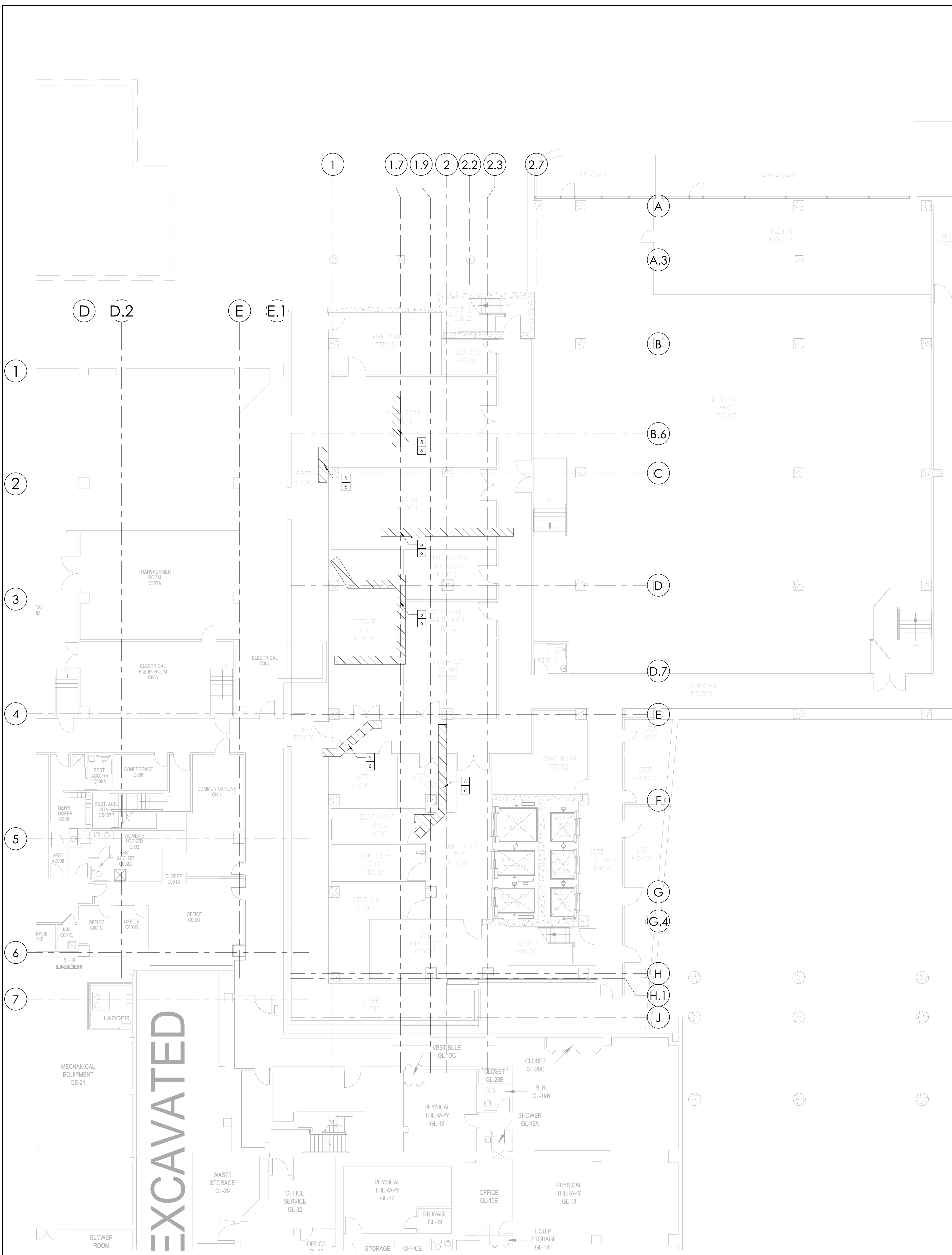
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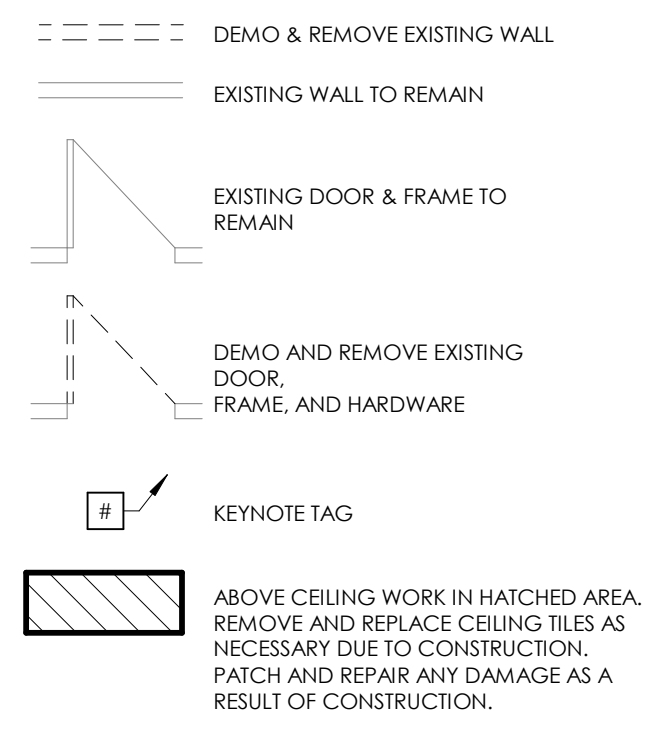
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**G110**  
CHPS PHASING - PHASE 4

CONSTRUCTION DOCUMENT SUBMITTAL



**DEMOLITION PLAN LEGEND**



**FLOOR/WALL/CEILING NOTES**

- FLOOR**  
**F1** - REMOVE EXISTING FLOOR, BASE, GUE, ETC. TO SLAB, PATCH, PRIME AND PREPARE SUB-FLOOR TO RECEIVE NEW FLOORING AS SCHEDULED.  
**F2** - EXISTING FLOOR TO REMAIN  
**F3** - SPECIAL CONDITION - REFER TO KEYNOTE
- WALL**  
**W1** - REMOVE EXISTING WALL COVERINGS, PAINT, ETC. PATCH, PREP AND PRIME WALL TO RECEIVE NEW FINISHES AS SCHEDULED  
**W2** - EXISTING WALL TO REMAIN  
**W3** - SPECIAL CONDITION - REFER TO KEYNOTE
- CEILING**  
**C1** - REMOVE EXISTING CEILING, HANGERS, ETC. TO BOTTOM OF STRUCTURE. EXERCISE EXTREME CAUTION AS TO NOT DISTURB SYSTEMS INTENDED TO REMAIN.  
**C2** - EXISTING CEILING TO REMAIN  
**C3** - SPECIAL CONDITION - REFER TO KEYNOTE

**GENERAL DEMOLITION PLAN NOTES**

- CONTRACTOR SHALL CONTACT PLANT OPERATIONS DAILY TO PROVIDE ACTIVITIES AND SHUTDOWN REPORTS. ALL SITE USE SHALL BE COORD. AND APPROVED IN ADVANCE BY OWNER.
- CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. REPORT ANY DISCREPANCIES TO ARCHITECT IN WRITING PRIOR TO BEGINNING WORK IN THE AFFECTED AREAS.
- CONTRACTOR TO VERIFY ALL EXISTING HOSPITAL SYSTEMS CURRENTLY INSTALLED IN THE CONSTRUCTION AREA. ALL DEVICES TO REMAIN SHALL BE CHECKED AND IN WORKING CONDITION WHEN PROJECT IS COMPLETE. CONTRACTOR SHALL EMPLOY REASONABLE MEANS TO CONFIRM DUST, DEBRIS, AND NOISE DUE TO DEMOLITION AND NEW CONSTRUCTION. REFER TO SPECS.
- ALL WALL MOUNTED ITEMS, ETC., SHALL BE REMOVED & REINSTALLED AS INDICATED THROUGHOUT THE DRAWINGS OR TURNED OVER TO THE OWNER FOR SALVAGE UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL PATCH TO MATCH SURROUNDING FINISHES. ANY AREAS DAMAGED AS A RESULT OF, OR CAUSED BY, THE WORK INDICATED THROUGHOUT THE CONTRACT DOCUMENTS.
- WHERE REMOVAL OF EXISTING WALL PARTITIONS, EQUIPMENT, ETC., DISRUPTS OR DISTURBS EXISTING ELECTRICAL, MECHANICAL, OR PLUMBING SERVICES TO AREAS NOT DESIGNATED AS CONSTRUCTION AREAS, CONTRACTOR SHALL PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO ENSURE UNINTERRUPTED SERVICE TO SAID AREAS. NOTE: NO SERVICES TO BE SHUT DOWN WITHOUT PRIOR APPROVAL BY OWNER.
- CONTRACTOR IS TO REMOVE COMPLETELY EXISTING CONSTRUCTION, AS SHOWN HEREIN, WHICH CONFLICTS WITH THE INTENT OF THE NEW CONSTRUCTION, UNLESS OTHERWISE NOTED.
- OWNER WILL BE RESPONSIBLE FOR REMOVING AND STORING ITEMS SUCH AS FURNITURE, PLAQUES, ARTWORK, MOVABLE EQUIPMENT, ETC.
- REFER TO MEP DRAWINGS FOR ADDITIONAL DEMOLITION WORK. PATCH & MATCH SURROUNDING MATERIALS WHERE ITEMS ARE REMOVED AT WALLS, CEILING AND FLOORS. MAINTAIN FIRE RATINGS WHERE DEMOLISHED ITEMS PENETRATE RATED WALLS AND FLOORS.
- REMOVE AND REPLACE CEILING TILES AS NECESSARY FOR DEMOLITION AND NEW CONSTRUCTION. REPLACE DAMAGED TILES AS REQUIRED.
- CONTRACTOR TO REMOVE, CLEAN AND STORE ALL PLUMBING FIXTURES SHOWN TO BE REMOVED. ALL FIXTURES TO BE TURNED OVER TO OWNER, UNLESS OTHERWISE NOTED.

**DEMOLITION KEYNOTES:**

- EXISTING CEILING GRID TO REMAIN. TRIM TO EXTENTS SHOWN ON RCP. REPLACE ALL TILES.
- DEMO & REMOVE CASEWORK INCLUDING BASE CABINETS, COUNTERTOPS, AND UPPER CABINETS.
- DEMO & REMOVE PLUMBING FIXTURE. RE: MEP
- DEMO & REMOVE EXISTING SOFFIT
- REMOVE CEILING AS NECESSARY TO REMOVE EXISTING MEP WORK ABOVE IN HATCHED AREA. FOLLOW HOSPITAL INFECTION CONTROL STANDARDS FOR CONSTRUCTION DEBRIS CONTAINMENT. REPLACE CEILING AFTER COMPLETE AND REPLACE ANY TILES DAMAGED FROM CONSTRUCTION TO MATCH EXISTING.
- AREA OF DISTURBANCE ABOVE CEILING FOR ROUTING OF PLUMBING SYSTEMS. AREA INCLUDES BOTH LATH AND DRYWALL CEILING TYPES. EXISTING CEILING MOUNTED DEVICES SHALL BE TEMPORARILY REMOVED TO ACCOMMODATE ABOVE CEILING WORK. REINSTALL DEVICES IN ORIGINAL LOCATIONS. DEVICES SHALL FUNCTION AS THEY DID PRIOR TO CONSTRUCTION.
- PATCH AND MATCH EXISTING FINISHES AS NEEDED.
- REFER TO STRUCTURAL DRAWINGS FOR DEMOLITION OF PORTION OF PCT AND COCA EXTERIOR WALLS FOR INSTALLATION OF NEW FIRE RATED DOORS.
- DEMO & REMOVE SLIDING DOOR AND FRAME
- PRESERVE EXISTING CARD READER TO BE RE-USED IN NEW CONSTRUCTION

**1 BASEMENT LEVEL DEMO PLAN**  
 3/32" = 1'-0"  
 NORTH



12101 W 110th Street Suite 100  
 Overland Park, KS 66210  
 913.232.2123  
 MO Certificate of Authority Number  
 A-201102720

**Project Team:**  
 ROSS & BARUZZINI, INC.  
 8 South Old Orchard | St. Louis, MO 63119  
 314.918.8383

**SPELLMAN BRADY & COMPANY**  
 825 Maryland Avenue | Suite 300  
 St. Louis, MO 63105

**BOB D. CAMPBELL 7 CO.**  
 4338 Bellevue Avenue  
 Kansas City, MO 64111

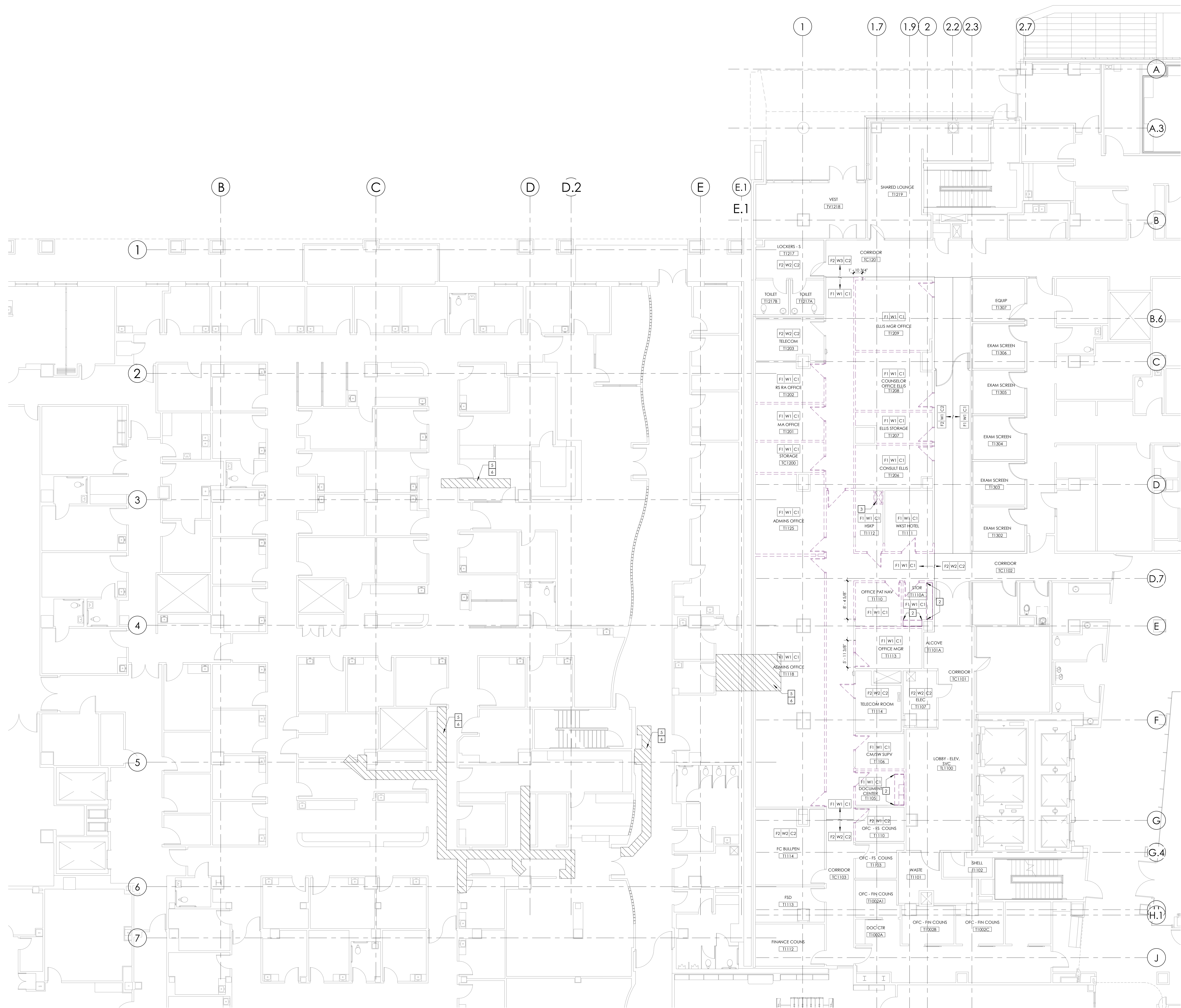
**Project Title:**  
 CP150492 | University of Missouri Teaching Hospital - West Wing - Expansion/Renovation  
 University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020  
 Date:

Drawn by: Author  
 bcdg Project #: 12275\_15  
 MU Project #: CP150492

**D100**  
 BASEMENT DEMO PLAN  
 BID SET



1 FIRST FLOOR DEMO PLAN  
1/8" = 1'-0"

**DEMOLITION PLAN LEGEND**

- DEMO & REMOVE EXISTING WALL
- EXISTING WALL TO REMAIN
- EXISTING DOOR & FRAME TO REMAIN
- DEMO AND REMOVE EXISTING DOOR, FRAME, AND HARDWARE
- KEYNOTE TAG
- ABOVE CEILING WORK IN HATCHED AREA REMOVE AND REPLACE CEILING TILES AS NECESSARY DUE TO CONSTRUCTION. PATCH AND REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION.

**FLOOR/WALL/CEILING NOTES**

- FLOOR**
- F1 - REMOVE EXISTING FLOOR, BASE, GLUE, ETC. TO SLAB. PATCH, PRIME, AND PREPARE SUB-FLOOR TO RECEIVE NEW FLOORING AS SCHEDULED.
  - F2 - EXISTING FLOOR TO REMAIN.
  - F3 - SPECIAL CONDITION - REFER TO KEYNOTE.
- WALL**
- W1 - REMOVE EXISTING WALL COVERINGS, PAINT, ETC. PATCH, PREP, AND PRIME WALL TO RECEIVE NEW FINISHES AS SCHEDULED.
  - W2 - EXISTING WALL TO REMAIN.
  - W3 - SPECIAL CONDITION - REFER TO KEYNOTE.
- CEILING**
- C1 - REMOVE EXISTING CEILING, HANGERS, ETC. TO BOTTOM OF STRUCTURE. EXERCISE EXTREME CAUTION AS TO NOT DISTURB SYSTEMS INTENDED TO REMAIN.
  - C2 - EXISTING CEILING TO REMAIN.
  - C3 - SPECIAL CONDITION - REFER TO KEYNOTE.

**GENERAL DEMOLITION PLAN NOTES**

1. CONTRACTOR SHALL CONTACT PLANT OPERATIONS DAILY TO PROVIDE ACTIVITIES AND SHUTDOWN REPORTS. ALL SITE USE SHALL BE COORD. AND APPROVED IN ADVANCE BY OWNER.
2. CONTRACTOR IS TO HOLD VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. REPORT ANY DISCREPANCIES TO ARCHITECT IN WRITING PRIOR TO BEGINNING WORK IN THE AFFECTED AREAS.
3. CONTRACTOR TO VERIFY ALL EXISTING HOSPITAL SYSTEMS CURRENTLY INSTALLED IN THE CONSTRUCTION AREA. ALL DEVICES TO REMAIN SHALL BE CHECKED AND IN WORKING CONDITION WHEN PROJECT IS COMPLETE.
4. CONTRACTOR SHALL EMPLOY REASONABLE MEANS TO CONTAIN DUST, DEBRIS, AND NOISE DUE TO DEMOLITION AND NEW CONSTRUCTION. REFER TO SPEC.
5. ALL WALL MOUNTED ITEMS, ETC. SHALL BE REMOVED & REINSTALLED AS INDICATED THROUGHOUT THE DRAWINGS OR TURNED OVER TO THE OWNER FOR SALVAGE UNL.O.
6. CONTRACTOR SHALL PATCH TO MATCH SURROUNDING FINISHES. ANY AREAS DAMAGED AS A RESULT OF OR CAUSED BY THE WORK INDICATED THROUGHOUT THE CONTRACT DOCUMENTS.
7. WHERE REMOVAL OF EXISTING WALL PARTITIONS, EQUIPMENT, ETC. DISRUPTS OR DISTURBS EXISTING ELECTRICAL, MECHANICAL, OR PLUMBING SERVICES TO AREAS NOT DESIGNATED AS CONSTRUCTION AREAS, CONTRACTOR SHALL PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO ENSURE UNINTERRUPTED SERVICE TO SAID AREAS. NOTE: NO SERVICE IS TO BE SHUT DOWN WITHOUT PRIOR APPROVAL BY OWNER.
8. CONTRACTOR IS TO REMOVE COMPLETELY EXISTING CONSTRUCTION, AS SHOWN HEREIN, WHICH CONFLICTS WITH THE INTENT OF THE NEW CONSTRUCTION UNL.O.
9. OWNER WILL BE RESPONSIBLE FOR REMOVING AND STORING ITEMS SUCH AS FURNITURE, FLAGPOLES, ARTWORK, MOVABLE EQUIPMENT, ETC.
10. REFER TO MEP DRAWINGS FOR ADDITIONAL DEMOLITION WORK. PATCH & MATCH SURROUNDING MATERIALS WHERE ITEMS ARE REMOVED AT WALLS, CEILING AND FLOORS. MAINTAIN FIRE RATINGS WHERE DEMOLISHED ITEMS PENETRATED FIRE RATED WALLS AND FLOORS.
11. REMOVE AND REPLACE CEILING TILES AS NECESSARY FOR DEMOLITION AND NEW CONSTRUCTION. REPLACE DAMAGED TILES AS REQUIRED.
12. CONTRACTOR TO REMOVE, CLEAN AND STORE ALL PLUMBING FIXTURES SHOWN TO BE REMOVED. ALL FIXTURES TO BE TURNED OVER TO OWNER, UNL.O.

**DEMOLITION KEYNOTES:**

- 1 EXISTING CEILING GRID TO REMAIN, TRIM TO EXTENTS SHOWN ON RCP. REPLACE ALL TILES.
- 2 DEMO & REMOVE CASEWORK INCLUDING BASE CABINETS, COUNTERTOPS, AND UPPER CABINETS.
- 3 DEMO & REMOVE PLUMBING FIXTURE. RE: MEP
- 4 DEMO & REMOVE EXISTING SOFFIT
- 5 REMOVE CEILING AS NECESSARY TO REMOVE EXISTING MEP WORK ABOVE IN HATCHED AREA. FOLLOW HOSPITAL INFECTION CONTROL STANDARDS FOR CONSTRUCTION DEBRIS CONTAINMENT. REPLACE CEILING AFTER COMPLETE AND REPLACE ANY TILES DAMAGED FROM CONSTRUCTION TO MATCH EXISTING.
- 6 AREA OF DISTURBANCE ABOVE CEILING FOR ROUTING OF PLUMBING SYSTEMS. AREA INCLUDES BOTH LAY-IN AND DRYWALL CEILING TYPES. EXISTING CEILING MOUNTED DEVICES SHALL BE TEMPORARILY REMOVED TO ACCOMMODATE ABOVE CEILING WORK. REINSTALL DEVICES IN ORIGINAL LOCATIONS. DEVICES SHALL FUNCTION AS THEY DID PRIOR TO CONSTRUCTION.
- 7 PATCH AND MATCH EXISTING FINISHES AS NEEDED.
- 8 REFER TO STRUCTURAL DRAWINGS FOR DEMOLITION OF PORTION OF PCT AND CCA EXTERIOR WALLS FOR INSTALLATION OF NEW FIRE RATED DOORS.
- 9 DEMO & REMOVE SLIDING DOOR AND FRAME
- 10 PRESERVE EXISTING CARD READER TO BE RE-USED IN NEW CONSTRUCTION



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
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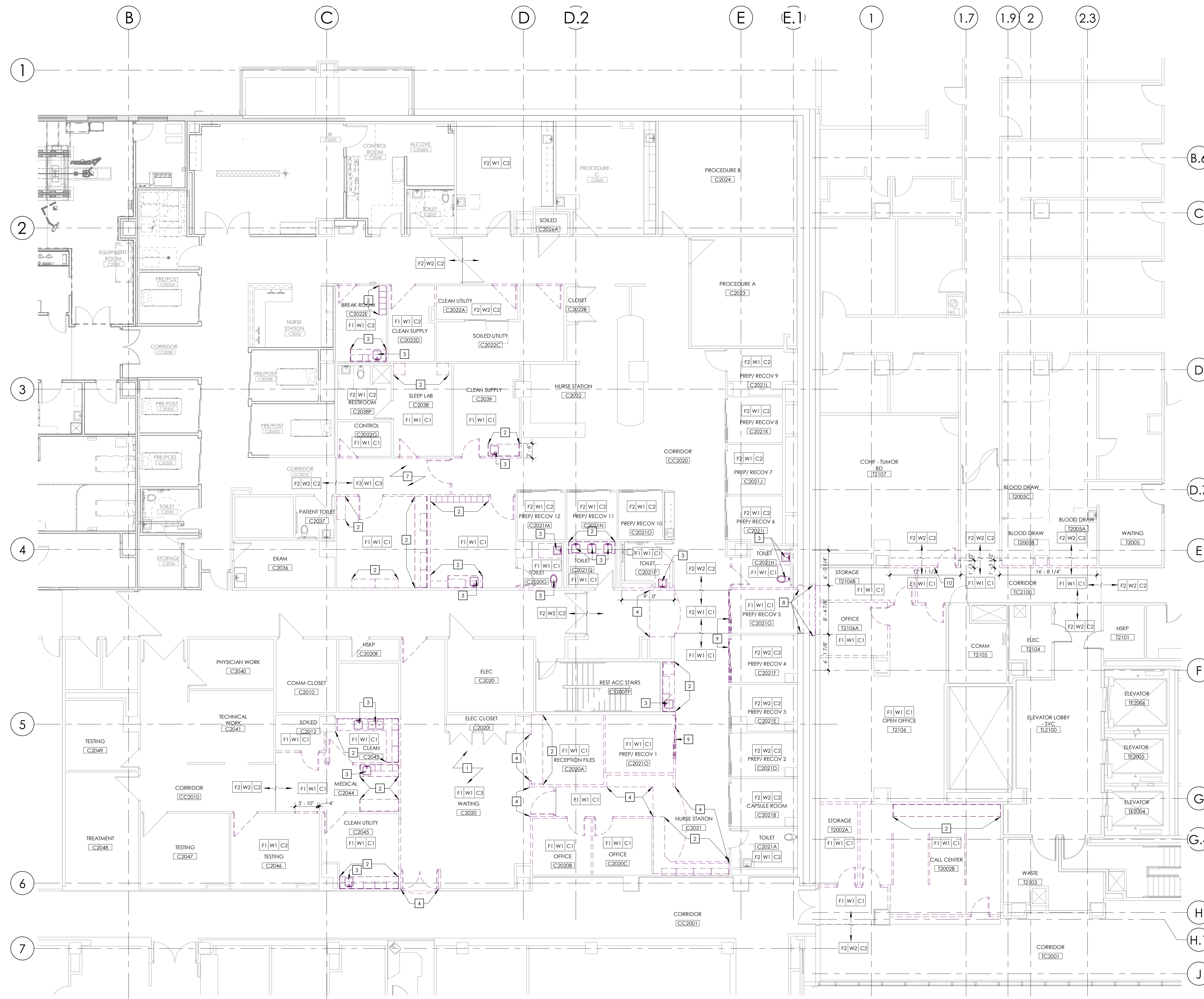
**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 University of Missouri, Columbia, Missouri



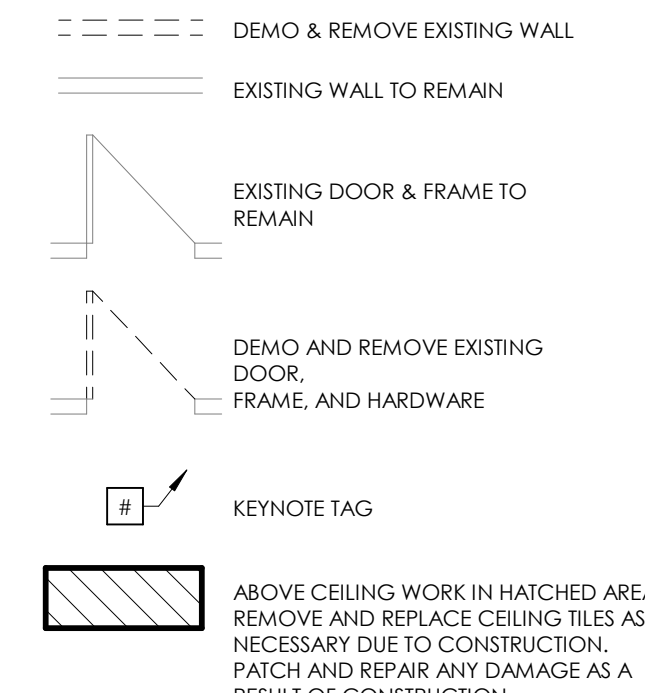
Issue Date: 12/09/2020  
Issue: Date:

Drawn by: Author  
bcgd Project #: 12275.43  
MU Project #: CP210751

**D101**  
CBCU DEMOLITION PLAN  
BID SET



**DEMOLITION PLAN LEGEND**



**FLOOR/WALL/CEILING NOTES**

- FLOOR**  
**F1** - REMOVE EXISTING FLOOR, BASE, GLUE, ETC. TO RECEIVE NEW FLOORING AS SCHEDULED.  
**F2** - EXISTING FLOOR TO REMAIN  
**F3** - SPECIAL CONDITION - REFER TO KEYNOTE
- WALL**  
**W1** - REMOVE EXISTING WALL COVERINGS, PAINT, ETC. PATCH, PREP, AND PRIME WALL TO RECEIVE NEW FINISHES AS SCHEDULED.  
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**C1** - REMOVE EXISTING CEILING, HANGERS, ETC. TO BOTTOM OF STRUCTURE. EXERCISE EXTREME CAUTION AS TO NOT DISTURB SYSTEMS INTENDED TO REMAIN.  
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- PRESERVE EXISTING CARD READER TO BE RE-USED IN NEW CONSTRUCTION.

**CHPS FLOOR PLAN**  
 1/8" = 1'-0"  
 NORTH

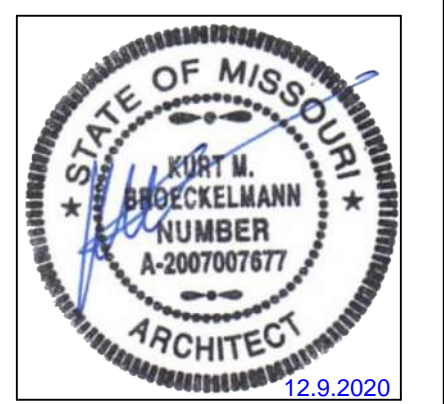
**bcdesigngroup**  
 12101 W 110th Street, Suite 100  
 Overland Park, KS 66210  
 913.232.2123  
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**Project Team:**  
**ROSS & BARUZZINI, INC.**  
 6 South Old Orchard | St. Louis, MO 63119  
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**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020  
 Issue: Date:

Drawn by: Author

bcdg Project #: 12275.43  
 MU Project #: CP210751



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123

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Project Team:

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8 South Old Orchard | St. Louis, MO 63119  
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Issue Date: 12/09/2020

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bcdg Project #: 12275.43  
MU Project #: CP210751

**A100**

CBCU FLOOR PLAN

BID SET

**FLOOR PLAN LEGEND:**

	NEW DOOR		ENLARGED DRAWING TAG
	EXISTING DOOR		PLAN KEYNOTE
	NEW WALL		EQUIPMENT TAG
	EXISTING WALL		DOOR TAG
	ROOM NAME		PARTITION WALL TAG
	ROOM NUMBER		GLAZING TAG
	ELEVATION TAGS		CARD READER
	BUILDING SECTION TAG		
	CUBICLE CURTAIN, CFCI		
	CURTAIN TRACK, CFCI		

**GENERAL FLOOR PLAN NOTES**

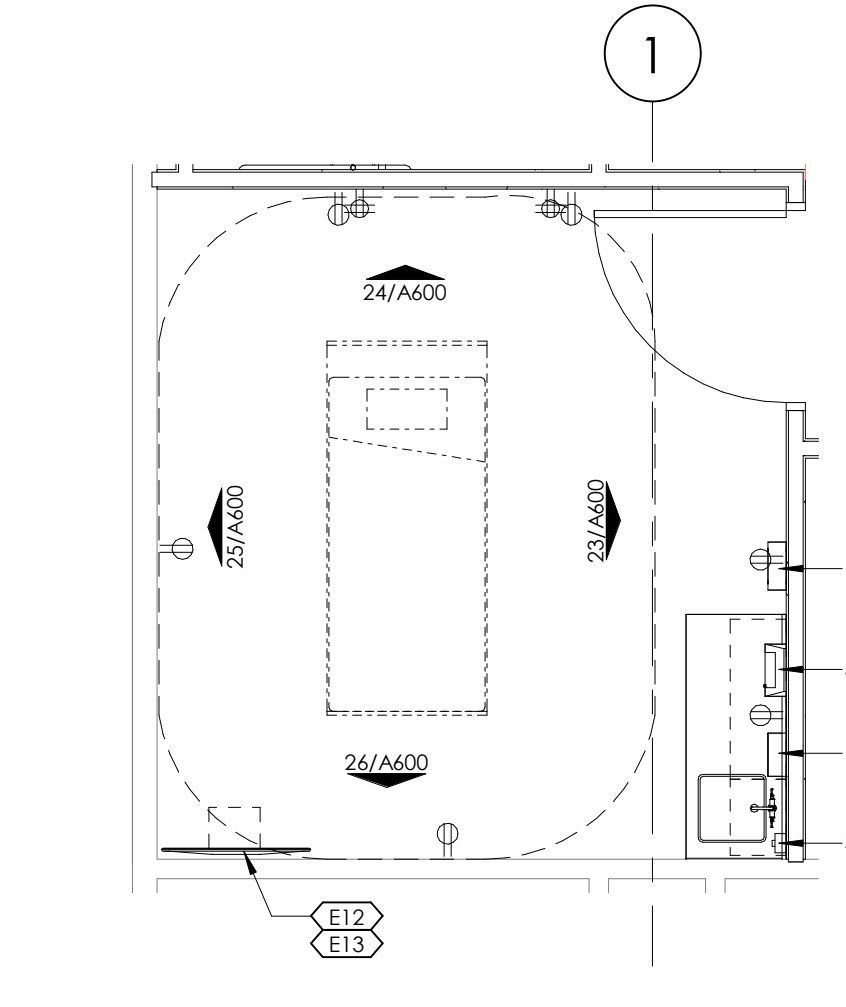
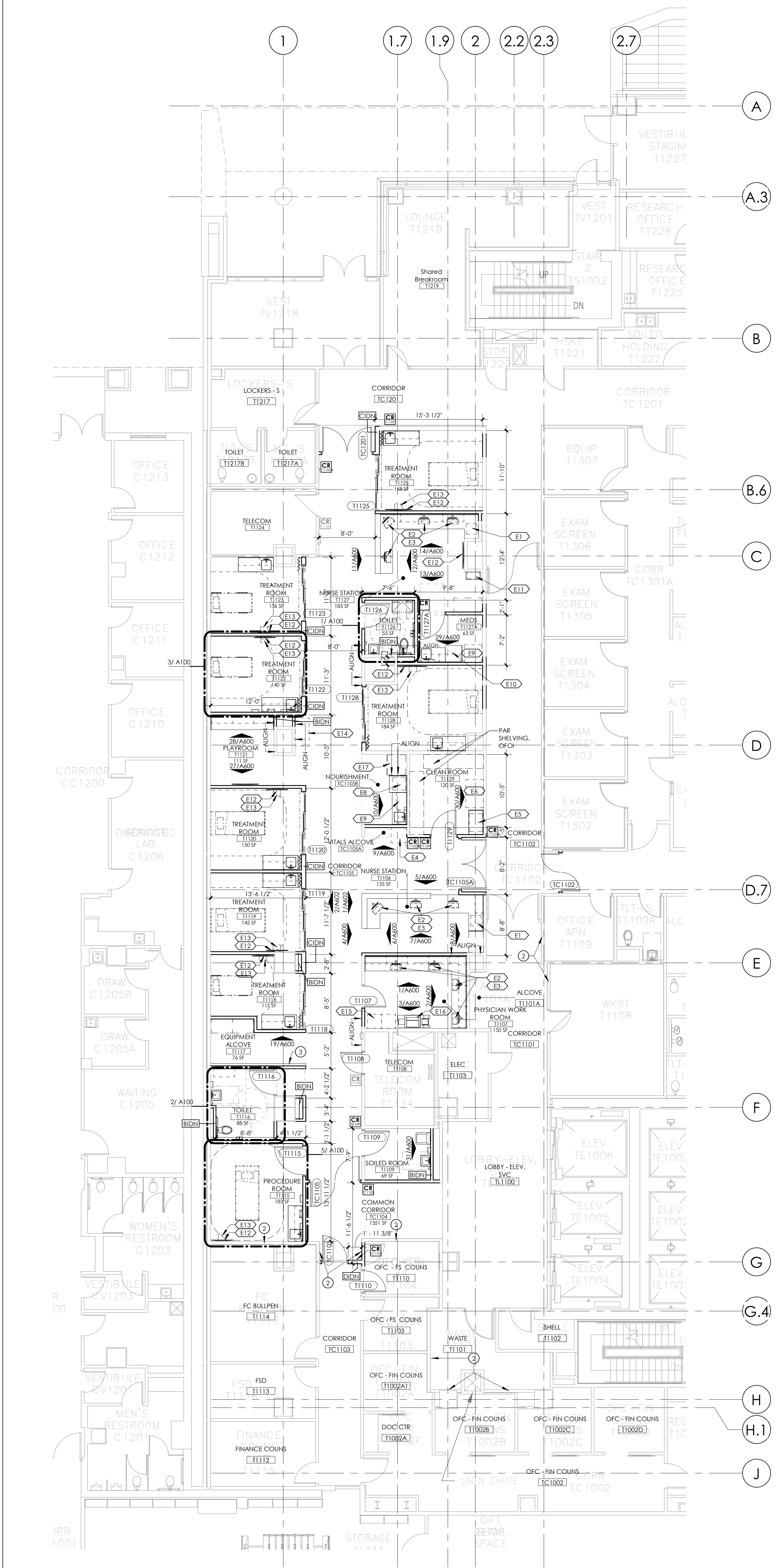
- ALL NEW INTERIOR PARTITIONS ARE TO BE ADINT UNLESS NOTED OTHERWISE. **RE COVER**
- ALL DIMENSIONS ARE TO FACE OF FINISHED WALL. GC TO NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK IN THE AFFECTED AREAS.
- RADIUS OUTSIDE CORNERS OF ALL COUNTERTOPS 1/12" TYPICAL.
- DIMENSIONS SHOWN IN ITALICS ARE CRITICAL AND MUST BE MAINTAINED.
- INSTALL METAL STRAP BLOCKING AT ALL ITEMS SHOWN TO BE MOUNTED TO WALLS, INCLUDING BUT NOT LIMITED TO WALL STOPS, CASEWORK, & GRAB BARS. STRAPS SHALL EXTEND A MINIMUM OF 3 STUDS, TYPICAL.
- ALL CFCI ITEMS LOCATIONS ARE TO BE COORDINATED WITH THE OWNER.

**FLOOR PLAN KEYNOTES:**

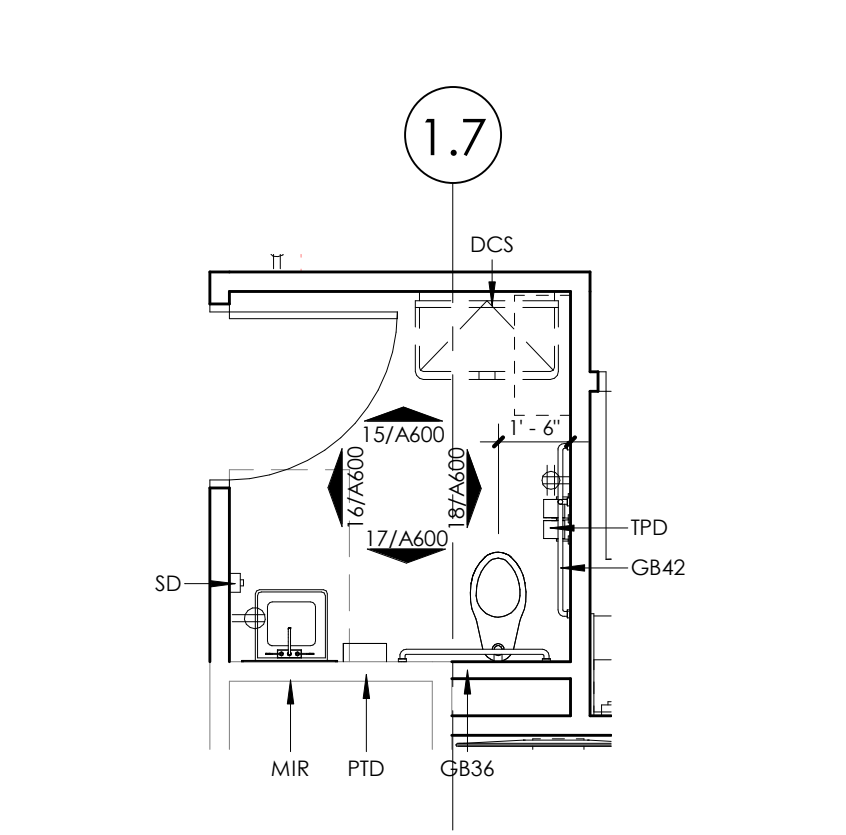
- EXISTING WALL TO BE PART OF NEW 1 HOUR FIRE RATING, PER CODE PLAN G100/G101. CONTRACTOR TO FIELD VERIFY WALL MEETS UL-465 OR CONSTRUCT WALL AS REQUIRED TO MEET UL-465
- EXISTING WALL TO BE PART OF NEW 2 HOUR FIRE RATING, PER CODE PLAN G100/G101. CONTRACTOR TO FIELD VERIFY WALL MEETS UL-465 OR CONSTRUCT WALLS AS REQUIRED TO MEET UL-465
- PLUG MOLD LOCATIONS, RE: ELEC.
- BLUE BIN STORAGE SHELVING, OFOC
- RE-USE EXISTING CARD READER FOR THIS DOOR
- TOUCHLESS ACTUATOR

**EQUIPMENT LIST:**

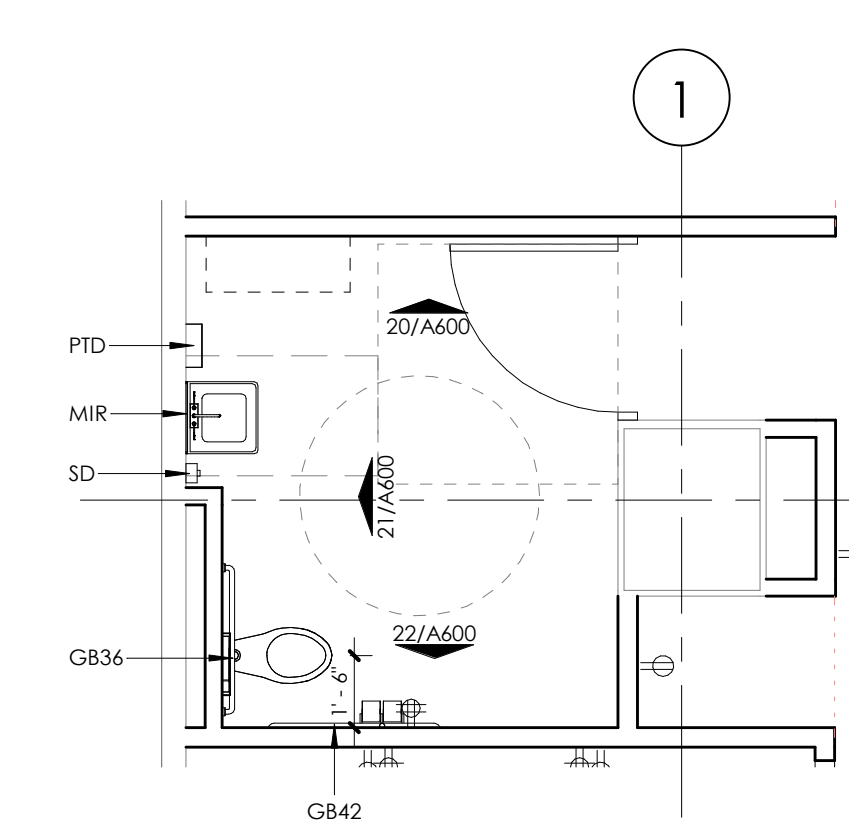
EQ#	ITEM	FURNISHED BY/INSTALLED BY
E1	PRINTER	OFOC
E2	COMPUTER WORKSTATION	OFOC
E3	KEYBOARD	OFOC
E4	SCALE	OFOC
E5	COUNTERTOP BLANKET WARMER	OFOC
E6	LINEN CART	OFOC
E7	MICROWAVE	OFOC
E8	ICE MACHINE	OFOC
E9	RX STATION TOWER	OFOC
E10	RX STATION FRIDGE	OFOC
E11	IPAD CHARGER	OFOC
E12	TV AND MOUNTING BRACKET	OFOC, OFCI
E13	PLAYSTATION	OFOC
E14	CRASH CART	OFOC
E15	FILE CABINETS	OFOC
E16	LARGE PRINTER	OFOC
E17	REFRIGERATOR	OFOC
E18	PEDIATRIC CRASH CART	OFOC
E19	SCOPE CABINET	OFOC
E20	PEDIATRIC SCOPE CABINET	OFOC
E21	IV POLES	OFOC
E22	ERCP TABLE	OFOC
E23	PEDIATRIC TRAVEL CART	OFOC
E24	EUS MACHINE	OFOC
E25	MANDOMETRY	OFOC
E26	BARREX	OFOC
E27	ESSE	OFOC
E28	MARTELL TRANSLATOR	OFOC
E29	TRAVEL CART	OFOC
E30	BRAVO	OFOC
E31	ECO	OFOC
E32	IV CART	OFOC
E33	AIRWAY CART	OFOC
E34	BRIST SCALE	OFOC
E35	FULL HEIGHT BLANKET WARMER	OFOC
E36	PATIENT MONITOR	OFOC
E37	PATIENT BED	OFOC
E38	SODA VENDING MACHINE	OFOC
E39	SNACK VENDING MACHINE	OFOC



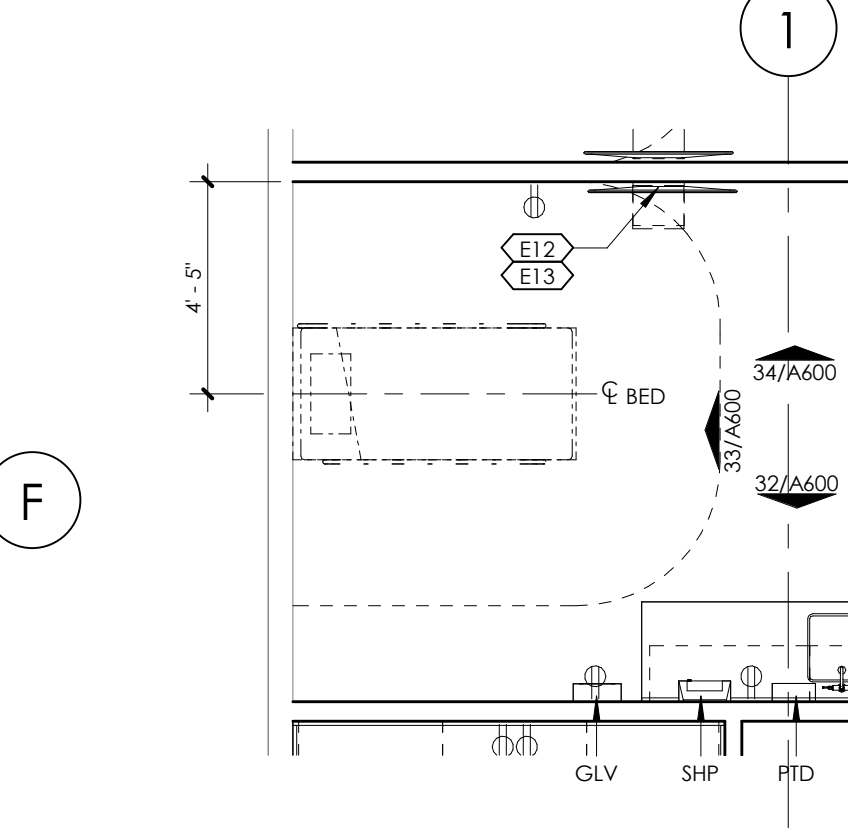
5 CBCU PROCEDURE ROOM  
1/4" = 1'-0"



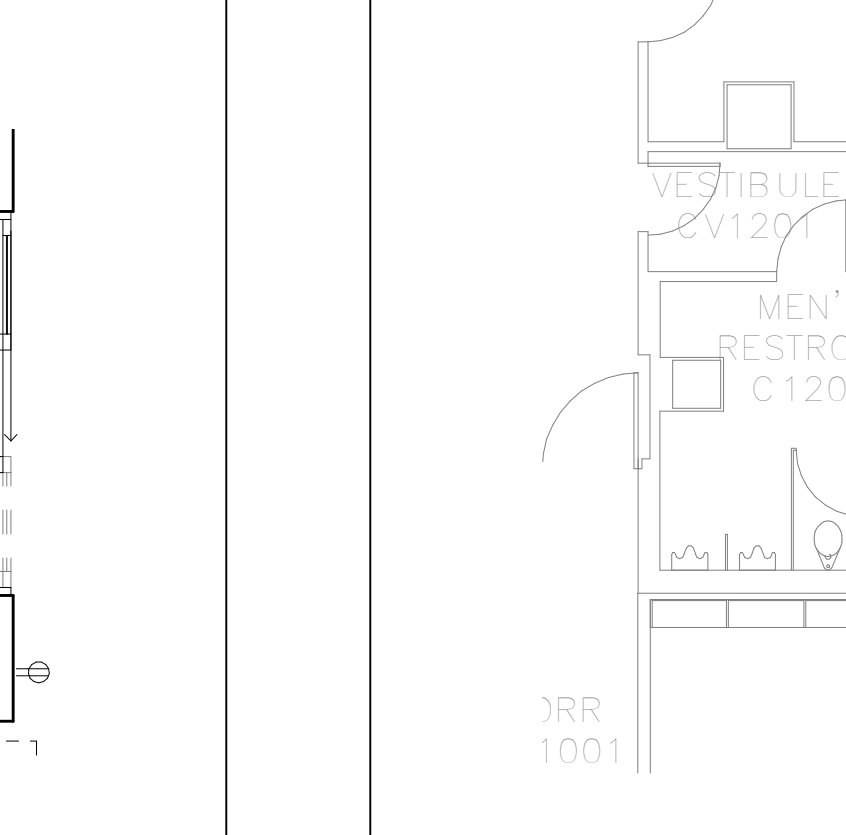
1 CBCU FLOOR PLAN  
1/4" = 1'-0"



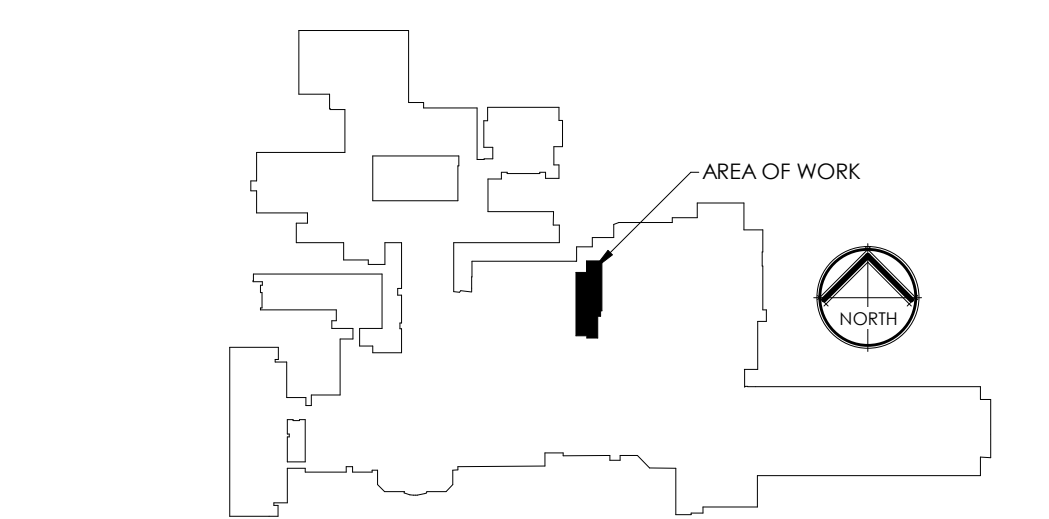
2 CBCU FLOOR PLAN  
1/4" = 1'-0"



3 CBCU FLOOR PLAN  
1/4" = 1'-0"

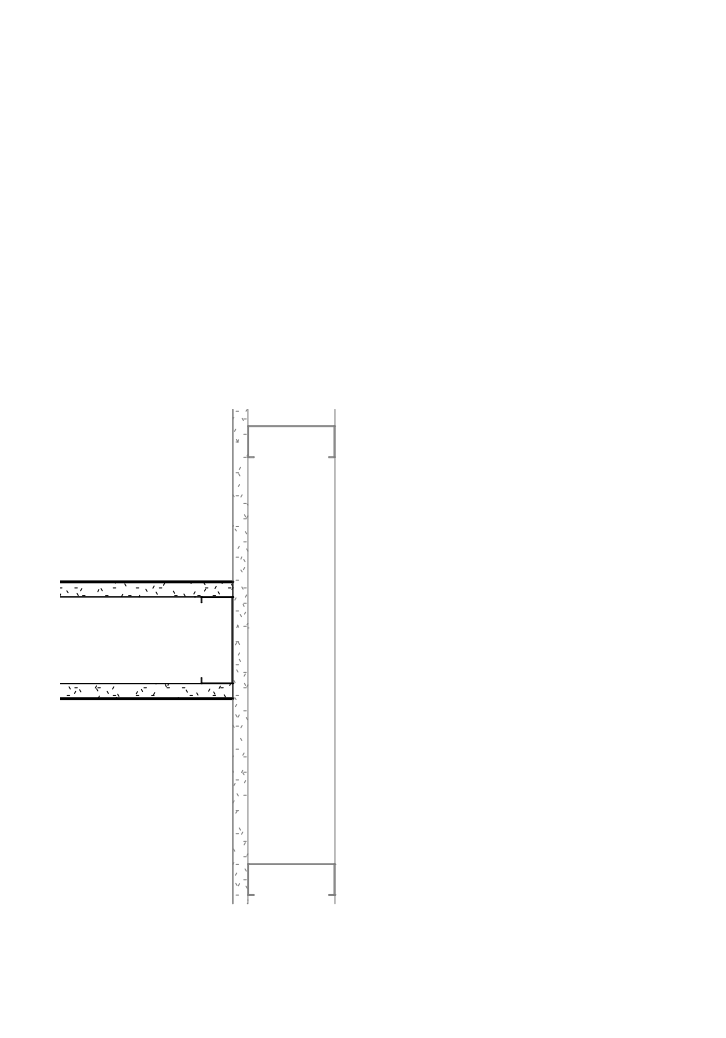
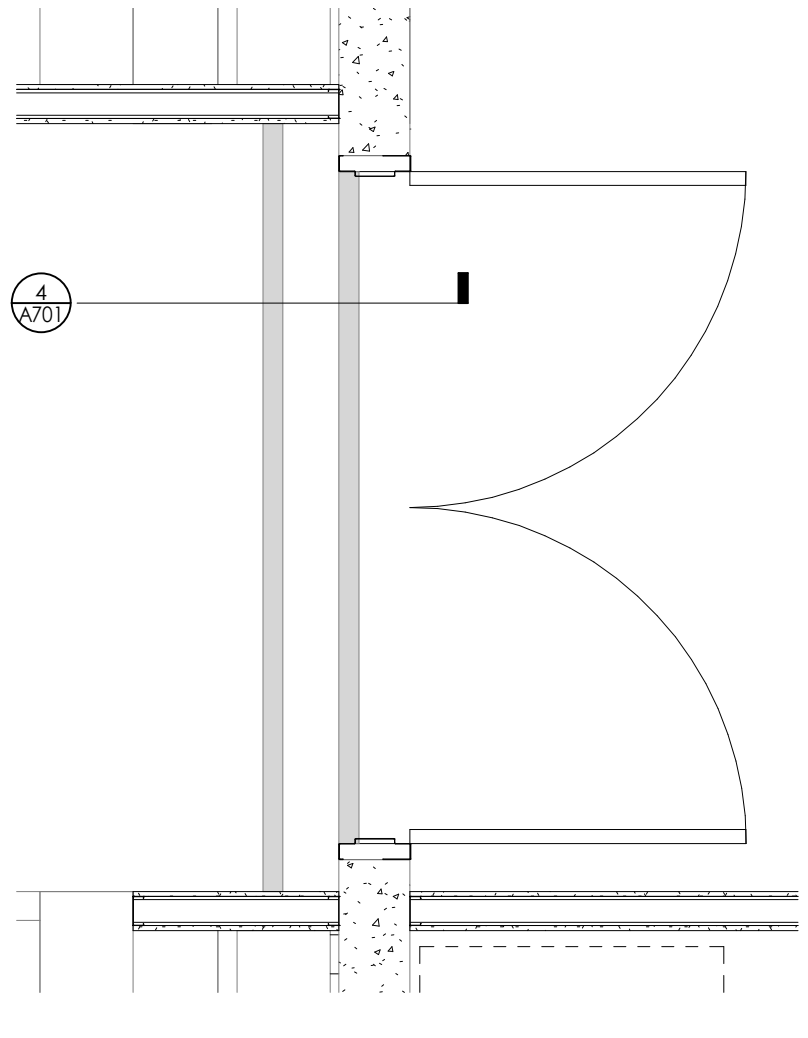


4 CBCU FLOOR PLAN  
1/8" = 1'-0"



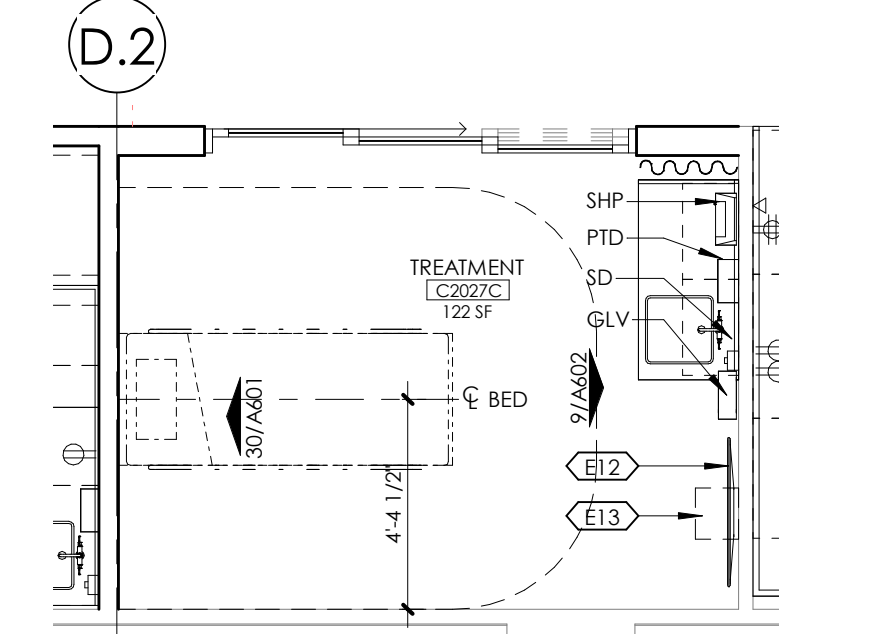
FIRST FLOOR KEYPLAN



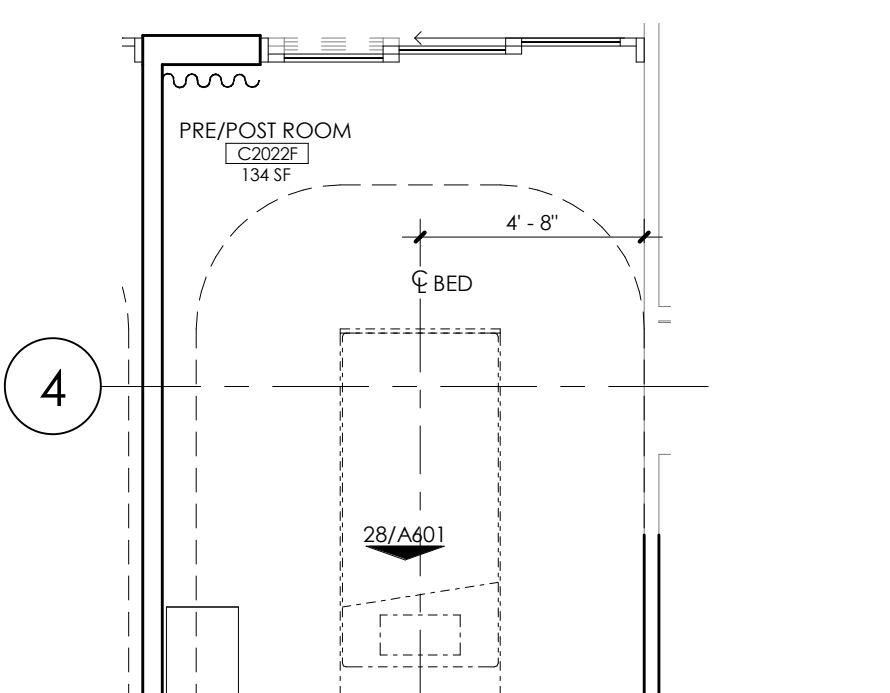


7 CCA-PCT CONNECTION DETAIL  
1/2" = 1'-0"

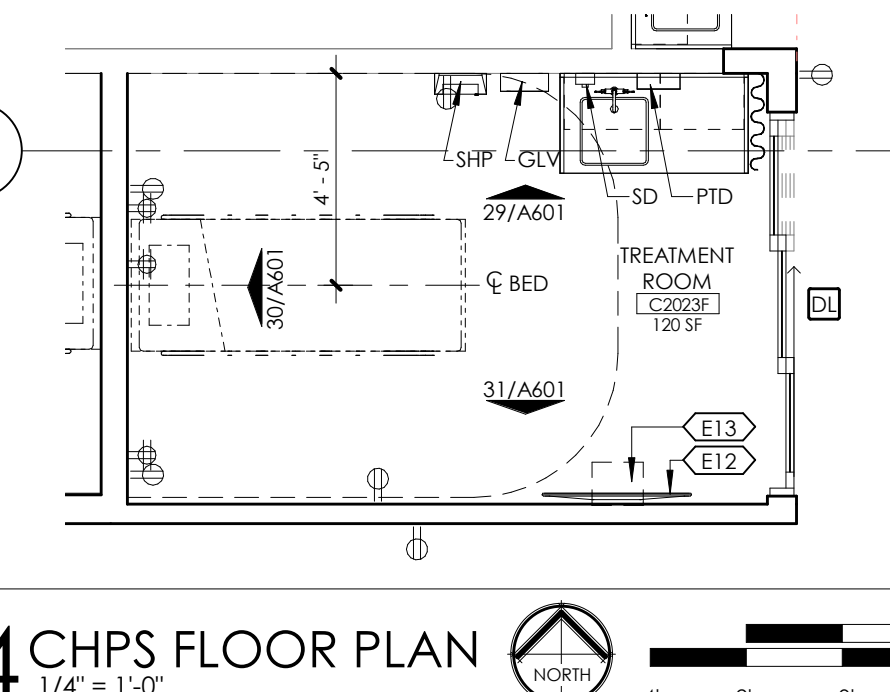
8 WALL DETAIL  
1 1/2" = 1'-0"



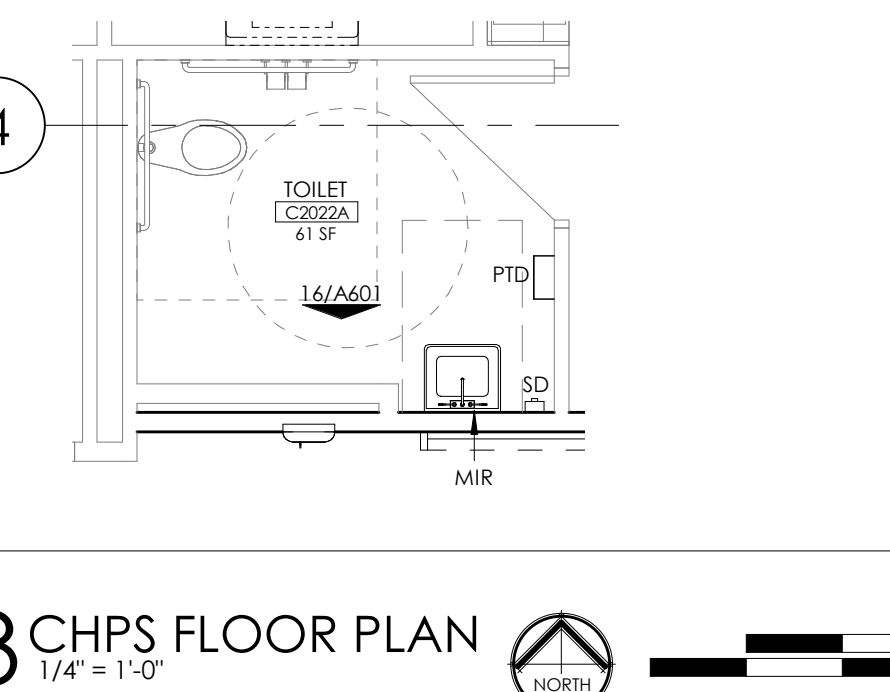
6 CHPS FLOOR PLAN  
1/4" = 1'-0"



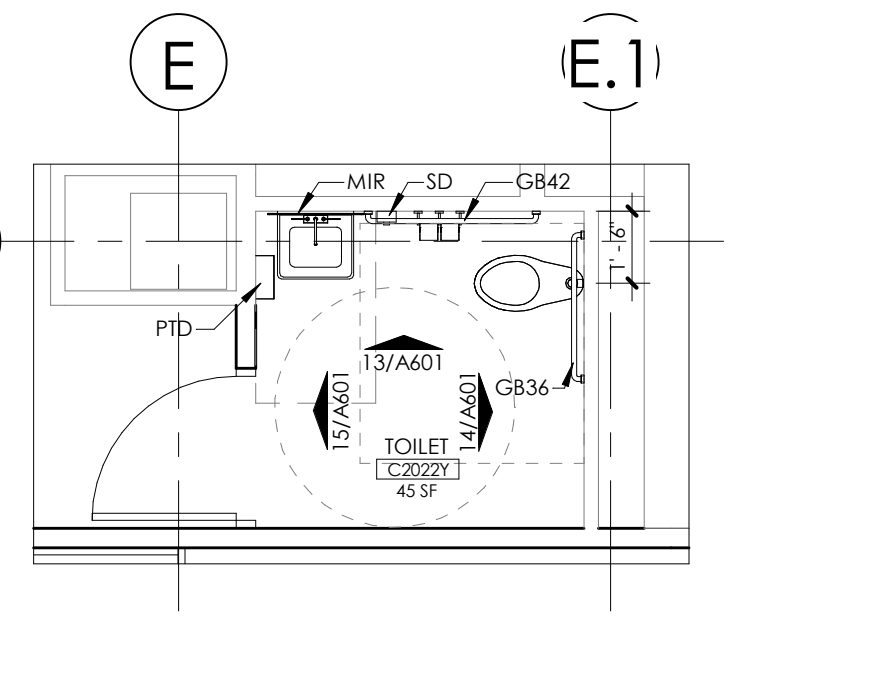
5 CHPS FLOOR PLAN  
1/4" = 1'-0"



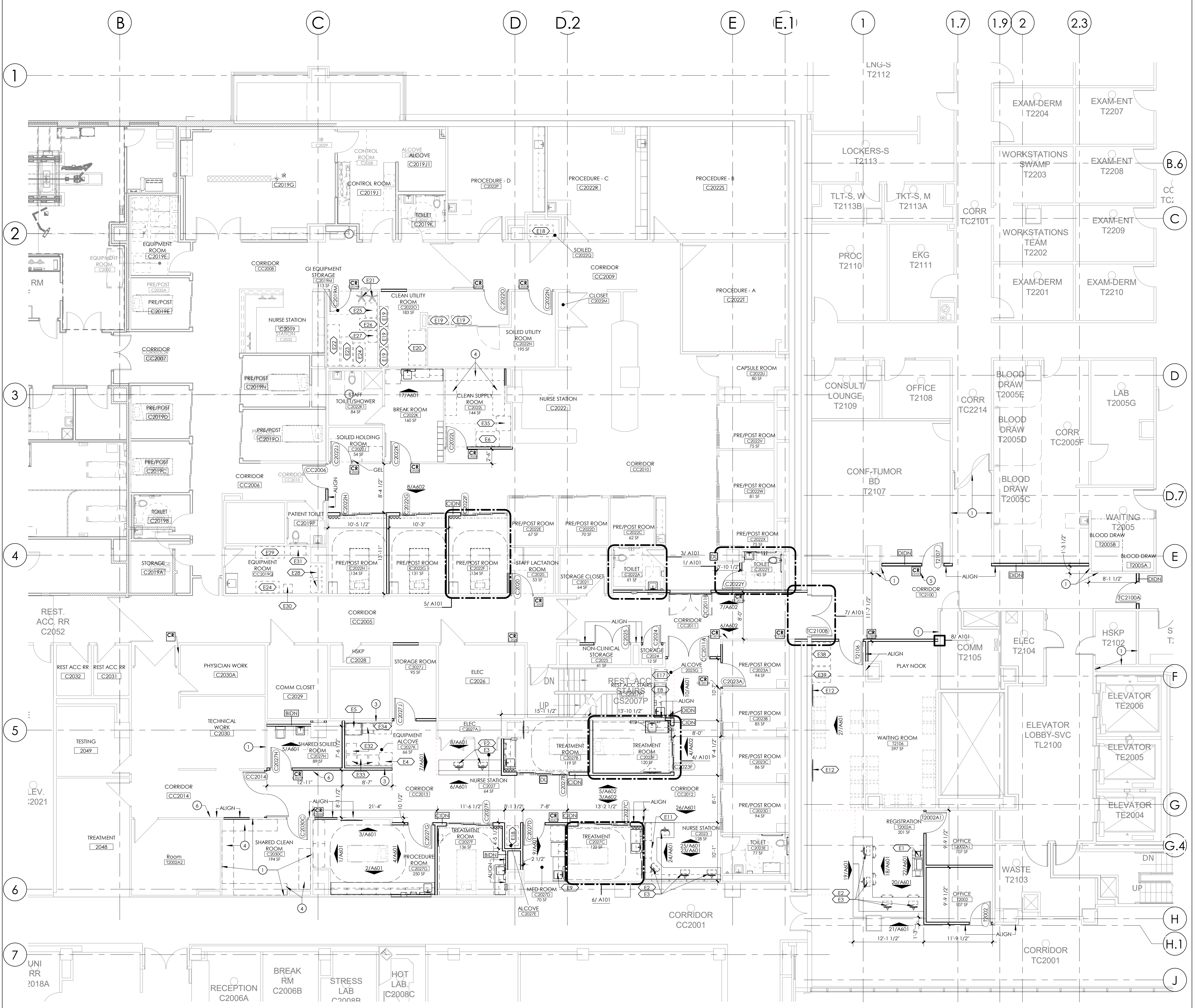
4 CHPS FLOOR PLAN  
1/4" = 1'-0"



3 CHPS FLOOR PLAN  
1/4" = 1'-0"



1 CHPS FLOOR PLAN  
1/4" = 1'-0"



2 CHPS FLOOR PLAN  
1/8" = 1'-0"

**FLOOR PLAN LEGEND:**

	NEW DOOR		ENLARGED DRAWING TAG
	EXISTING DOOR		PLAN KEYNOTE
	NEW WALL		EQUIPMENT TAG
	EXISTING WALL		DOOR TAG
	ROOM NAME		PARTITION WALL TAG
	ROOM NUMBER		GLAZING TAG
	ELEVATION TAGS		CARD READER
	BUILDING SECTION TAG		
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	CURTAIN TRACK, CFCI		

**GENERAL FLOOR PLAN NOTES**

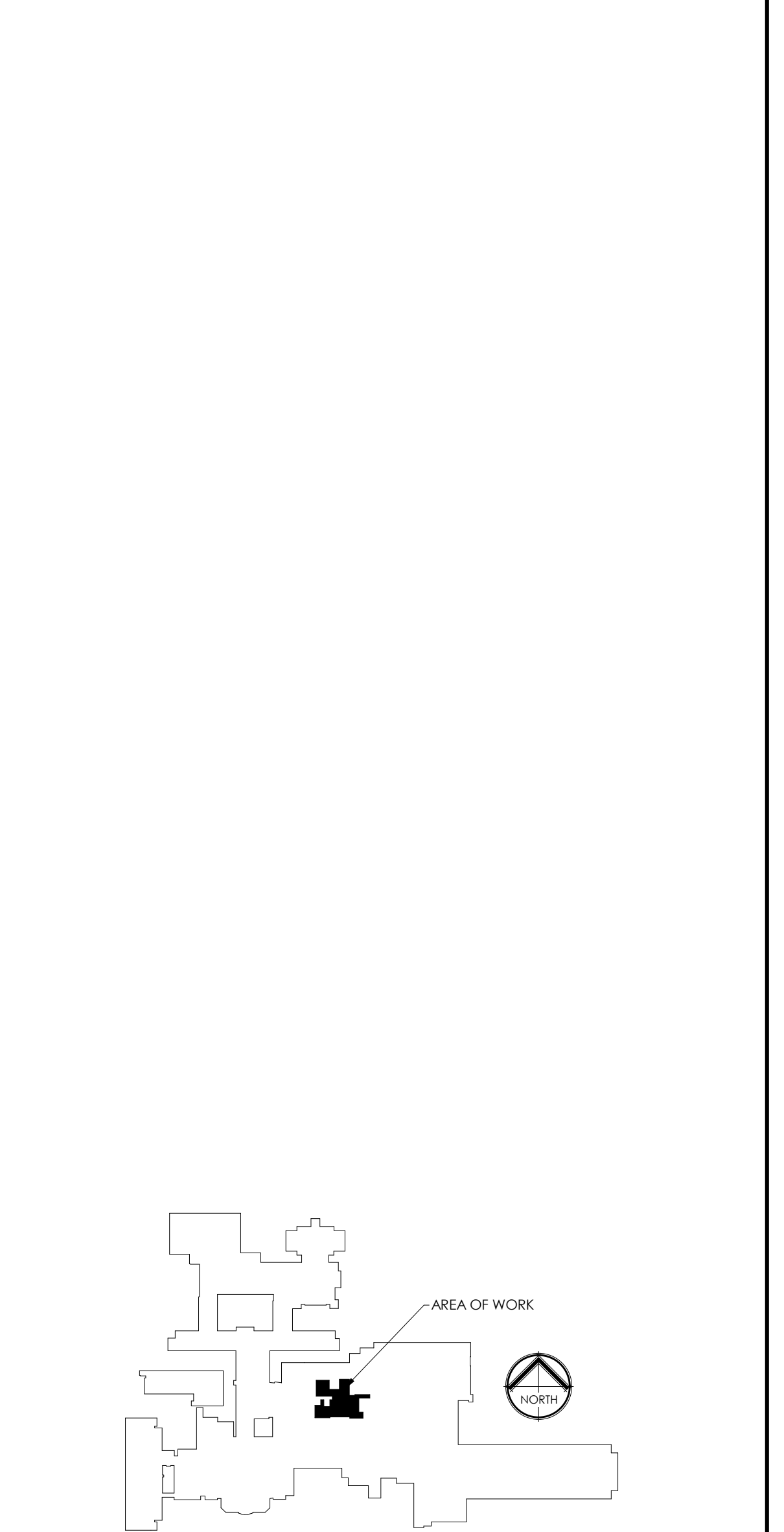
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2. ALL DIMENSIONS ARE TO FACE OF FINISHED WALL. GC TO NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK IN THE AFFECTED AREAS.
3. RADIIUS OUTSIDE CORNERS OF ALL COUNTERTOPS 1-1/2" TYPICAL.
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6. ALL CFCI ITEMS LOCATIONS ARE TO BE COORDINATED WITH THE OWNER.

**FLOOR PLAN KEYNOTES:**

1. EXISTING WALL TO BE PART OF NEW 1 HOUR FIRE RATING. PER CODE PLAN G100/G101. CONTRACTOR TO FIELD VERIFY WALL MEETS UL-454 OR CONSTRUCT WALL AS REQUIRED TO MEET UL-454.
2. EXISTING WALL TO BE PART OF NEW 2 HOUR FIRE RATING. PER CODE PLAN G100/G101. CONTRACTOR TO FIELD VERIFY WALL MEETS UL-475 OR CONSTRUCT WALLS AS REQUIRED TO MEET UL-475.
3. PLUG MOLD LOCATIONS, RE: ELEC.
4. BLUE BIN STORAGE SHELVING, CFCOC
5. RE-USE EXISTING CARD READER FOR THIS DOOR
6. TOUCHLESS ACTUATOR

**EQUIPMENT LIST:**

EQ#	ITEM	FURNISHED BY/INSTALLED BY
E1	PRINTER	OFO
E2	COMPUTER WORKSTATION	OFO
E3	KEYBOARD	OFO
E4	SCALE	OFO
E5	COUNTERTOP BLANKET WARMER	OFO
E6	LINEN CART	OFO
E7	MICROWAVE	OFO
E8	ICE MACHINE	OFO
E9	RX STATION TOWER	OFO
E10	RX STATION FRIESE	OFO
E11	IPAD CHARGER	OFO
E12	TV AND MOUNTING BRACKET	OFO, CFCI
E13	PLAYSTATION	OFO
E14	CRASH CART	OFO
E15	FILE CABINETS	OFO
E16	LARGE PRINTER	OFO
E17	REFRIGERATOR	OFO
E18	PEDIATRIC CRASH CART	OFO
E19	SCOPE CABINET	OFO
E20	PEDIATRIC SCOPE CABINET	OFO
E21	ERIC TABLE	OFO
E22	PEDIATRIC TRAVEL CART	OFO
E23	IV POLES	OFO
E24	EUS MACHINE	OFO
E25	MANDRYERY	OFO
E26	BARREX	OFO
E27	ERIE	OFO
E28	MARTE TRANSLATOR	OFO
E29	TRAVEL CART	OFO
E30	BRAYVO	OFO
E31	EEG	OFO
E32	IV CART	OFO
E33	AIRWAY CART	OFO
E34	BAW SCALE	OFO
E35	FULL HEIGHT BLANKET WARMER	OFO
E36	PATIENT MONITOR	OFO
E37	PATIENT BED	OFO
E38	SODA VENDING MACHINE	OFO
E39	SNACK VENDING MACHINE	OFO



SECOND FLOOR KEYPLAN



12101 W 110th Street Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201100729

**Project Team:**  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Belleview Avenue  
Kansas City, MO 64111

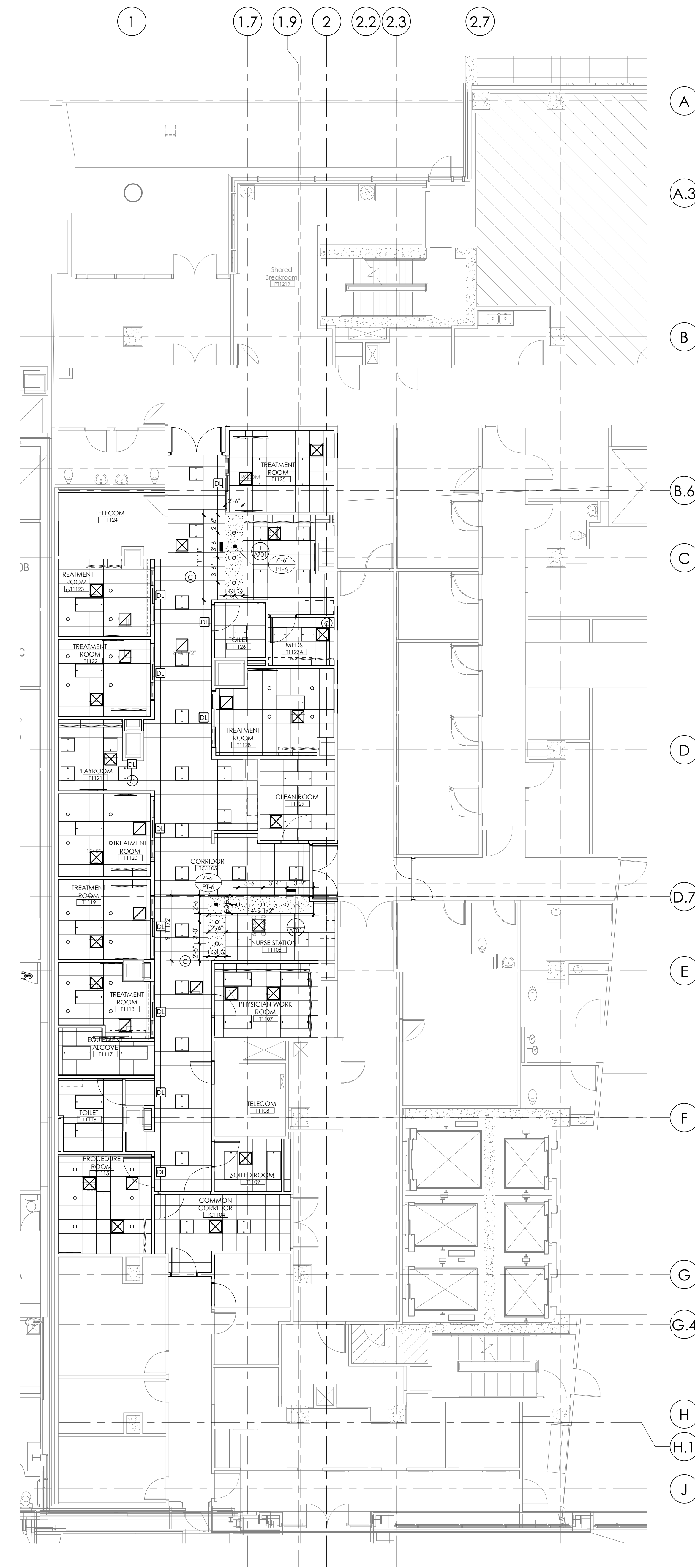
**Project Title:**  
CP150492 | University of Missouri Teaching Hospital - West Wing - Expansion/Renovation  
University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020  
Date:

Drawn by: Author  
bcbd Project #: 12275.15  
MU Project #: CP150492

**A101**  
CHPS FLOOR PLAN



**REFLECTED CEILING PLAN LEGEND**

	2x2 ACOUSTICAL CEILING TILE & GRID		2x4 LIGHT FIXTURE, RE: ELEC.
	2x4 ACOUSTICAL CEILING TILE & GRID		1x4 LIGHT FIXTURE, RE: ELEC.
	GYP. BD. SOFFIT/CEILING		2x2 LIGHT FIXTURE, RE: ELEC.
	NEW DIFFUSER - RETURN, RE: MECH.		UNDER CABINET LIGHT, RE: ELEC.
	NEW DIFFUSER - SUPPLY, RE: MECH.		RECESSED CAN LIGHT, RE: ELEC.
	CEILING HEIGHT A.F.F. CEILING TYPE/PART		PENDANT LIGHT, RE: ELEC.
	PLAN KEYNOTE		WALL SCONCE, RE: ELEC.
	EMERGENCY LIGHT, RE: ELEC.		WALL SCONCE, RE: ELEC.
	CEILING MOUNTED EXIT LIGHT		SMOKE DETECTOR, RE: MEP
	CEILING MOUNTED CAMERA, RE: MEP		THERMAL DETECTOR, RE: MEP
			DOMELIGHT, RE: MEP

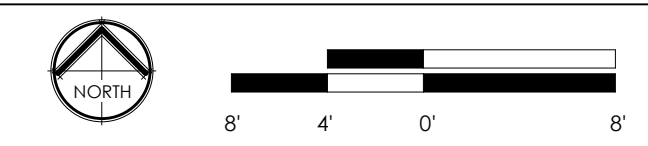
**REFLECTED CEILING PLAN NOTES**

- CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. REPORT ANY DISCREPANCIES TO ARCHITECT IN WRITING BEFORE BEGINNING WORK IN AFFECTED AREA(S).
- CONTRACTOR SHALL VERIFY ALL EXISTING HOSPITAL SYSTEMS CURRENTLY INSTALLED IN THE CONSTRUCTION AREA. ALL DEVICES SHALL BE CHECKED AND IN WORKING CONDITION UPON COMPLETION OF THE PROJECT.
- ALL DIMENSIONS ARE TO FACE OF FINISHED WALL OR FACE OF MASONRY. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK IN AFFECTED AREA(S).
- 'ALIGN' AS USED THROUGHOUT THESE DOCUMENTS IS UNDERSTOOD TO MEAN FINISH SURFACE OF NEW CONSTRUCTION SHALL MEET FINISH SURFACE OF EXISTING CONSTRUCTION IN A NEAT AND SMOOTH MANNER PROVIDING A FLUSH FINISHABLE SURFACE.
- REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION AND WORK, INCLUDING, BUT NOT LIMITED TO, DIFFUSERS, GRILLES, LIGHTS, ETC.
- ALL CEILINGS ARE TO 8'-0" AFF, UNLESS NOTED OTHERWISE.
- REFER TO MEP DRAWINGS FOR ABOVE CEILING WORK RELATED TO THIS PROJECT. REMOVE TILE AS NEEDED TO INSTALL NEW MEP ITEMS AND PATCH ANY DAMAGED MATERIAL CAUSED FROM NEW INSTALLATION. COORDINATE SCHEDULE W/ HOSPITAL PRIOR TO START OF WORK.
- UNLESS NOTED OTHERWISE, SOFFIT PAINT TO MATCH WALL ON WHICH IT OCCURS.
- RENEWAL CEILING TILES SHOWN TO BE REMOVED FOR INSTALLATION OF NEW ELEC. WORK. REPLACE TILES IF DAMAGED.

**RCP KEYNOTES:**

- ALIGN NEW ACT CEILING GRID WITH EXISTING CEILING GRID ADJACENT.

**1 PARTIAL 1ST FLOOR RCP - CBCU**  
1/8" = 1'-0"



**bcDESIGN GROUP**  
12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201100729

**Project Team:**  
**ROSS & BARUZZINI, INC.**  
6 South Old Orchard | St. Louis, MO 63119  
314.918.8383

**SPELLMAN BRADY & COMPANY**  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

**BOB D. CAMPBELL 7 CO.**  
4338 Bellevue Avenue  
Kansas City, MO 64111

**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020  
Issue: Date:

Drawn by: Author  
bcdg Project #: 12275.43  
MU Project #: CP210751

**A200**  
CBCU RCP



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

913.232.2123

MO Certificate of Authority Number  
A-201102720

Project Team:

ROSS & BARUZZINI, INC.  
8 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
Kansas City, MO 64111

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS  
AND CBCU**  
University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020  
Issue: Date:

Drawn by: Author

bcdg Project #: 12275.43  
MU Project #: CP210751

**A201**

CHPS RCP

BID SET

REFLECTED CEILING PLAN NOTES

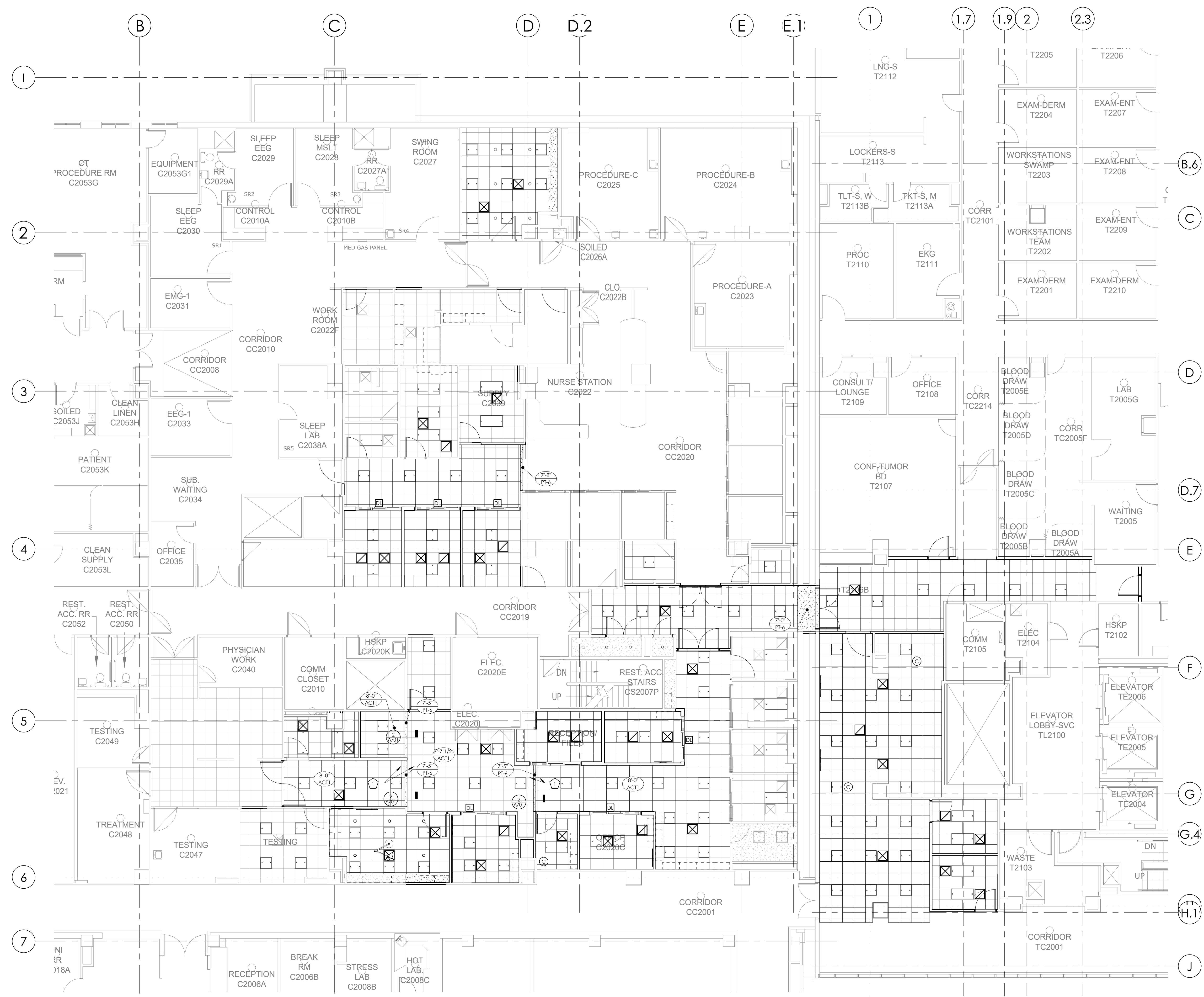
- CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. REPORT ANY DISCREPANCIES TO ARCHITECT IN WRITING BEFORE BEGINNING WORK IN AFFECTED AREAS.
- CONTRACTOR SHALL VERIFY ALL EXISTING HOSPITAL SYSTEMS CURRENTLY INSTALLED IN THE CONSTRUCTION AREA. ALL DEVICES SHALL BE CHECKED AND IN WORKING CONDITION UPON COMPLETION OF THE PROJECT.
- ALL DIMENSIONS ARE TO FACE OF FINISHED WALL OR FACE OF MASONRY. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK IN AFFECTED AREAS.
- "AUGN" AS USED THROUGHOUT THESE DOCUMENTS IS UNDERSTOOD TO MEAN FINISH SURFACE OF NEW CONSTRUCTION SHALL MEET FINISH SURFACE OF EXISTING CONSTRUCTION IN A NEAT AND SMOOTH MANNER PROVIDING A FLUSH FINISHABLE SURFACE.
- REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION AND WORK, INCLUDING, BUT NOT LIMITED TO, DIFFUSERS, GRILLES, LIGHTS, ETC.
- ALL CEILINGS ARE TO 8'-0" AFF. UNLESS NOTED OTHERWISE.
- REFER TO MEP DRAWING FOR ABOVE CEILING WORK RELATED TO THIS PROJECT. REMOVE TILE AS NEEDED TO INSTALL NEW MEPTIBS AND PATCH ANY DAMAGED MATERIAL CAUSED FROM NEW INSTALLATION. COORDINATE SCHEDULE W/ HOSPITAL PRIOR TO START OF WORK.
- UNLESS NOTED OTHERWISE, SOFFIT PAINT TO MATCH WALL ON WHICH IT OCCURS.
- REINSTALL CEILING TILES SHOWN TO BE REMOVED FOR INSTALLATION OF NEW ELEC. WORK. REPLACE TILES IF DAMAGED.

REFLECTED CEILING PLAN LEGEND

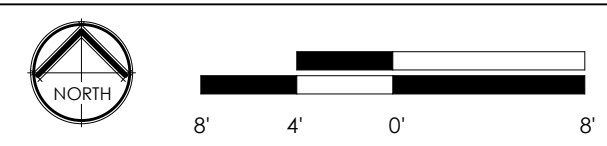
- 2X2 ACOUSTICAL CEILING TILE & GRID
- 2X4 ACOUSTICAL CEILING TILE & GRID
- OYP. BD. SOFFIT/CEILING
- NEW DIFFUSER - RETURN, RE: MECH.
- NEW DIFFUSER - SUPPLY, RE: MECH.
- CEILING HEIGHT A.F.F. CEILING TYPE/PAINT
- PLAN KEYNOTE
- EMERGENCY LIGHT, RE: ELEC.
- CEILING MOUNTED EXIT LIGHT
- CEILING MOUNTED CAMERA, RE: MEP
- 2X4 LIGHT FIXTURE, RE: ELEC.
- 1X4 LIGHT FIXTURE, RE: ELEC.
- 2X2 LIGHT FIXTURE, RE: ELEC.
- UNDER CABINET LIGHT, RE: ELEC.
- RECESSED CAN LIGHT, RE: ELEC.
- PENDANT LIGHT, RE: ELEC.
- WALL SCONCE, RE: ELEC.
- WALL SCONCE, RE: ELEC.
- SMOKE DETECTOR, RE: MEP
- THERMAL DETECTOR, RE: MEP
- DOME LIGHT, RE: MEP

RCP KEYNOTES:

- ALIGN NEW ACT CEILING GRID WITH EXISTING CEILING GRID ADJACENT.



**1 PARTIAL 2ND FLOOR RCP - CHPS**  
1/8" = 1'-0"





bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123

MO Certificate of Authority Number  
A-201102790

Project Team:

ROSS & BARUZZINI, INC.  
6 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
Kansas City, MO 64111

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS**  
AND CBCU  
University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020  
Date:

Drawn by: Author

bcdg Project #: 12275.43  
MU Project #: CP210751

**A600**

INTERIOR ELEVATIONS - CBCU

BID SET

INTERIOR ELEVATION LEGEND

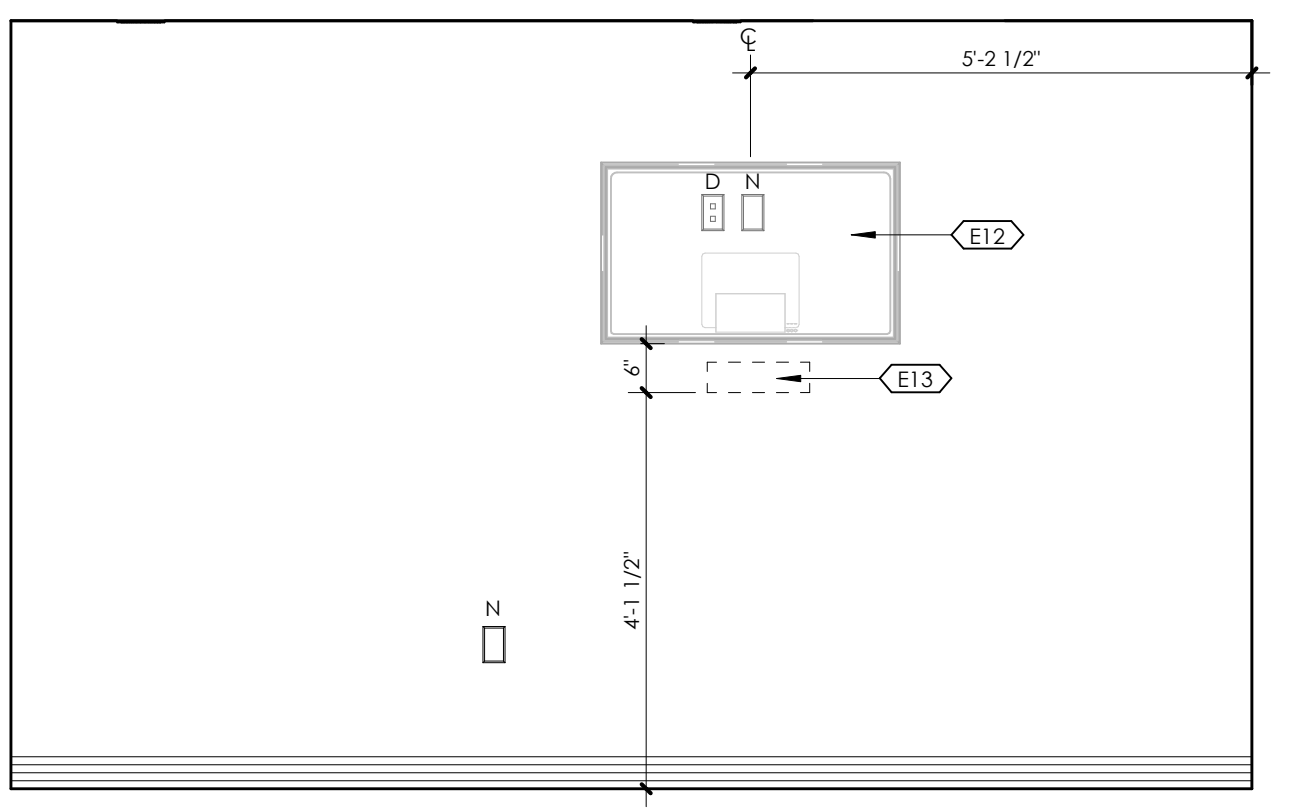
N	NORMAL DUPLEX, REMEP	N	EXISTING NORMAL DUPLEX
EM	EMERGENCY POWER DUPLEX, REMEP	EM	EXISTING EMERGENCY DUPLEX
4-FLEX	POWER 4-FLEX, REMEP	4-FLEX	EXISTING POWER 4-FLEX
D	DATA, REMEP	D	EXISTING DATA
GF	GROUND FAULT DUPLEX, REMEP	A	MEDICAL AIR OUTLET, REMEP
LS	LIGHT SWITCH(ES), REMEP	V	MEDICAL VAC OUTLET, REMEP
W	WATER, REMEP	O	OXYGEN OUTLET, REMEP
FEP	FINISHED END PANEL	S	SLIDE, REMEP
CL	CASEWORK LOCK	CR	CODE BLUE, REMEP
T	THERMOSTAT, REMEP	NC	NURSE CALL, REMEP
F	FIRE ALARM PULL, REMEP	SA	STAFF ASSIST, REMEP
FS	FIRE STROBE, REMEP	SD	STAFF DUTY STATION, REMEP
DL	DOME LIGHT, REMEP	CR	CARD READER, REMEP
EL	EMERGENCY LIGHT, REMEP	DA	DOOR ACTUATOR, REMEP

GENERAL INTERIOR ELEVATION NOTES

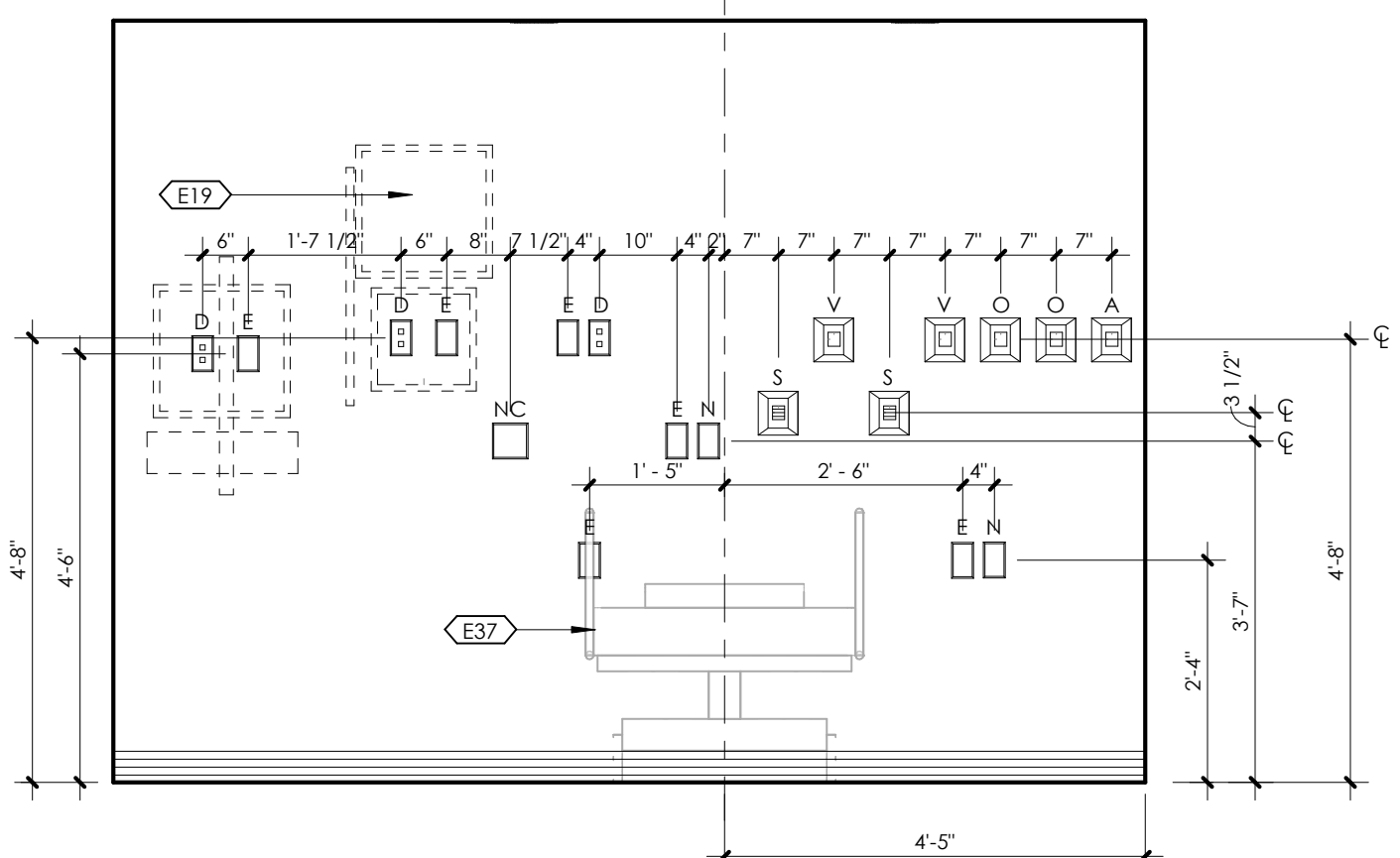
- PROVIDE F.I. WOOD BLOCKING AS REQUIRED FOR EQUIPMENT. COORDINATE SIZE AND LOCATION WITH OWNER.
- 1 1/2" RADIUS ON ALL OUTSIDE CORNERS OF COUNTERTOPS & MICROWAVE SHELVES, TYP.
- ALL EXPOSED ENDS OF CABINETS TO BE FINISHED, TYP.
- ALL UNDERSIDE OF ALL UPPER CABINETS TO BE FINISHED, TYP.
- ALL SHELVES EQUAL TO OR GREATER THAN 3/4" SHALL BE 1" THICK.
- ALL FULL HEIGHT CABINET DOORS SHALL BE 1" W/ BALANCED BACKING SHEET, TYP.
- ALL ELECTRICAL, MECHANICAL, AND PLUMBING ITEMS ARE FOR REFERENCE AND LOCATION ONLY. REFER TO MEP DRAWINGS FOR SIZES, TYPES, AND EXACT QUANTITIES.
- DIMENSIONS FOR MEP ITEMS ARE TO CENTERLINE OF COVERPLATE OR CENTER OF OPERABLE MECHANISM, TYP.
- ALL EDGES OF PAM COUNTERTOPS TO BE A PVC EDGE UNLESS OTHERWISE NOTED.
- ALL END PANELS OF CASEWORK ARE TO BE FINISHED, TYP.
- PROVIDE UNDER COUNTER SUPPORTS EVERY 3'-0" O.C., MIN.
- PROVIDE METAL SUPPORT BRACKETS @ 36" O.C., MAX. UNDER UNSUPPORTED PLASTIC LAMINATE COUNTERTOPS, COLOR: ALMOND.
- PROVIDE GROMMETS IN COUNTERTOPS AT EACH COMPUTER/EQUIPMENT FOR ACCESS TO OUTLETS BELOW. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION.
- REFER TO INSTALLATION GUIDELINES/COVER FOR TYPICAL INSTALLATION GUIDELINES & MOUNTING HEIGHTS.
- G.C. TO COORDINATE WITH OWNER FINAL LOCATIONS OF ALL CARD READERS (CR).
- ALL BASE CABINETS THAT ARE NOTED TO BE 20" DP. ON ELEVATIONS SHALL BE 24" FROM WALL TO FRONT OF CABINET DOOR. 25" TO EDGE OF COUNTERTOP. TYP.
- CORNER GUARD. O/I/O INSTALLATION WILL NEED TO BE IN SEQUENCE WITH THE WALL BASE. GC TO COORDINATE WITH OWNER.

EQUIPMENT LIST:

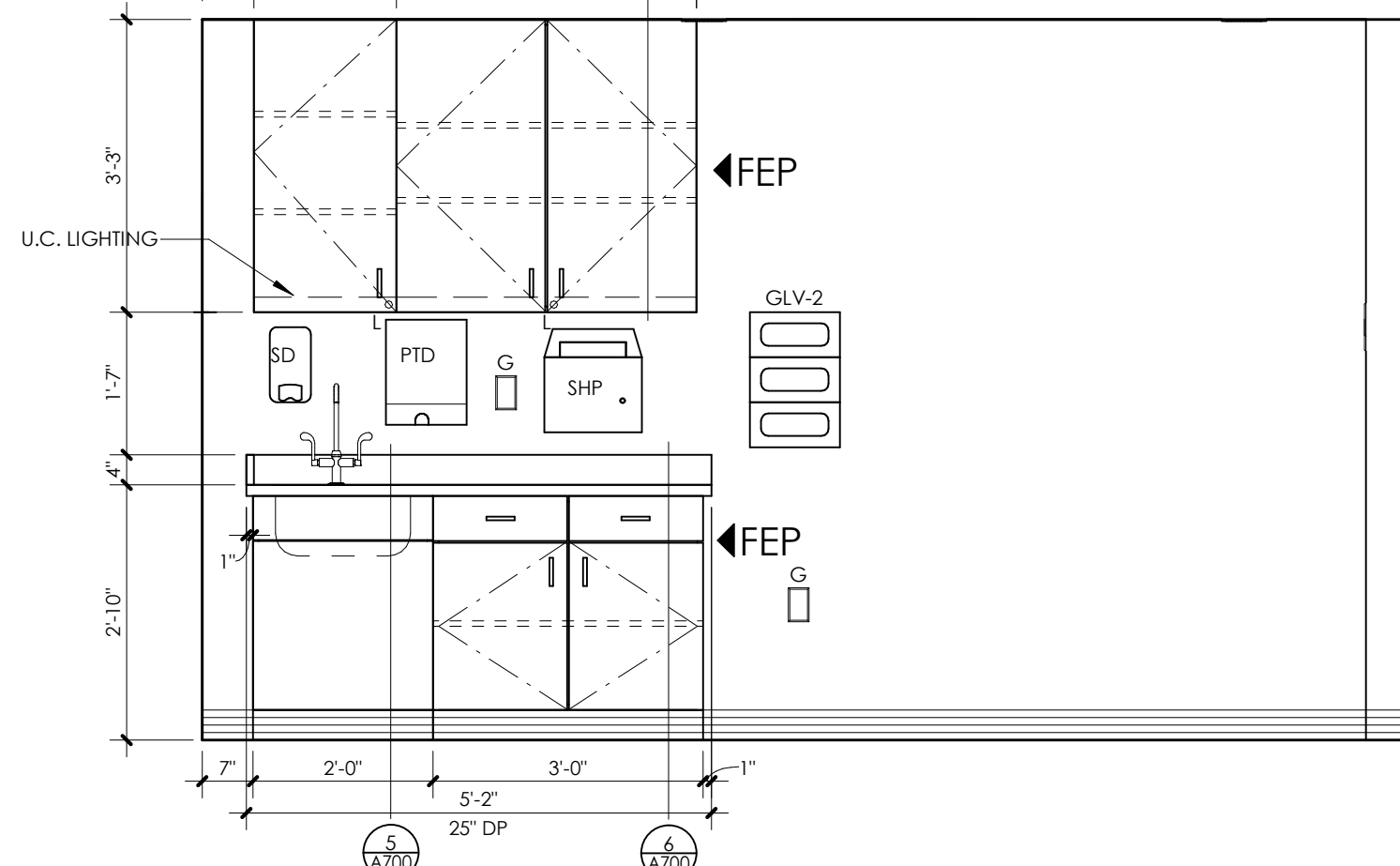
EQ#	ITEM	FURNISHED BY/INSTALLED BY
E1	PRINTER	O/O
E2	COMPUTER WORKSTATION	O/O
E3	KEYBOARD	O/O
E4	SCALE	O/O
E5	COUNTERTOP BLANKET WARMER	O/O
E6	LINEN CART	O/O
E7	MICROWAVE	O/O
E8	ICE MACHINE	O/O
E9	RX STATION TOWER	O/O
E10	RX STATION FRIDGE	O/O
E11	IPAD CHARGER	O/O
E12	TV AND MOUNTING BRACKET	O/O, O/CI
E13	PLAYSTATION	O/O
E14	CRASH CART	O/O
E15	FILE CABINETS	O/O
E16	LARGE PRINTER	O/O
E17	REFRIGERATOR	O/O
E18	PEDIATRIC CRASH CART	O/O
E19	SCOPE CABINET	O/O
E20	PEDIATRIC SCOPE CABINET	O/O
E21	IV POKES	O/O
E22	ERCT TABLE	O/O
E23	PEDIATRIC TRAVEL CART	O/O
E24	ESB MACHINE	O/O
E25	MANOMETRY	O/O
E26	BARREX	O/O
E27	ERBE	O/O
E28	MARTEI TRANSLATOR	O/O
E29	TRAVEL CART	O/O
E30	BRAYO	O/O
E31	EEG	O/O
E32	IV CART	O/O
E33	AIRWAY CART	O/O
E34	BBY SCALE	O/O
E35	FULL HEIGHT BLANKET WARMER	O/O
E36	PATIENT MONITOR	O/CI
E37	PATIENT BED	O/O
E38	SODA VENDING MACHINE	O/O
E39	SNACK VENDING MACHINE	O/O



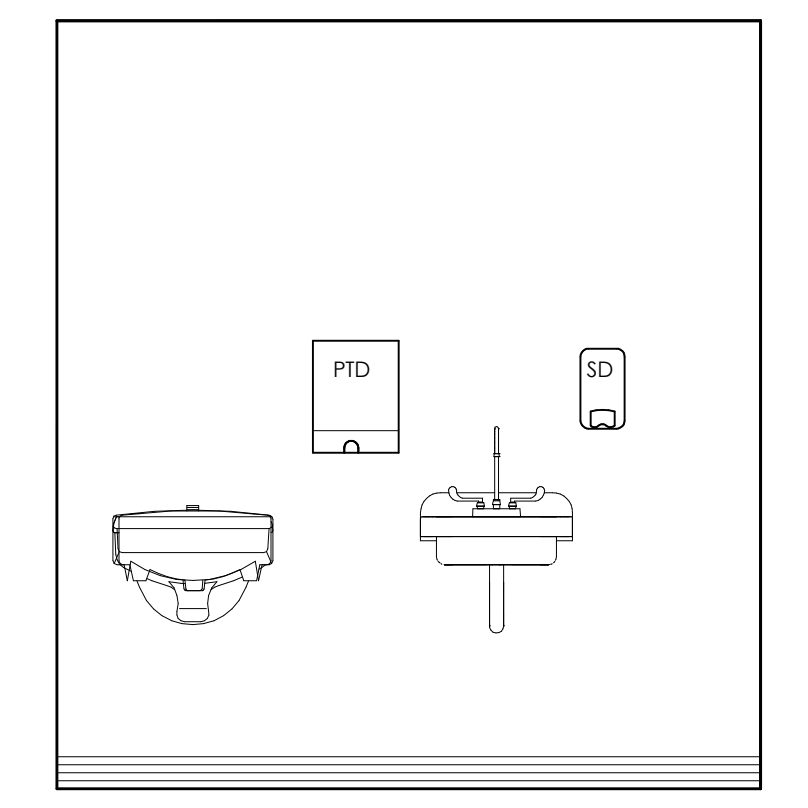
34 TYPICAL TREATMENT ROOM  
1/2" = 1'-0"



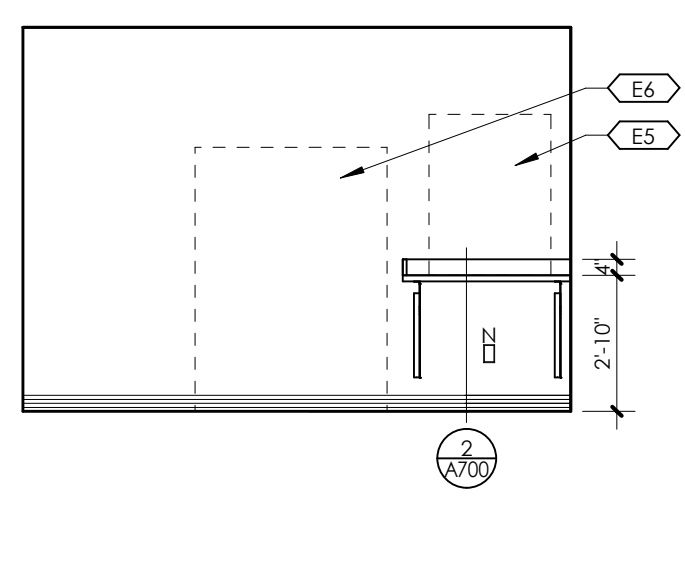
33 TYPICAL HEADWALL TREATMENT ROOM  
1/2" = 1'-0"



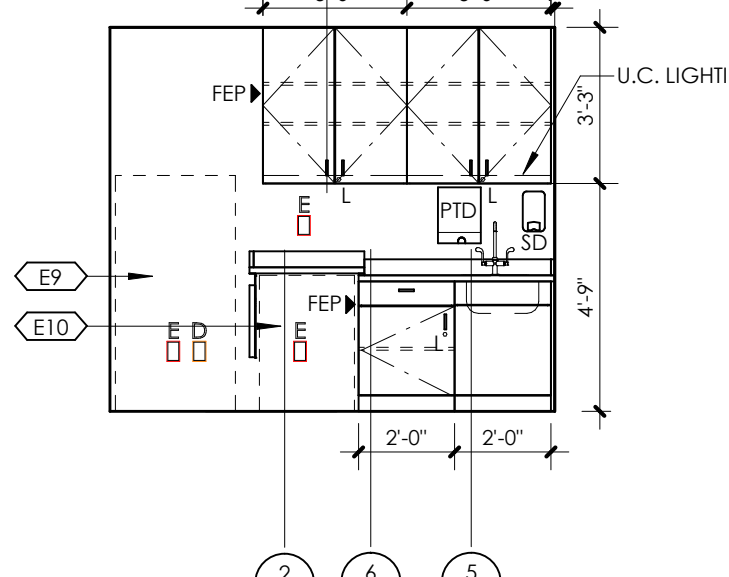
32 TYPICAL TREATMENT ROOM  
1/2" = 1'-0"



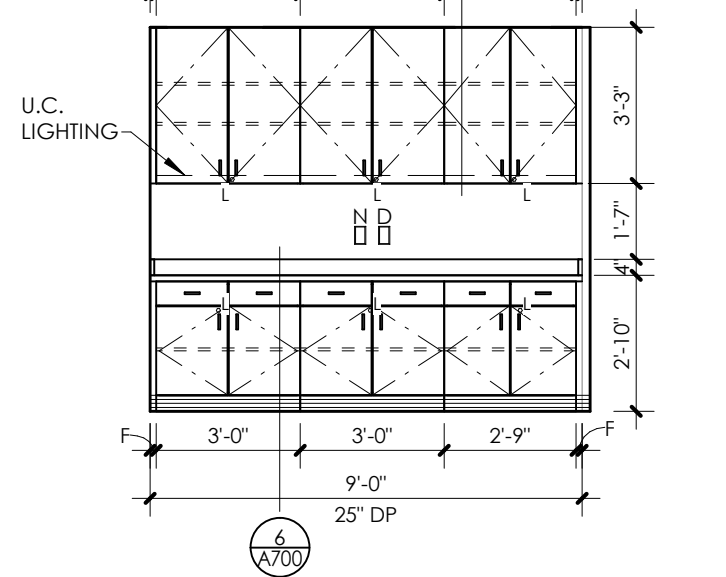
31 SOILED ROOM  
1/2" = 1'-0"



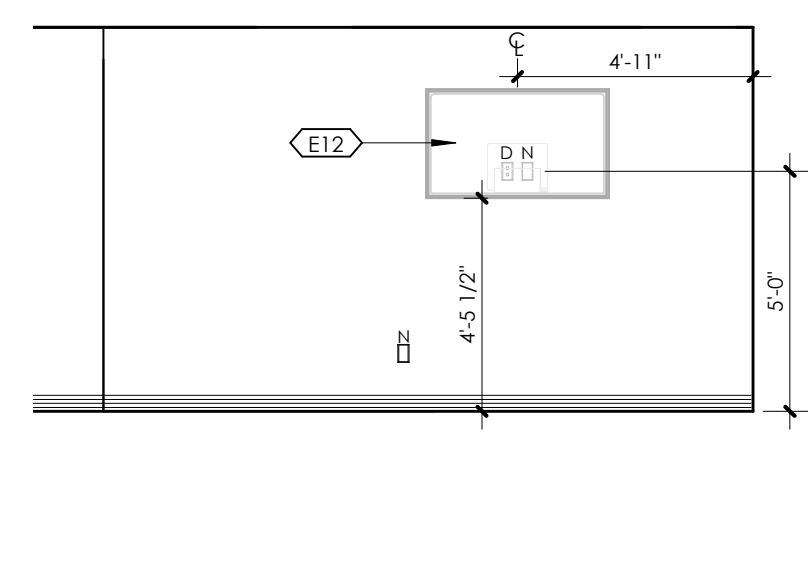
30 CLEAN  
1/4" = 1'-0"



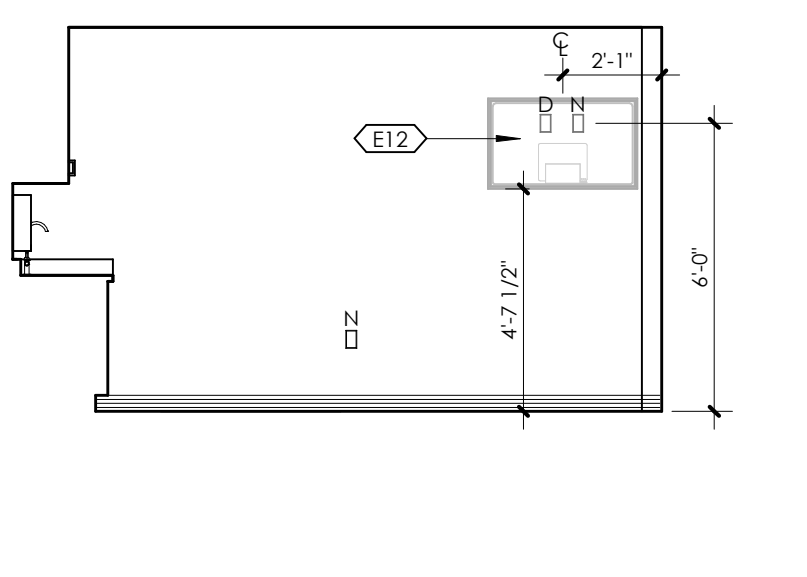
29 CBCU MED ROOM  
1/4" = 1'-0"



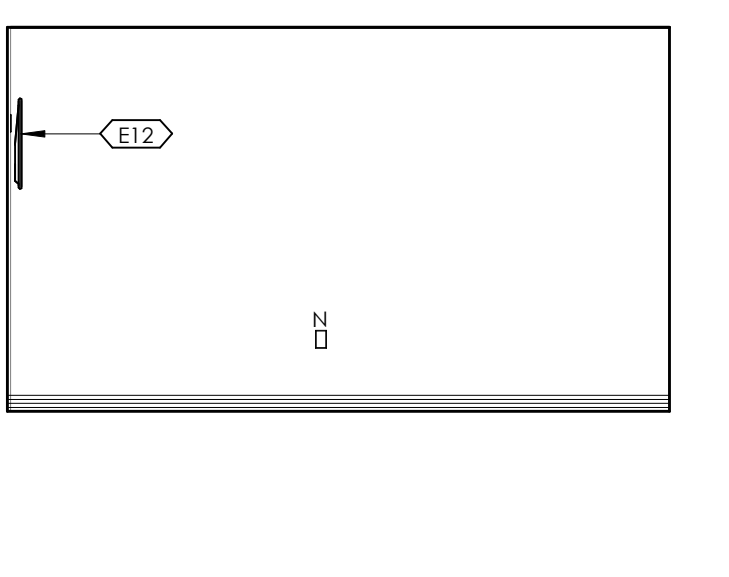
28 PLAYROOM  
1/4" = 1'-0"



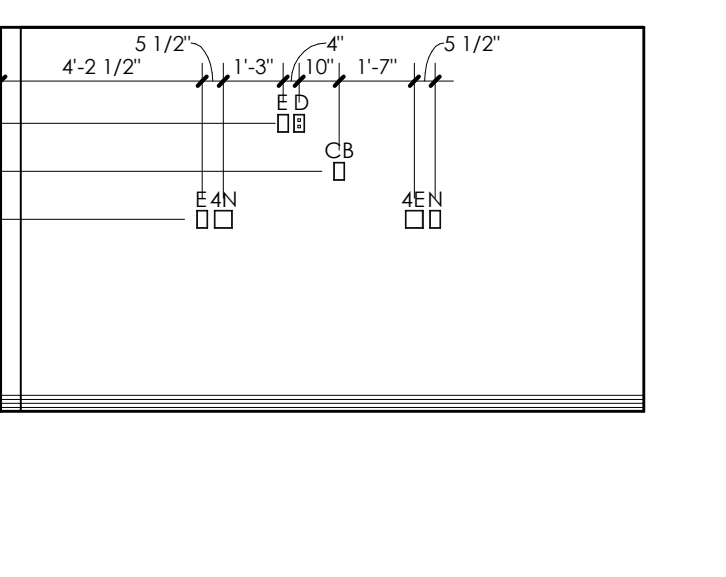
27 PLAYROOM  
1/4" = 1'-0"



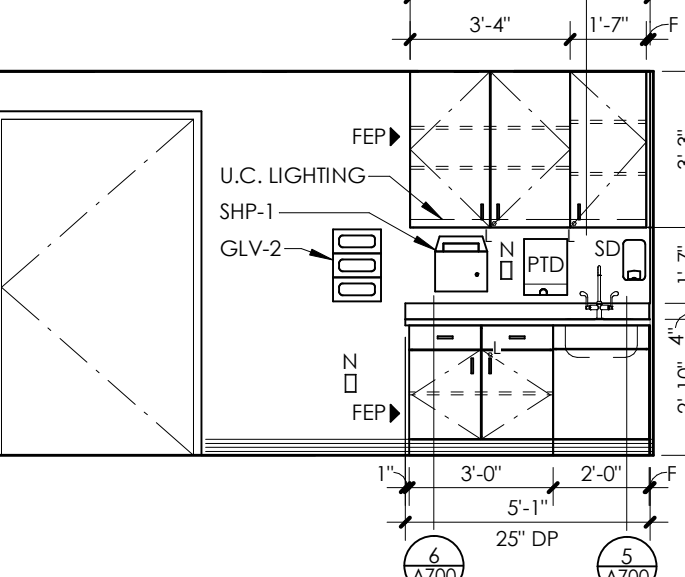
26 PROCEDURE ROOM  
1/4" = 1'-0"



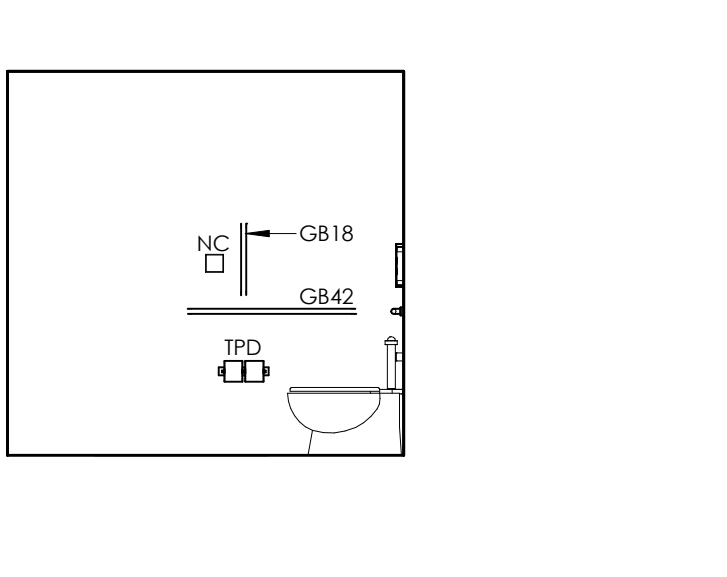
25 PROCEDURE ROOM  
1/4" = 1'-0"



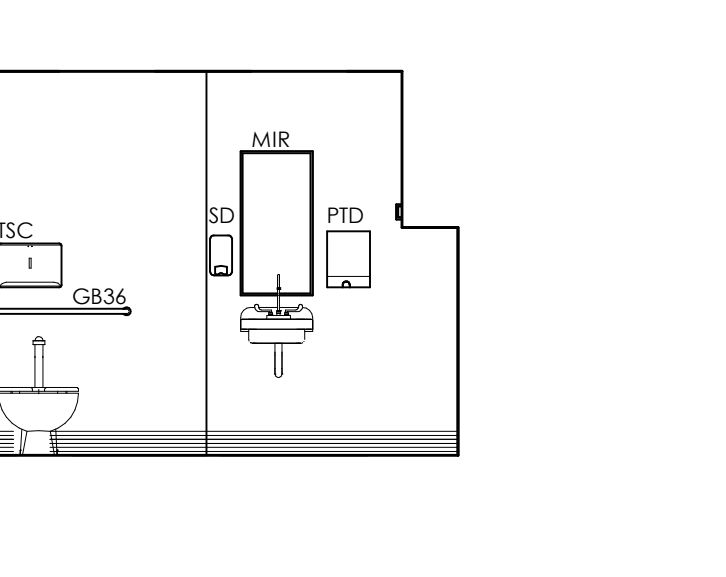
24 PROCEDURE ROOM  
1/4" = 1'-0"



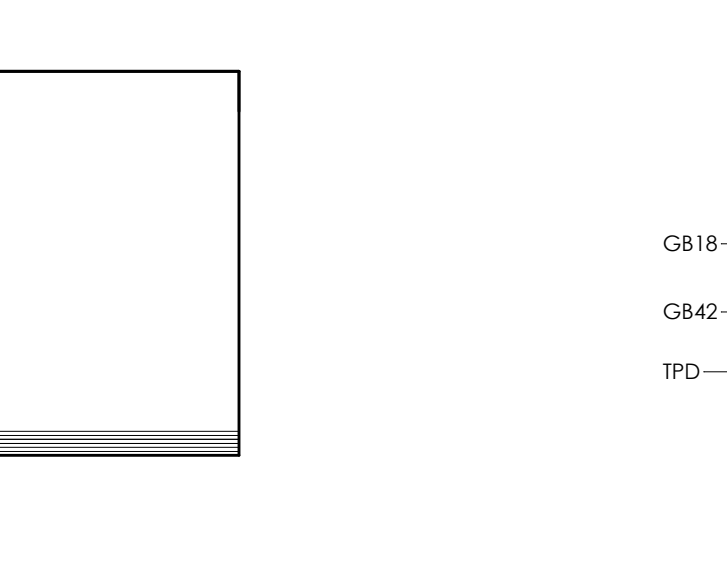
23 PROCEDURE ROOM  
1/4" = 1'-0"



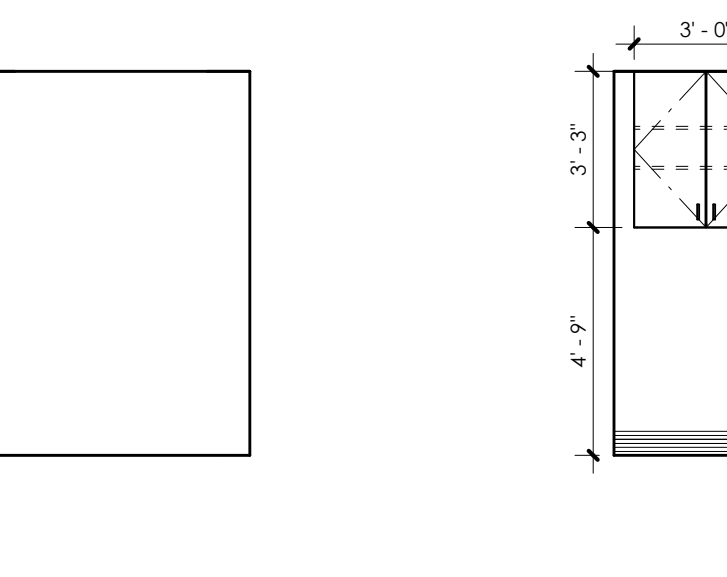
22 TOILET ROOM  
1/4" = 1'-0"



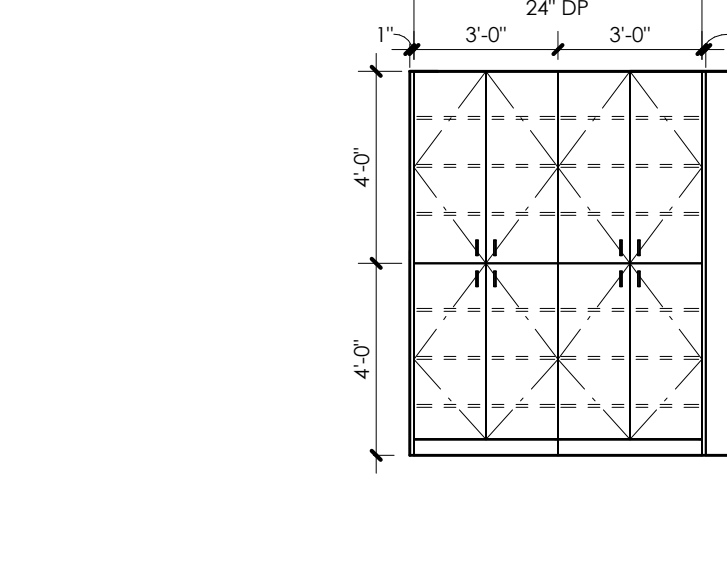
21 TOILET ROOM  
1/4" = 1'-0"



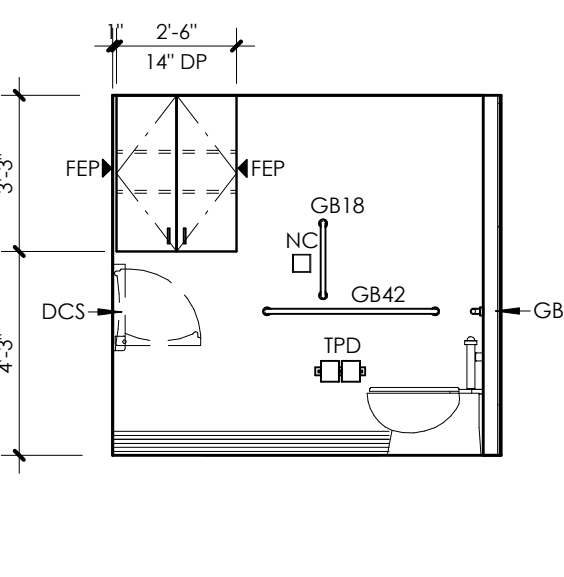
20 TOILET ROOM  
1/4" = 1'-0"



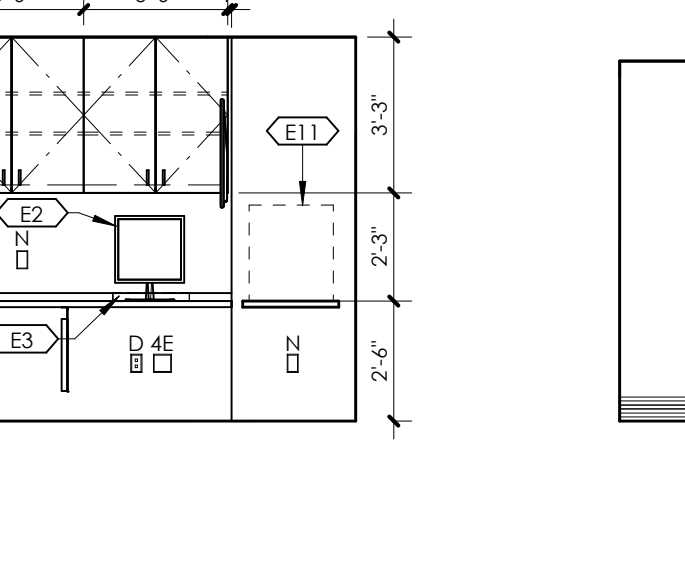
19 STORAGE HALLWAY  
1/4" = 1'-0"



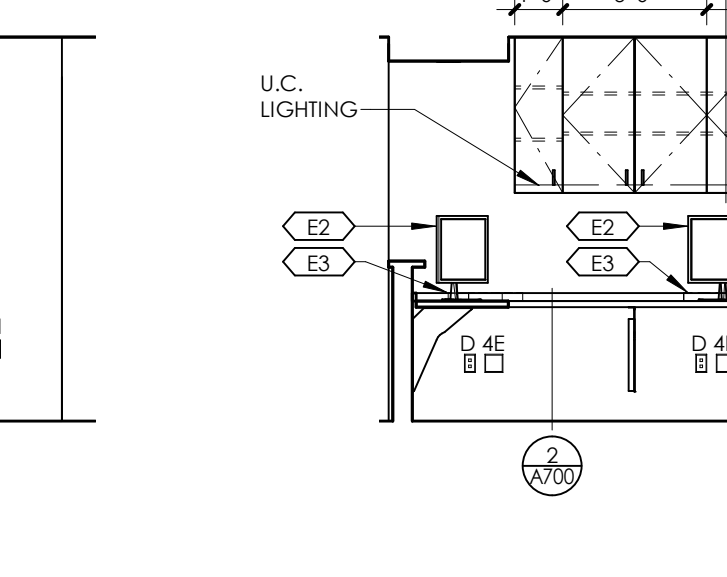
18 TOILET ROOM  
1/4" = 1'-0"



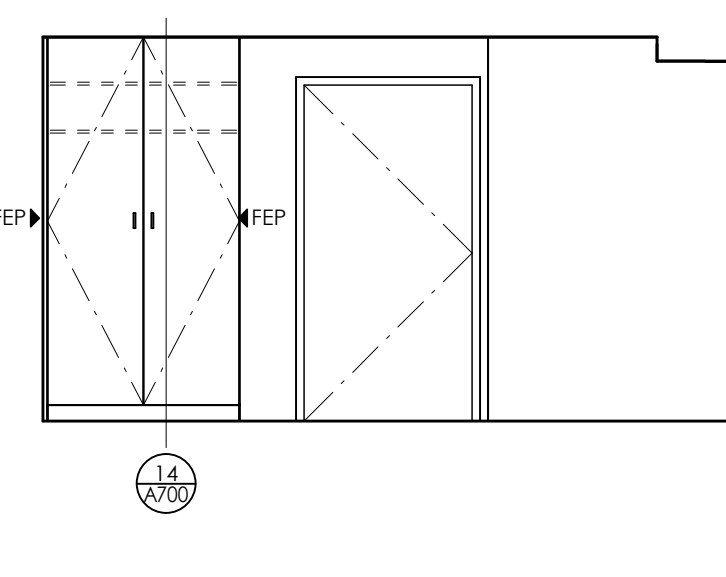
17 TOILET ROOM  
1/4" = 1'-0"



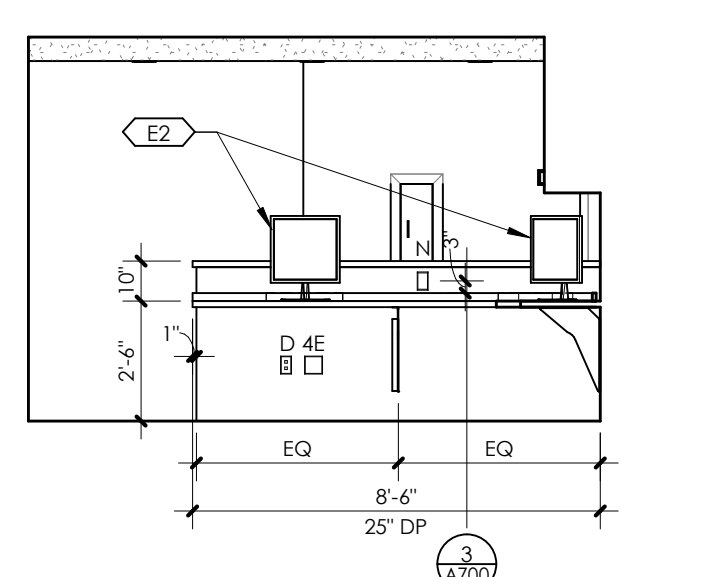
16 TOILET ROOM  
1/4" = 1'-0"



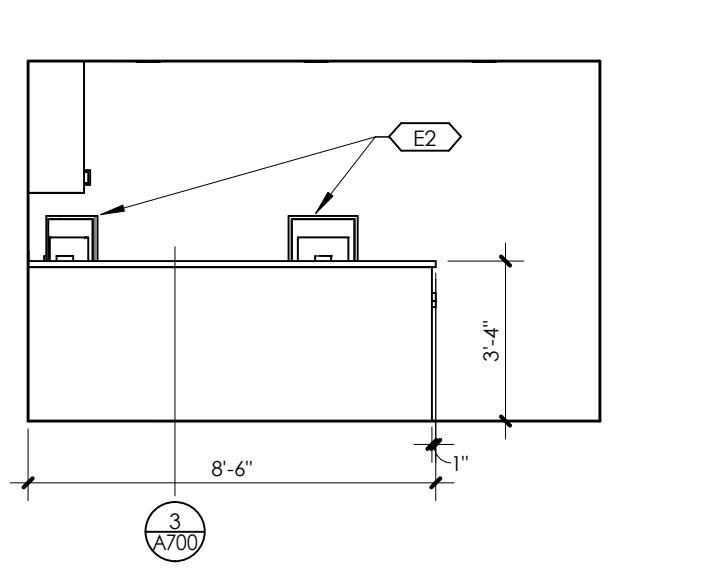
15 TOILET ROOM  
1/4" = 1'-0"



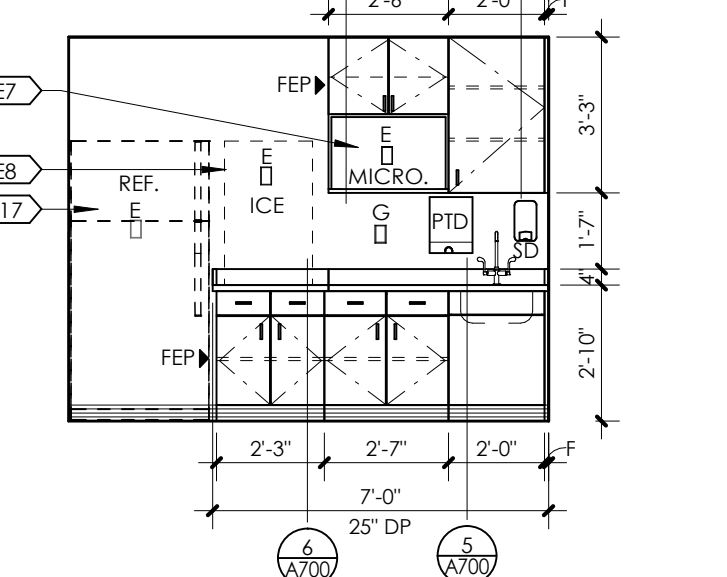
14 CBCU NURSE STATION  
1/4" = 1'-0"



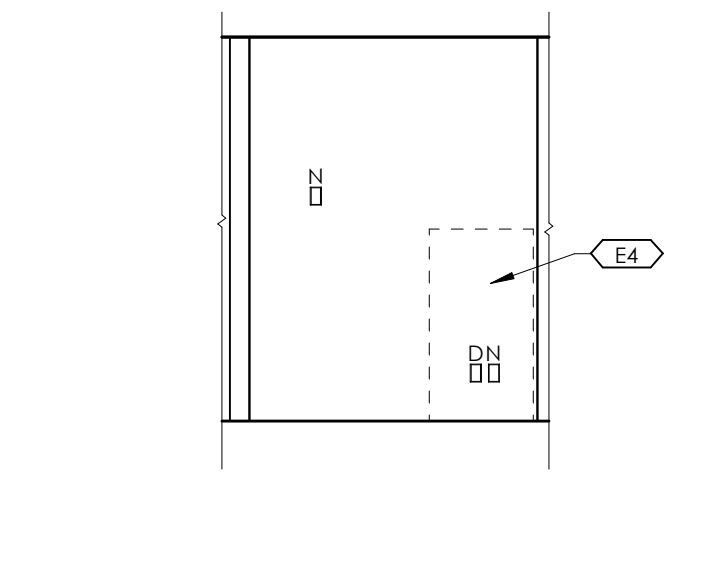
13 CBCU NURSE STATION  
1/4" = 1'-0"



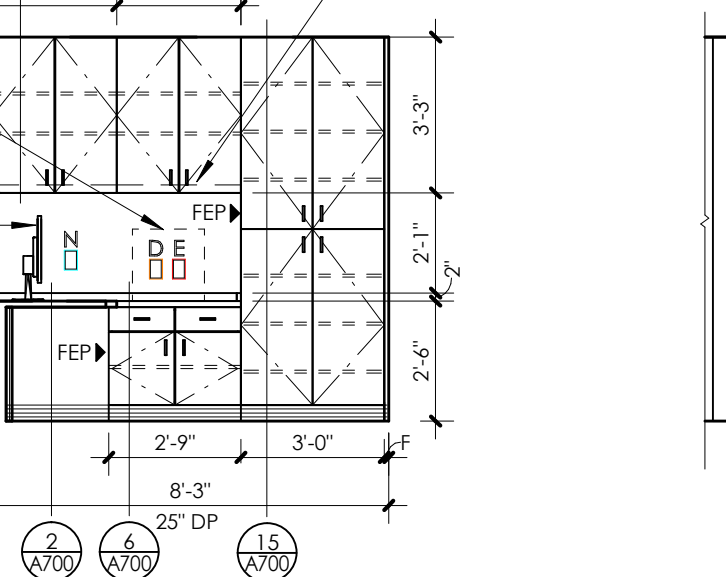
12 CBCU NURSE STATION  
1/4" = 1'-0"



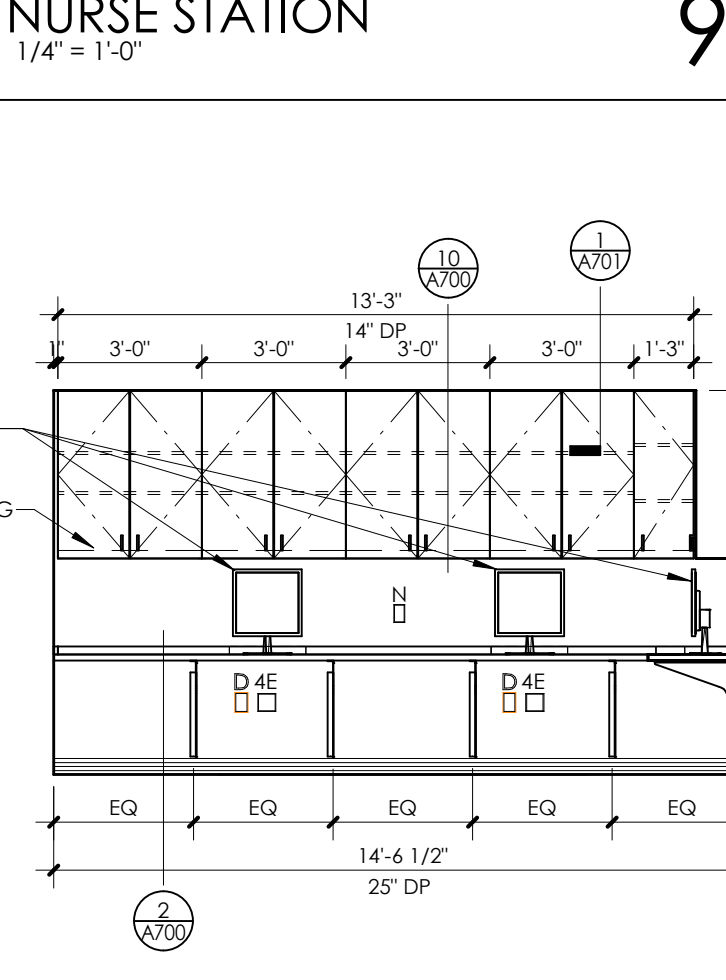
11 CBCU NURSE STATION  
1/4" = 1'-0"



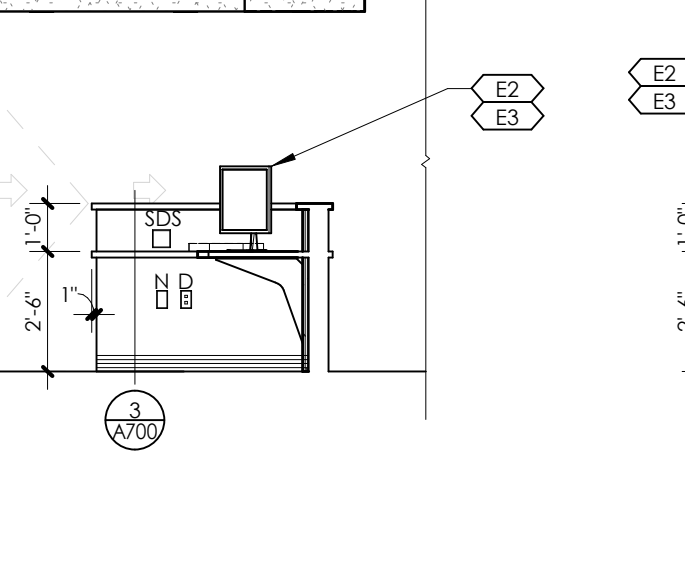
10 NOURISH STATION  
1/4" = 1'-0"



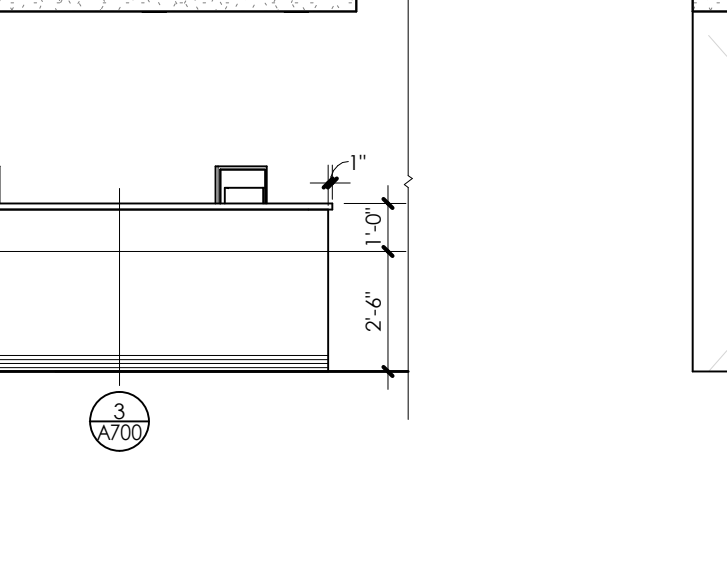
9 VITALS ALCOVE  
1/4" = 1'-0"



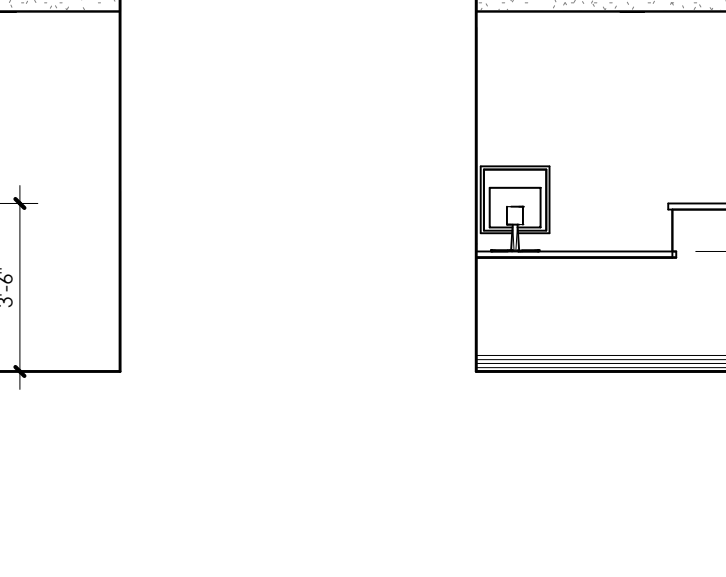
8 NURSE STATION  
1/4" = 1'-0"



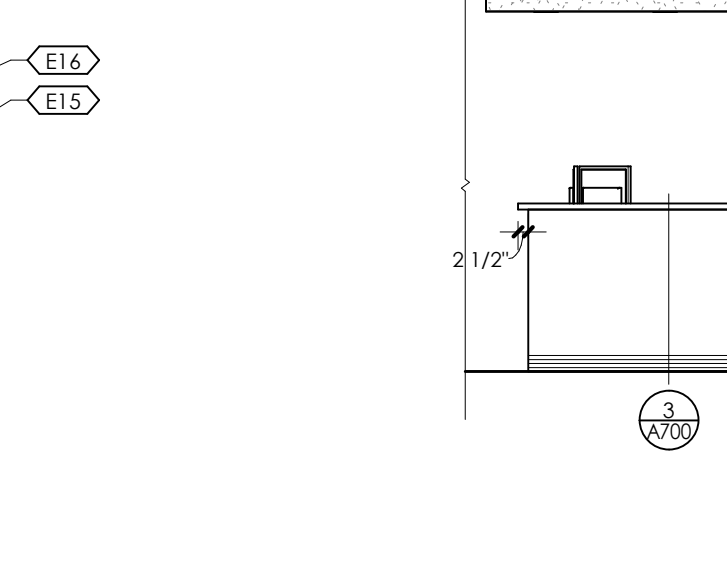
7 NURSE STATION  
1/4" = 1'-0"



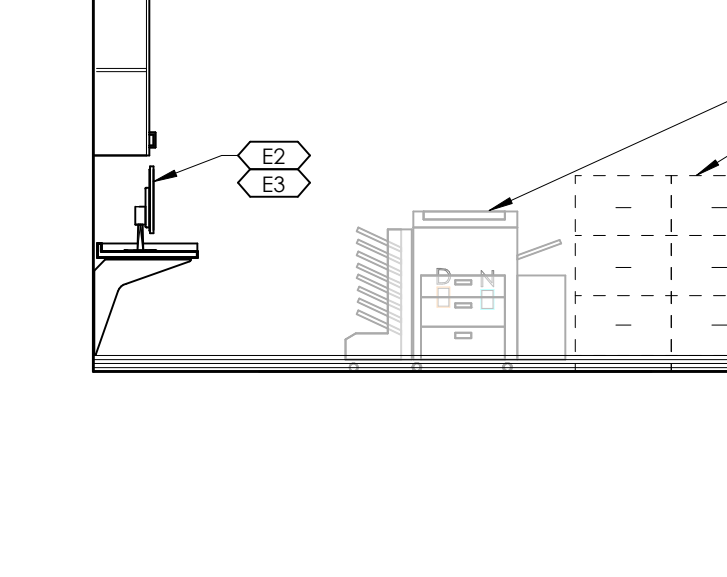
6 NURSE STATION  
1/4" = 1'-0"



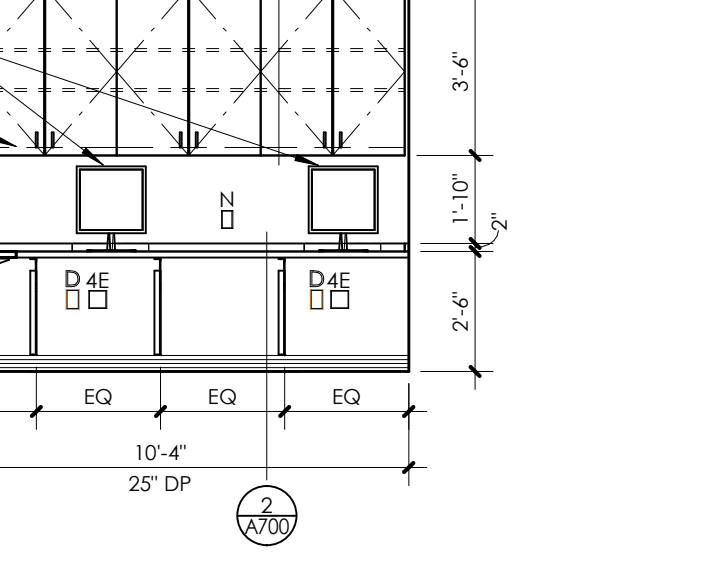
5 NURSE STATION  
1/4" = 1'-0"



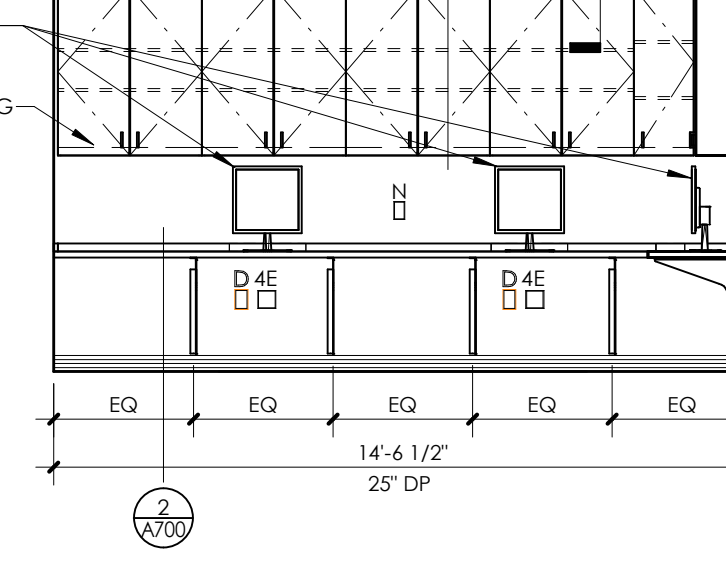
4 NURSE STATION  
1/4" = 1'-0"



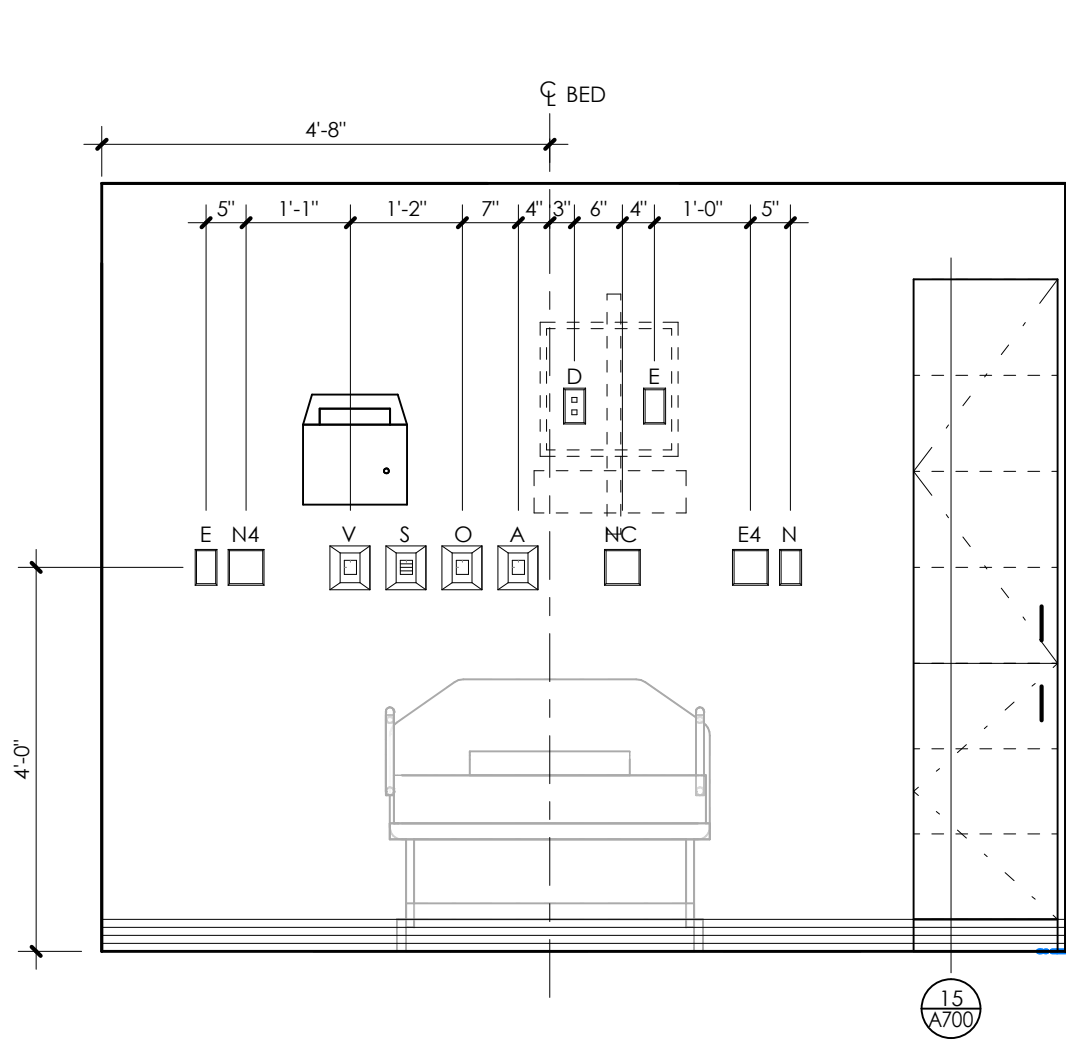
3 PHYSICIAN WORKROOM  
1/4" = 1'-0"



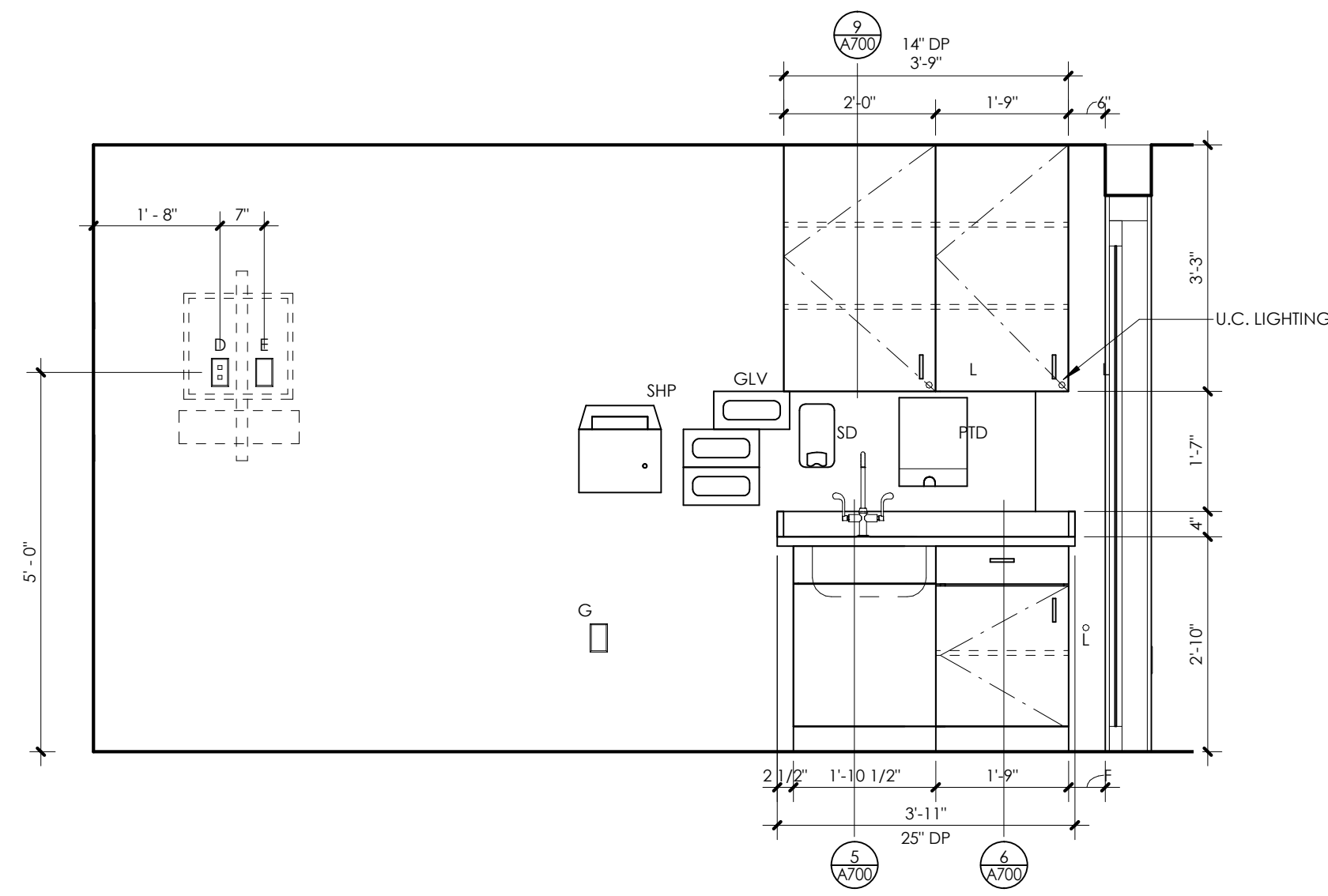
2 PHYSICIAN WORKROOM  
1/4" = 1'-0"



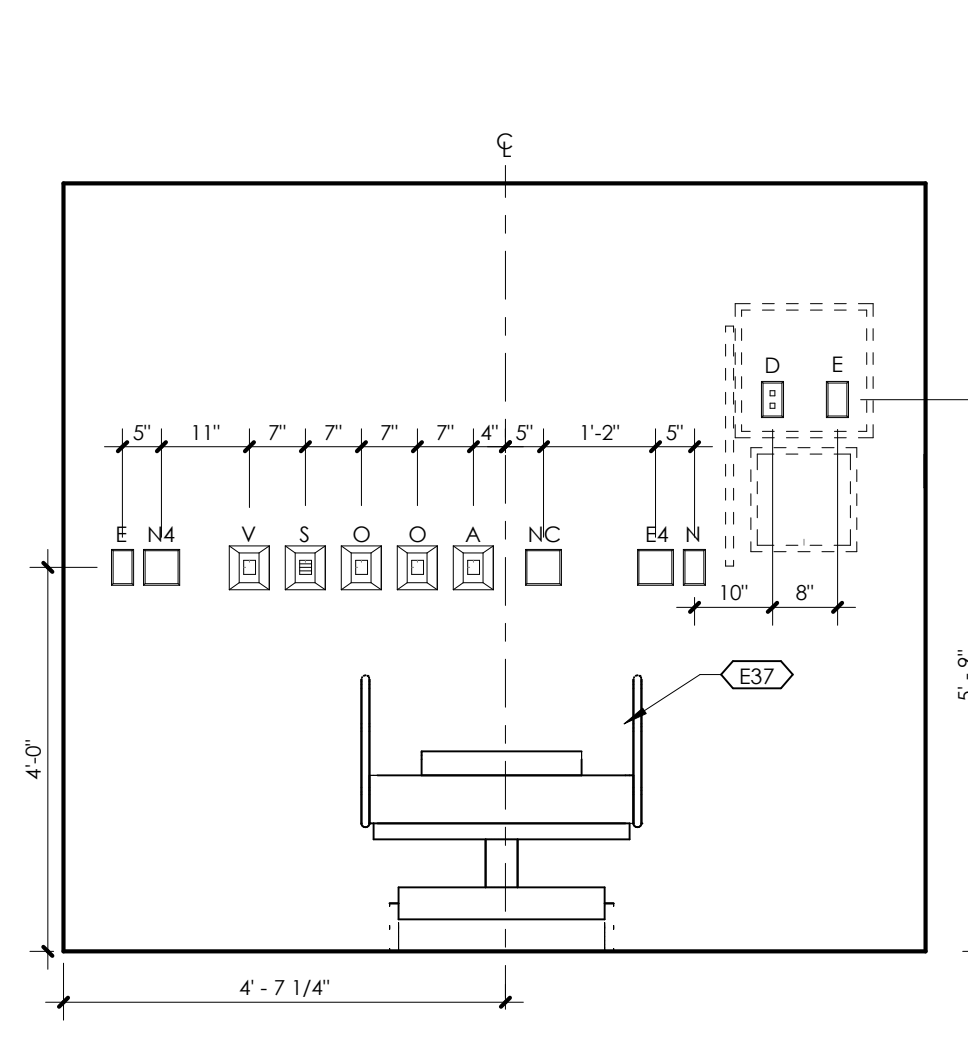
1 PHYSICIAN WORKROOM  
1/4" = 1'-0"



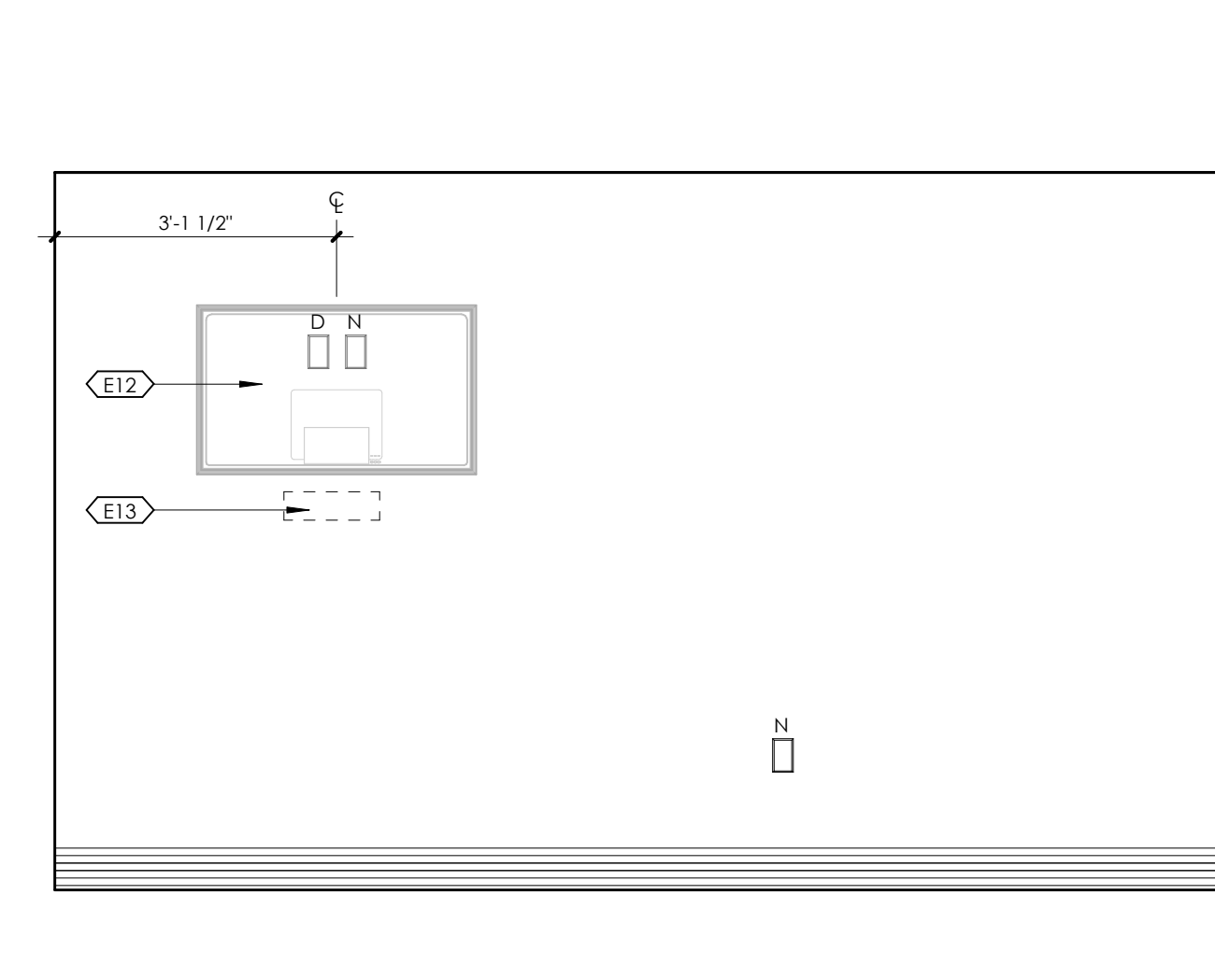
28 TYPICAL PRE/POST ROOM  
1/2" = 1'-0"



29 CHPS TREATMENT ROOM  
1/2" = 1'-0"



30 CHPS TREATMENT ROOM  
1/2" = 1'-0"



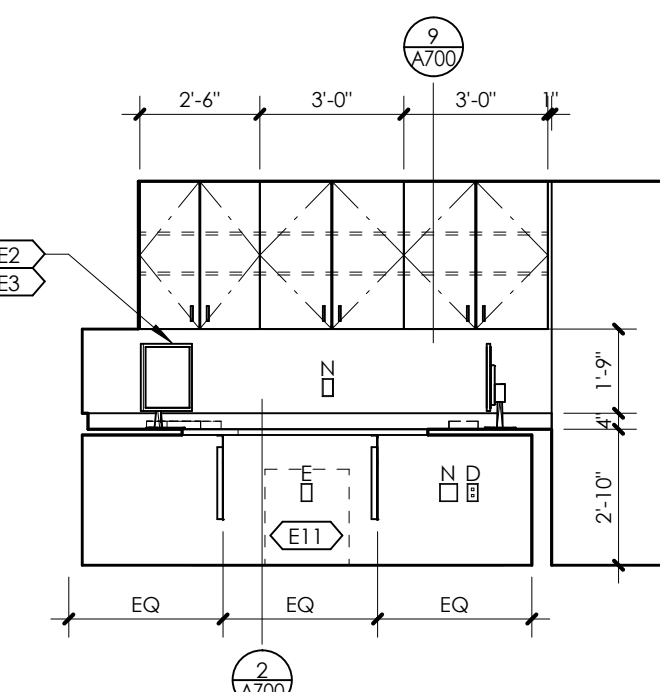
31 CHPS TREATMENT ROOM  
1/2" = 1'-0"

INTERIOR ELEVATION LEGEND

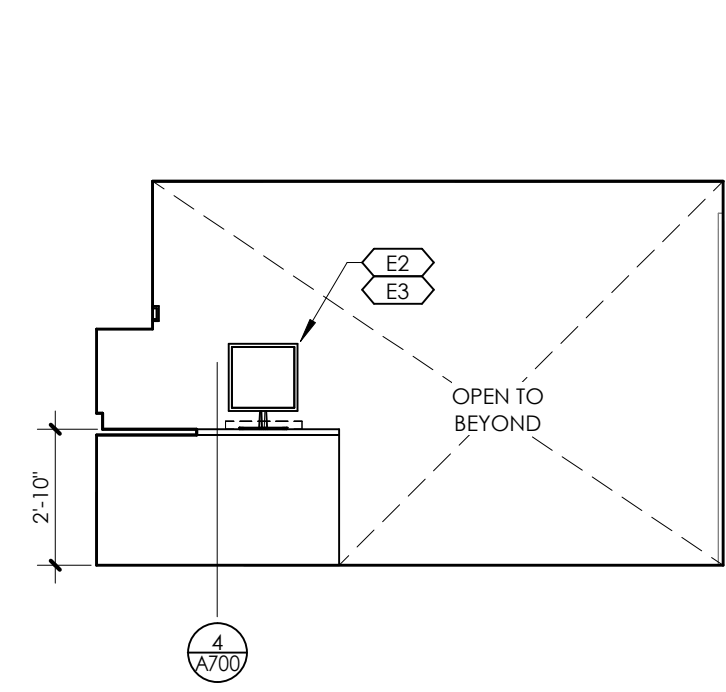
N	NORMAL DUPLEX, REMEP	N	EXISTING NORMAL DUPLEX
EM	EMERGENCY POWER DUPLEX, REMEP	EM	EXISTING EMERGENCY DUPLEX
4P	POWER 4-PLEX, REMEP	4P	EXISTING POWER 4-PLEX
D	DATA, REMEP	D	EXISTING DATA
GF	GROUND FAULT DUPLEX, REMEP	GF	MEDICAL AIR OUTLET, REMEP
L	LIGHT SWITCHES, REMEP	V	MEDICAL VAC OUTLET, REMEP
W	WATER, REMEP	O	OXYGEN OUTLET, REMEP
FE	FINISHED END PANEL	S	SLIDE, REMEP
CL	CASEWORK LOCK	CB	CODE BLUE, REMEP
T	THERMOSTAT, REMEP	NC	NURSE CALL, REMEP
F	FIRE ALARM PULL REMEP	SA	STAFF ASSIST, REMEP
FS	FIRE STROBE, REMEP	SS	STAFF DUTY STATION, REMEP
DL	DOME LIGHT, REMEP	CR	CARD READER, REMEP
EL	EMERGENCY LIGHT, REMEP	DA	DOOR ACTUATOR, REMEP

GENERAL INTERIOR ELEVATION NOTES

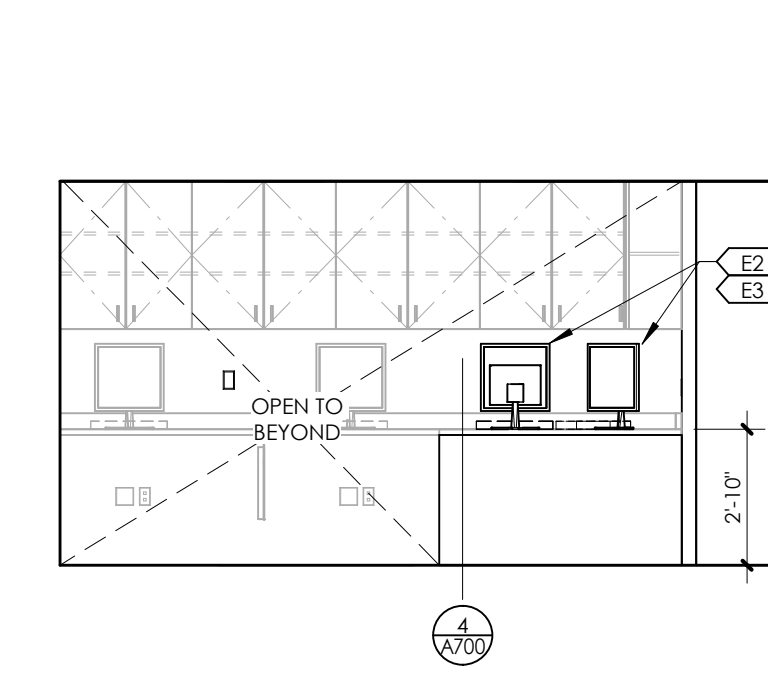
- PROVIDE E1, WOOD BLOCKING AS REQUIRED FOR EQUIPMENT. COORDINATE SIZE AND LOCATION WITH OWNER.
- 1/2" RADIUS ON ALL OUTSIDE CORNERS OF COUNTERTOPS & MICROWAVE SHELVES. TYP.
- ALL EXPOSED ENDS OF CABINETS TO BE FINISHED. TYP.
- ALL UNDERSIDES OF ALL UPPER CABINETS TO BE FINISHED. TYP.
- ALL SHELVES EQUAL TO OR GREATER THAN 3/8" SHALL BE 1" THICK.
- ALL FULL HEIGHT CABINET DOORS SHALL BE 1" W/ BALANCED BACKING SHEET. TYP.
- ALL ELECTRICAL, MECHANICAL, AND PLUMBING ITEMS ARE FOR REFERENCE AND LOCATION ONLY. REFER TO MEP DRAWINGS FOR SIZES, TYPES, AND EXACT QUANTITIES.
- DIMENSIONS FOR MEP ITEMS ARE TO CENTERLINE OF COVERLATE OR CENTER OF OPERABLE MECHANISM. TYP.
- ALL EDGES OF PLAM COUNTERTOPS TO BE A PVC EDGE UNLESS OTHERWISE NOTED.
- ALL END PANELS OF CASEWORK ARE TO BE FINISHED. TYP.
- PROVIDE METAL SUPPORT BRACKETS @ 36" O.C. MAX. UNDER UNSUPPORTED PLASTIC LAMINATE COUNTERTOPS, COLOR: ALUMINUM.
- PROVIDE GROMMETS IN COUNTERTOPS AT EACH COMPUTER/EQUIPMENT FOR ACCESS TO OUTLETS BELOW. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION.
- REFER TO INSTALLATION GUIDELINES/COVER FOR TYPICAL INSTALLATION GUIDELINES & MOUNTING HEIGHTS.
- G.C. TO COORDINATE WITH OWNER FINAL LOCATIONS OF ALL CARD READERS (CR).
- ALL BASE CABINETS THAT ARE NOTED TO BE 20" DP. ON ELEVATIONS SHALL BE 24" FROM WALL TO FRONT OF CABINET DOOR. 25" TO EDGE OF COUNTERTOP. TYP.
- CORNER GUARD. OPCR. INSTALLATION WILL NEED TO BE IN SEQUENCE WITH THE WALL BASE. GC. TO COORDINATE WITH OWNER.



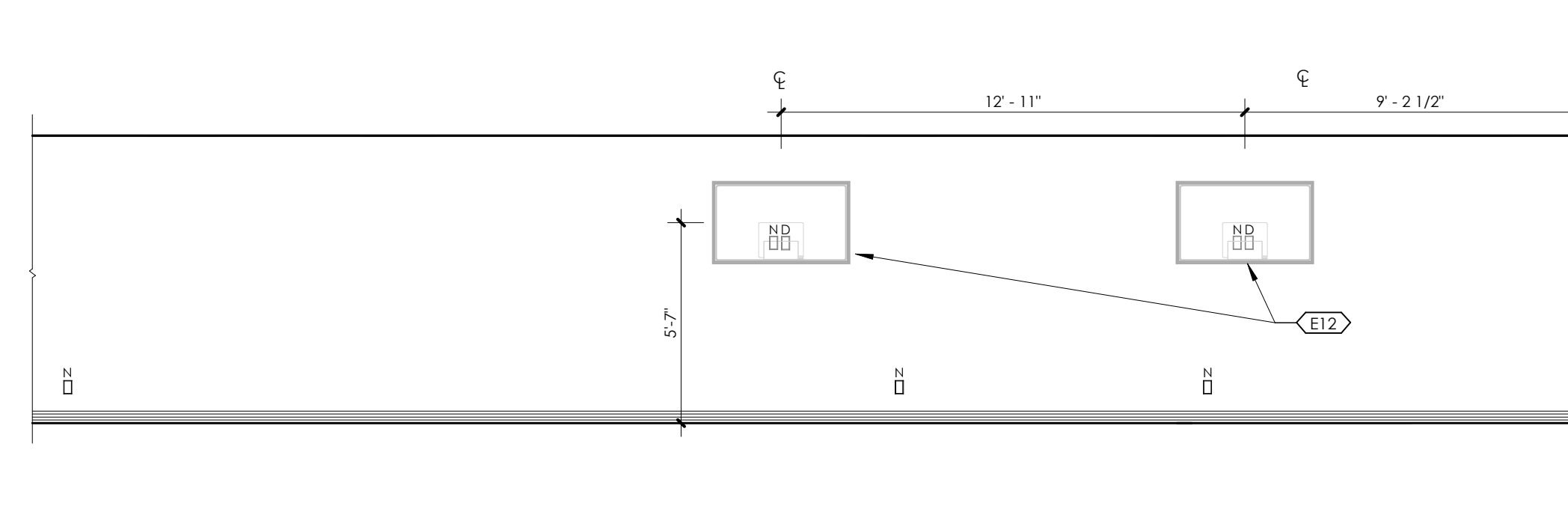
24 CHPS NURSE STATION  
1/4" = 1'-0"



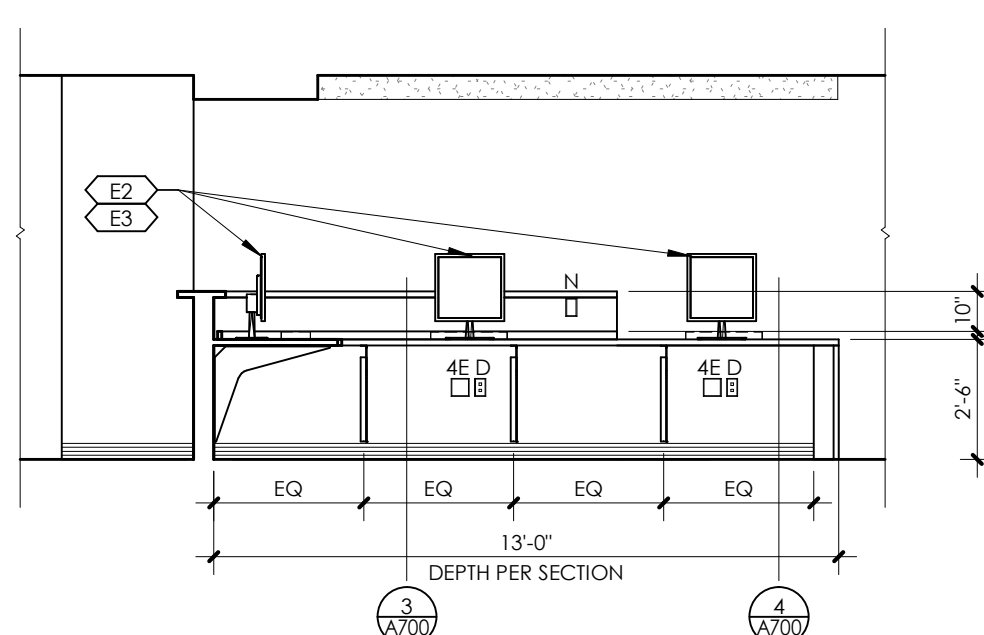
25 CHPS NURSE STATION  
1/4" = 1'-0"



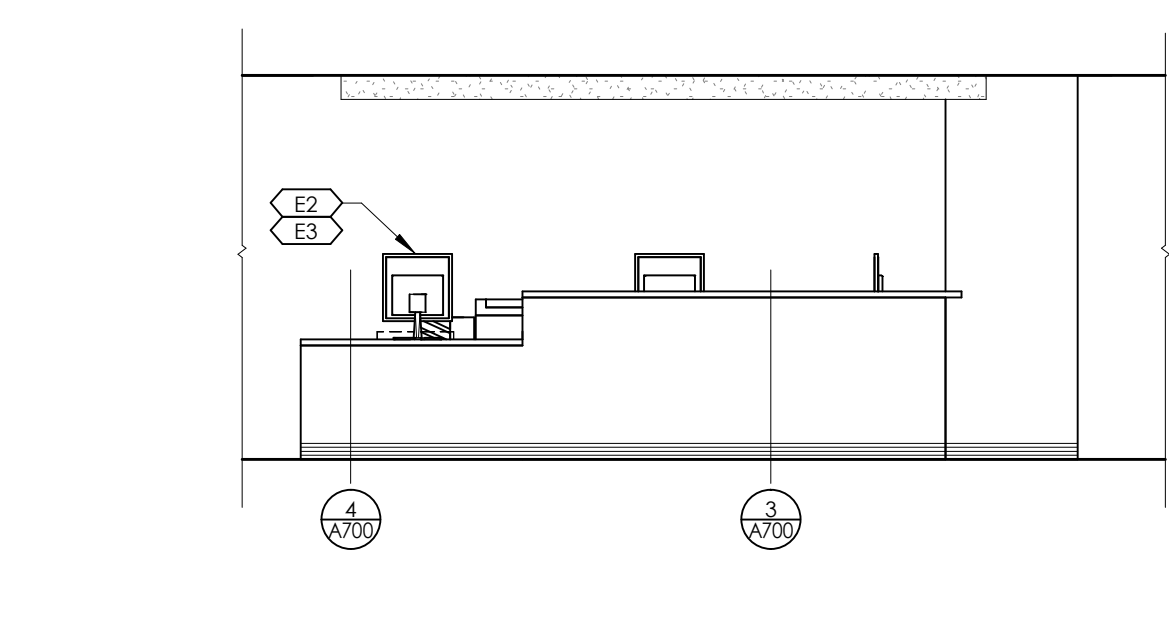
26 CHPS NURSE STATION  
1/4" = 1'-0"



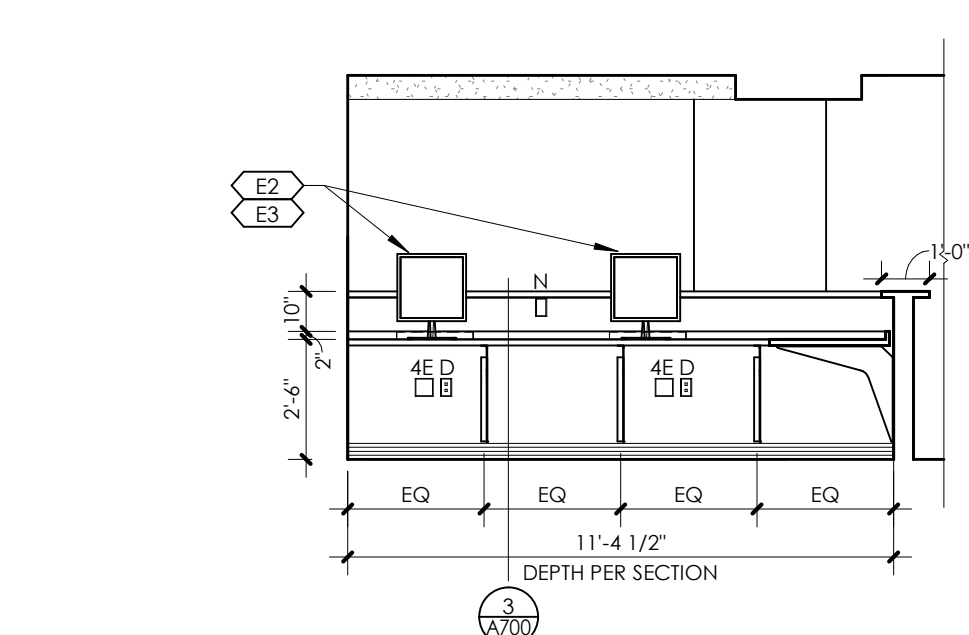
27 WAITING ROOM  
1/4" = 1'-0"



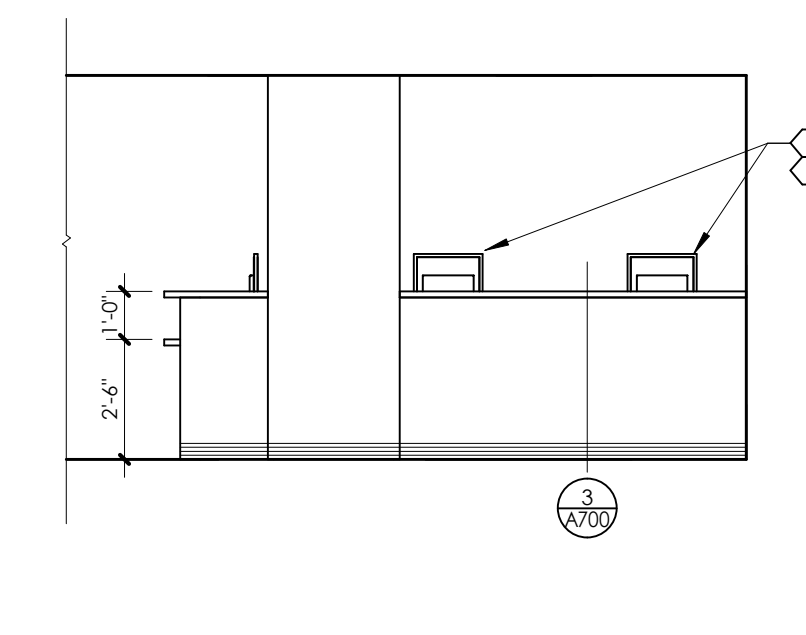
18 REGISTRATION  
1/4" = 1'-0"



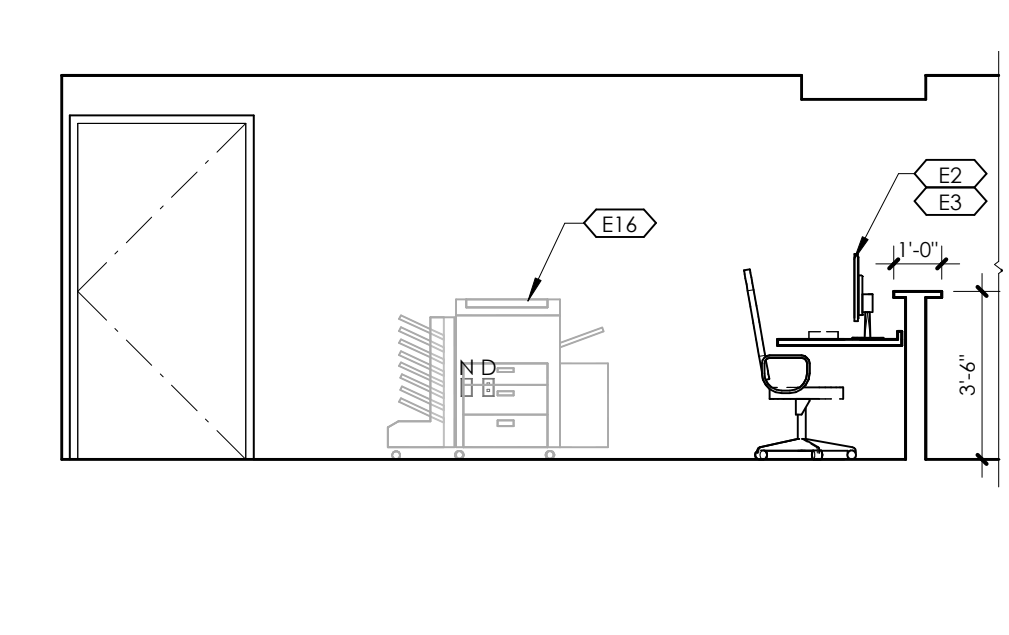
19 REGISTRATION  
1/4" = 1'-0"



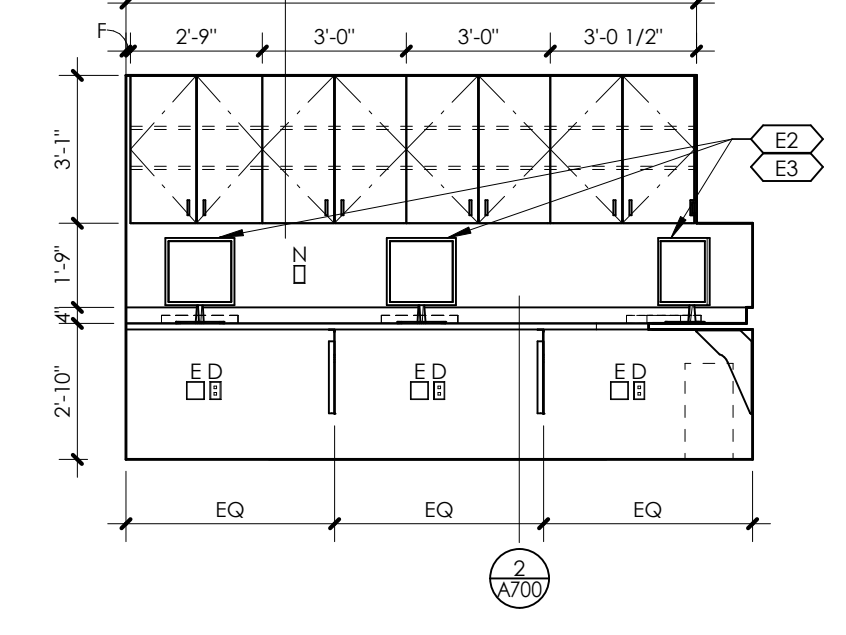
20 REGISTRATION  
1/4" = 1'-0"



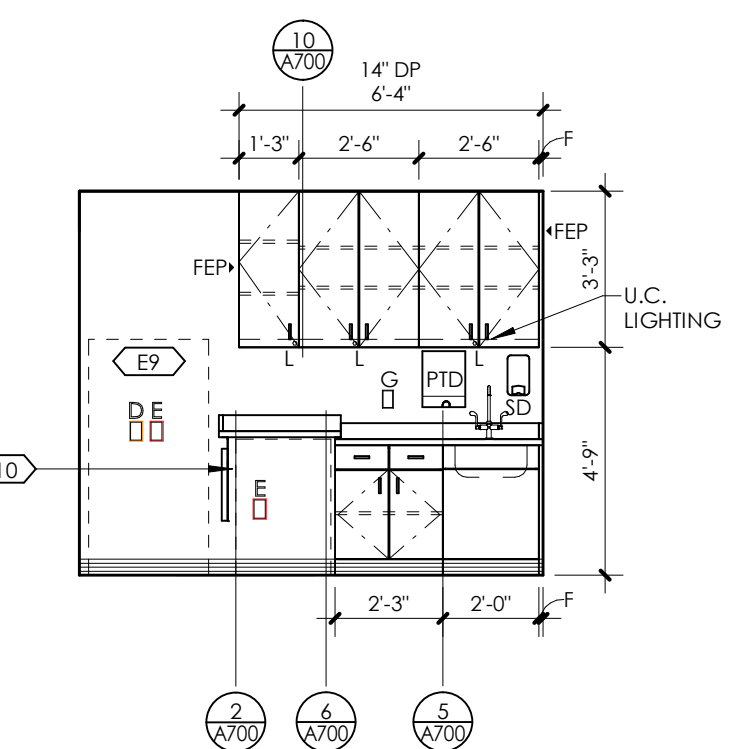
21 REGISTRATION  
1/4" = 1'-0"



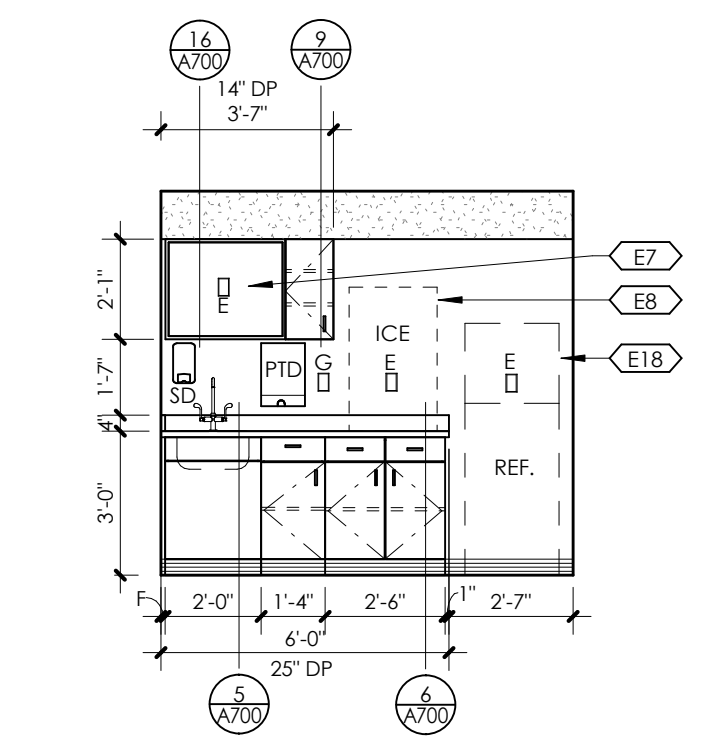
22 REGISTRATION  
1/4" = 1'-0"



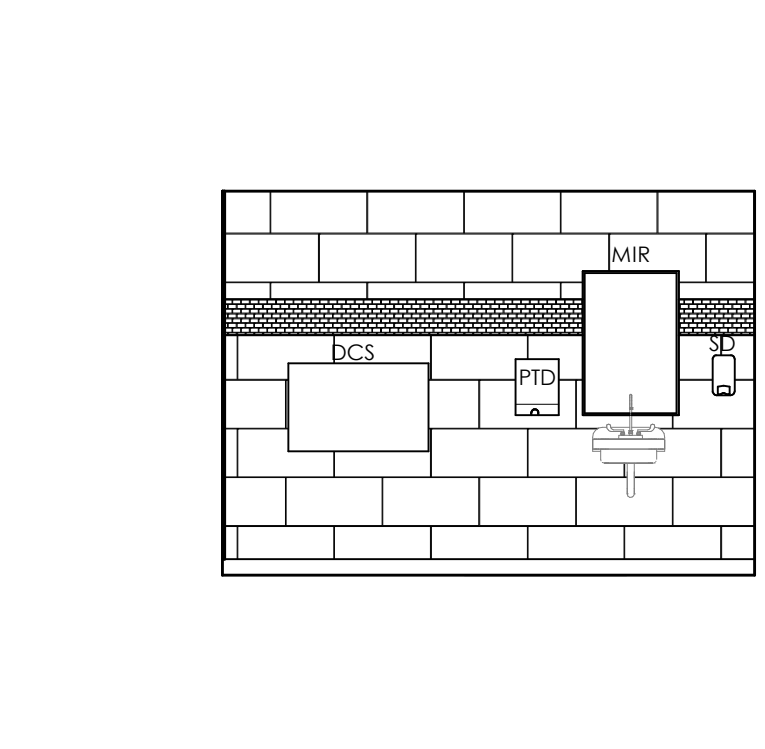
23 CHPS NURSE STATION  
1/4" = 1'-0"



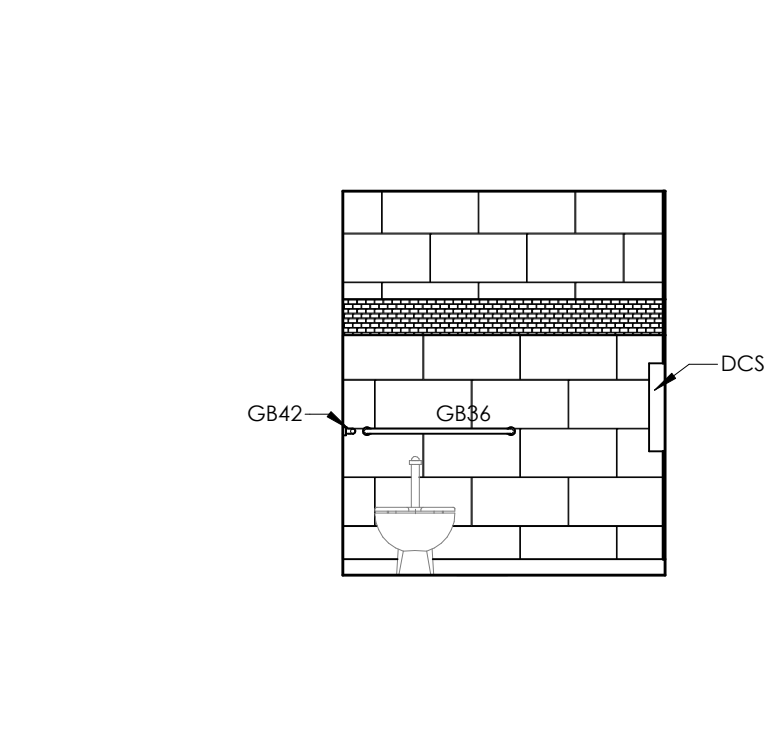
9 MEDS  
1/4" = 1'-0"



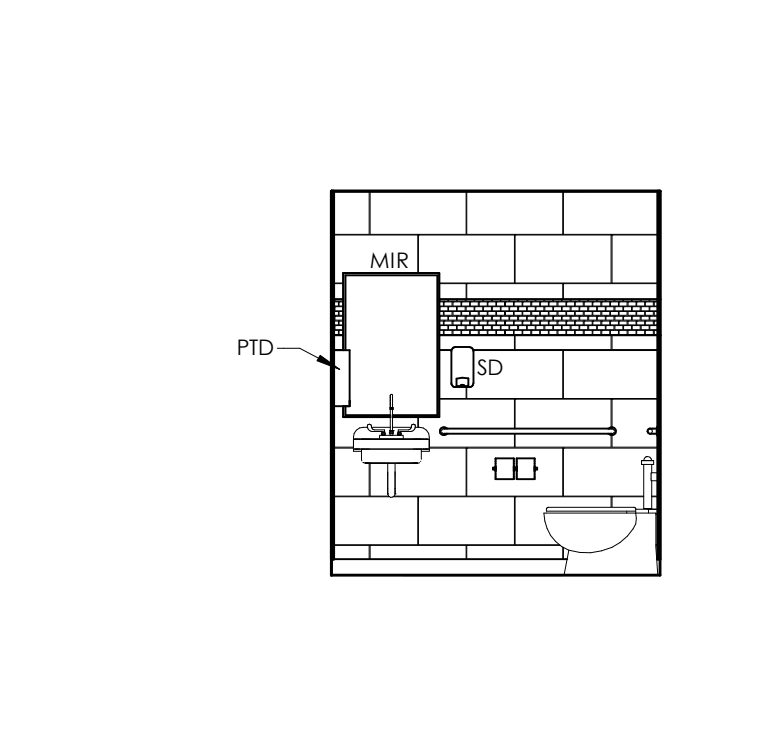
10 NOURISH STATION  
1/4" = 1'-0"



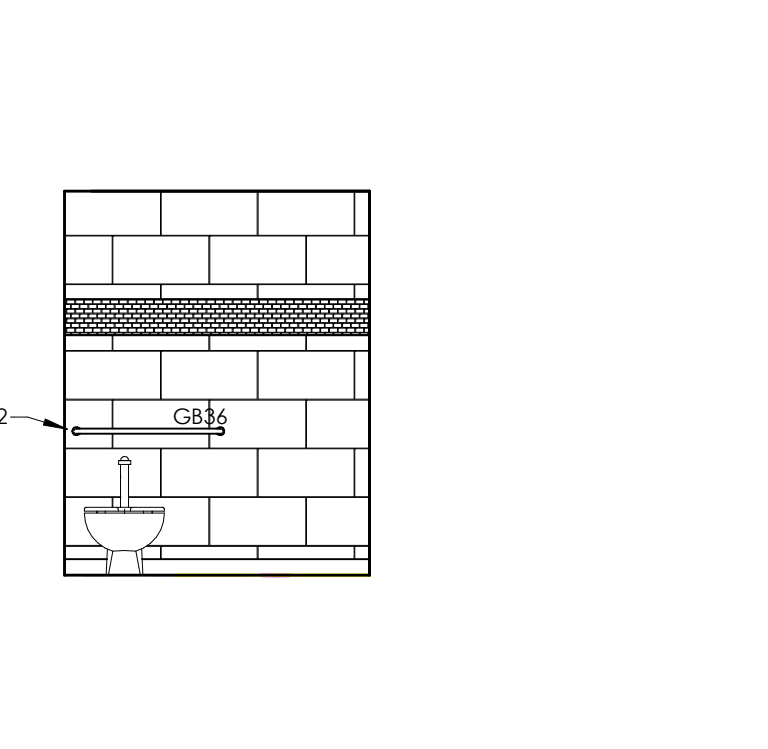
11 CHPS TOILET  
1/4" = 1'-0"



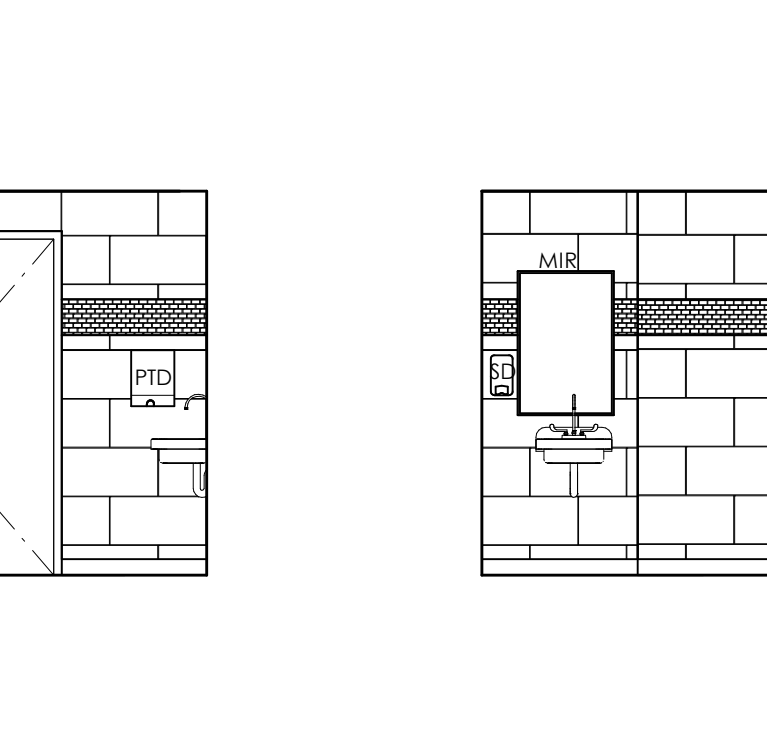
12 CHPS TOILET  
1/4" = 1'-0"



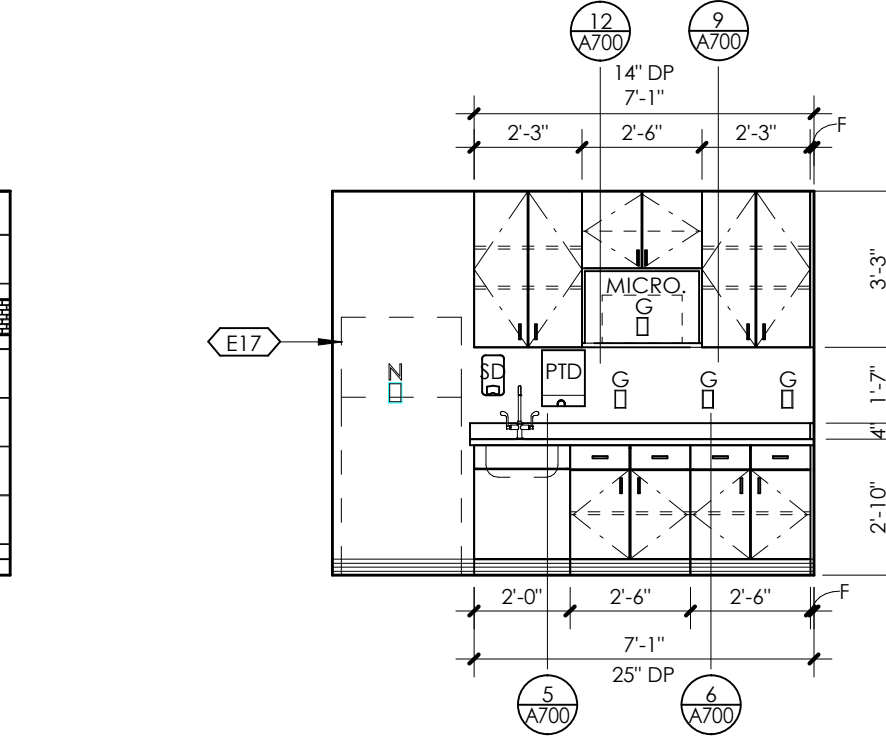
13 GI TOILET  
1/4" = 1'-0"



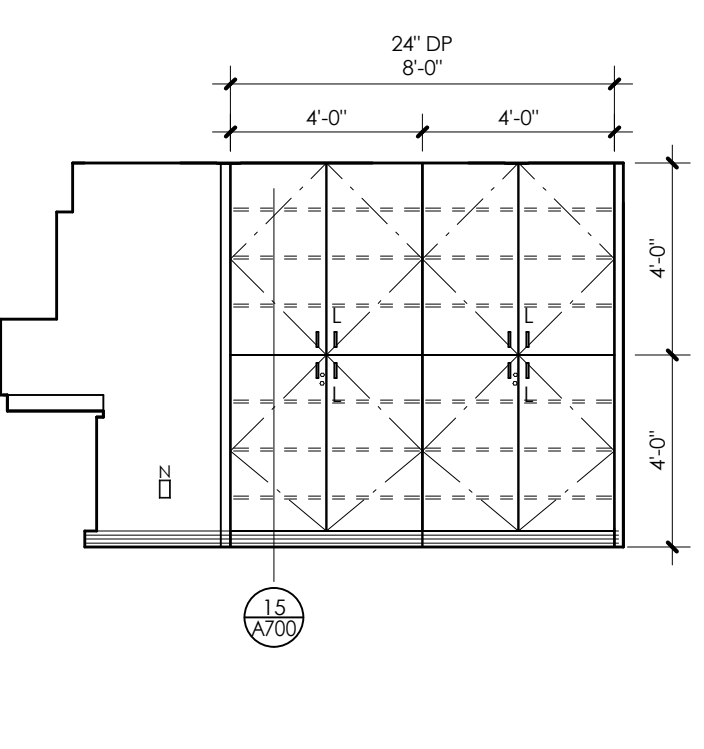
14 GI TOILET  
1/4" = 1'-0"



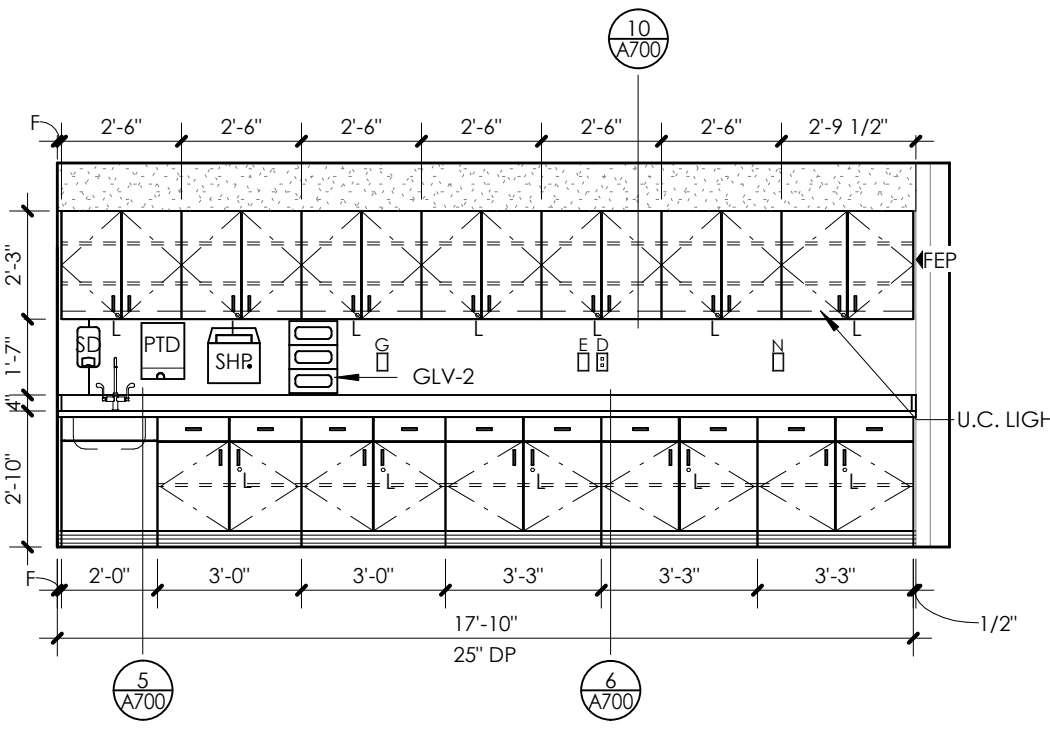
15 GI TOILET  
1/4" = 1'-0"



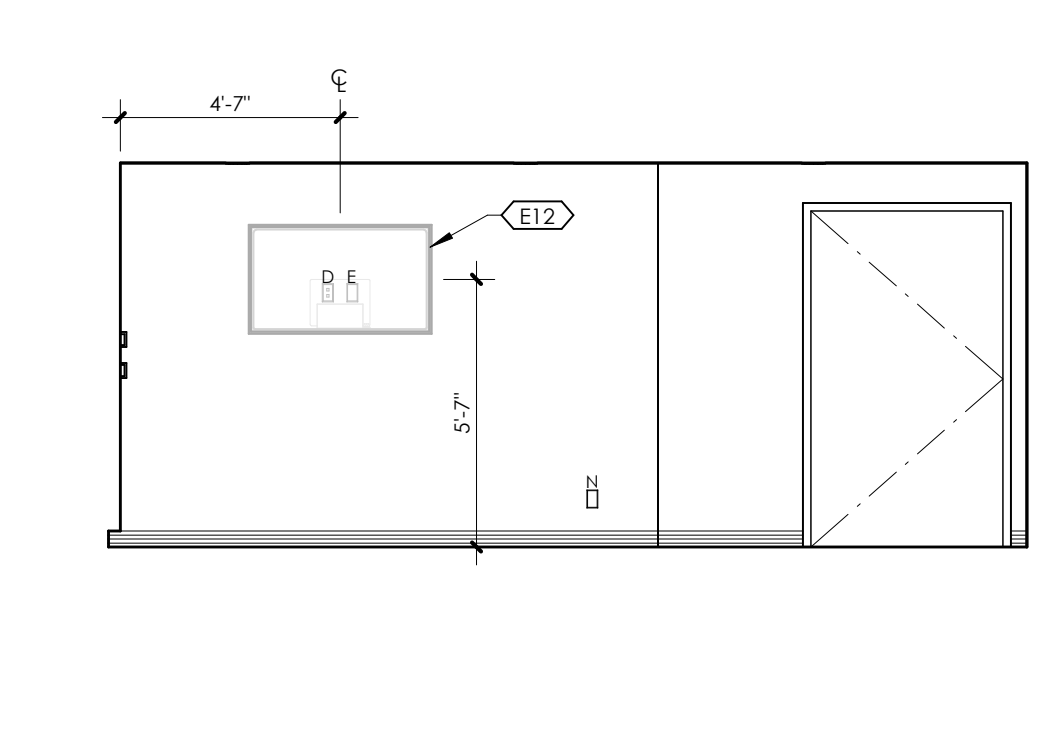
17 BREAKROOM  
1/4" = 1'-0"



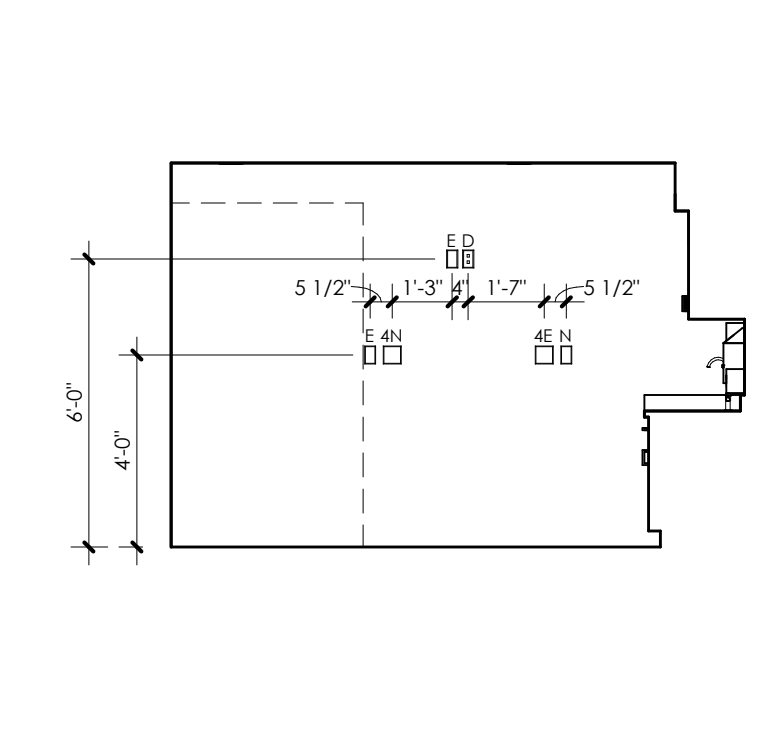
1 PROCEDURE ROOM  
1/4" = 1'-0"



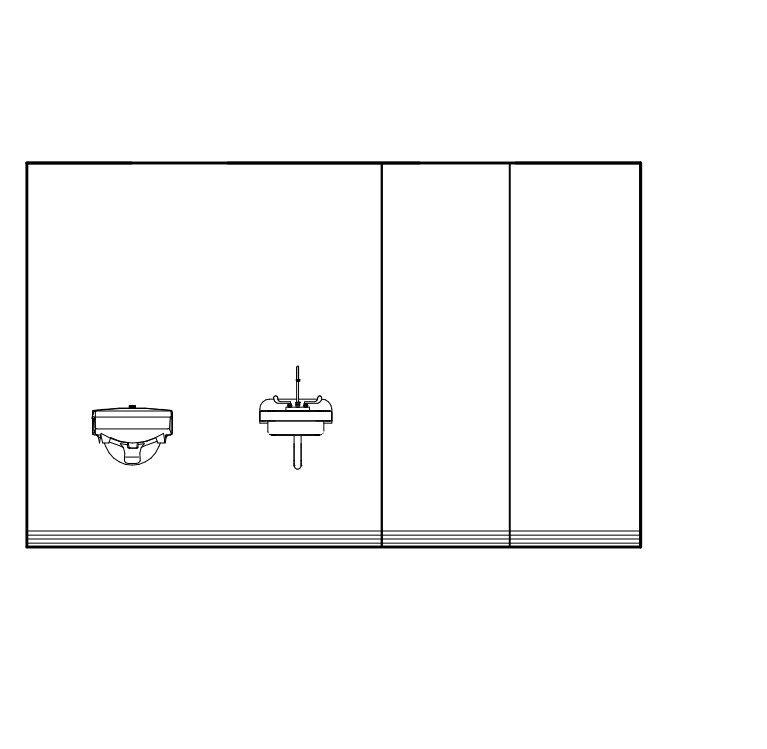
2 PROCEDURE ROOM  
1/4" = 1'-0"



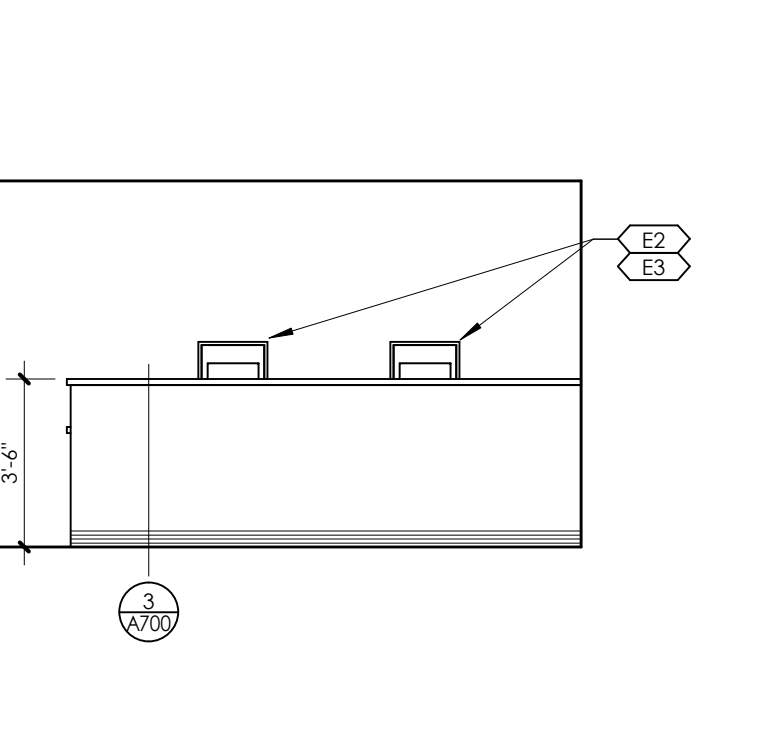
3 PROCEDURE ROOM  
1/4" = 1'-0"



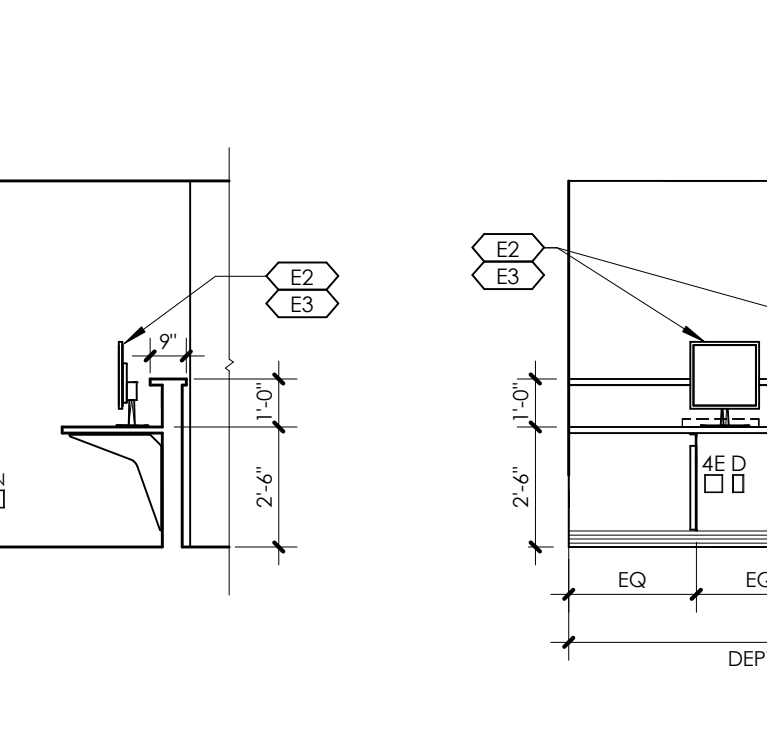
4 PROCEDURE ROOM  
1/4" = 1'-0"



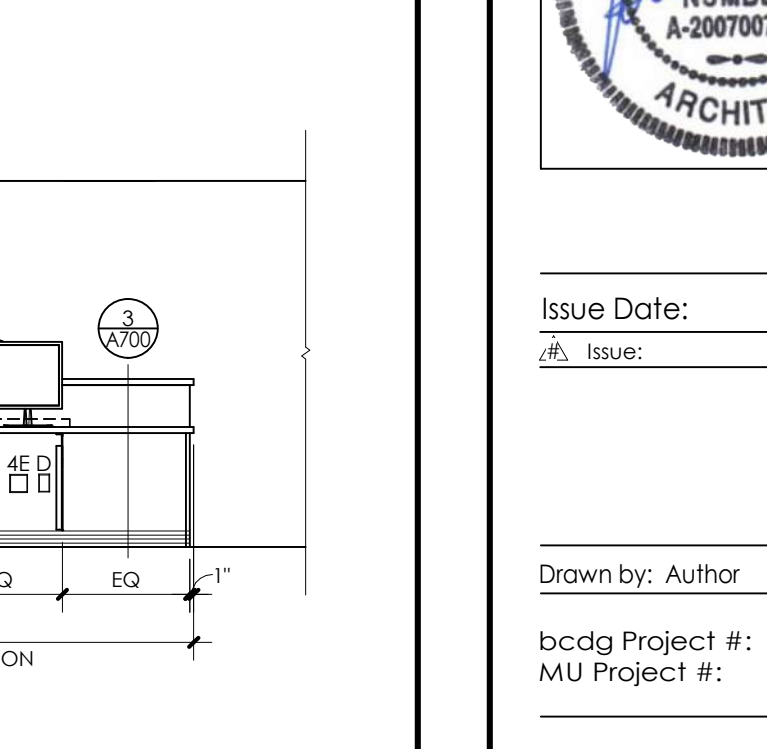
5 SOILED ROOM  
1/4" = 1'-0"



6 NURSE STATION  
1/4" = 1'-0"



7 NURSE STATION  
1/4" = 1'-0"



8 NURSE STATION  
1/4" = 1'-0"



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201103729

Project Team:  
ROSS & BARUZZINI, INC.  
6 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
Kansas City, MO 64111

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020  
Issue: \_\_\_\_\_ Date: \_\_\_\_\_

Drawn by: Author  
bcgd Project #: 12275.43  
MU Project #: CP210751

**A601**  
INTERIOR ELEVATIONS - CHPS



bc DESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

913.232.2123

MO Certificate of Authority Number  
A-201100729

Project Team:

ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
Kansas City, MO 64111

Project Title:  
CP150492 | University of Missouri Teaching Hospital - West Wing - Expansion/Renovation  
University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020

Issue: Date:

Drawn by: Author

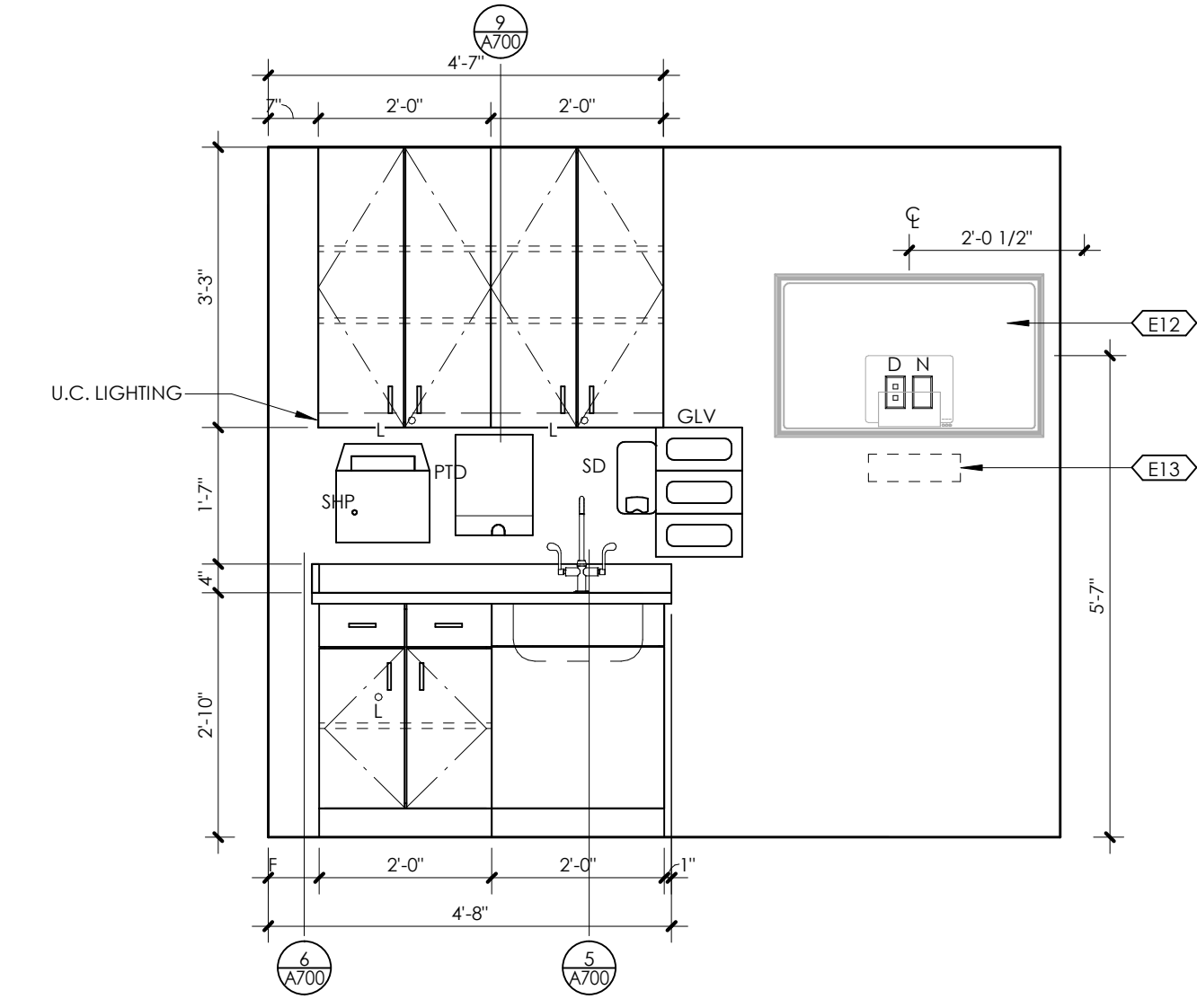
bcdg Project #: 12275.15

MU Project #: CP150492

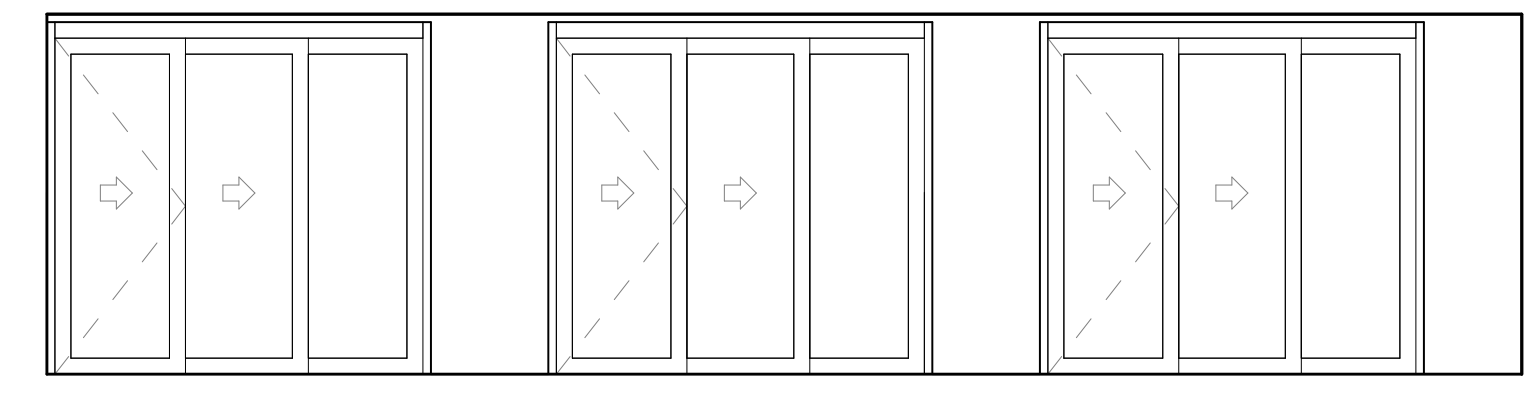
**A602**

INTERIOR ELEVATIONS

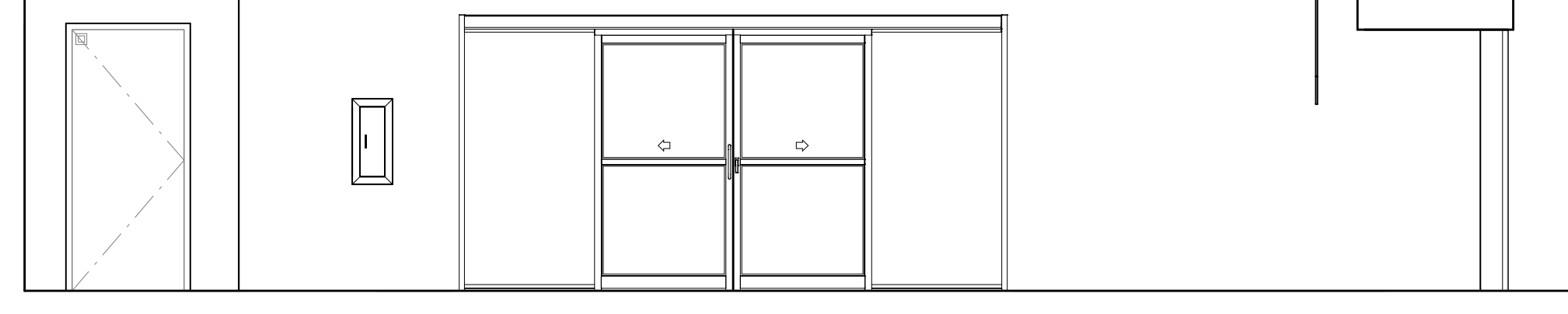
BID SET



9 CHPS TREATMENT ROOM  
1/2" = 1'-0"



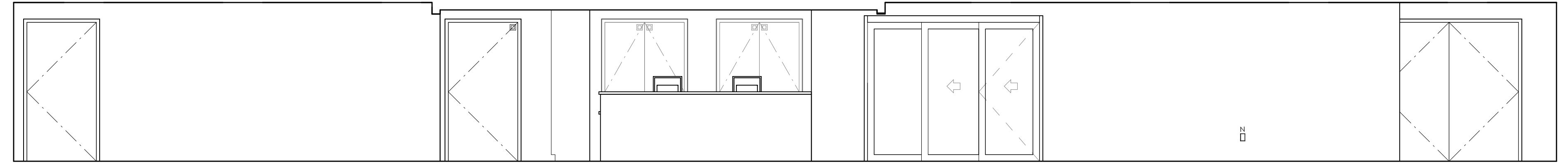
8 GI CORRIDOR  
1/4" = 1'-0"



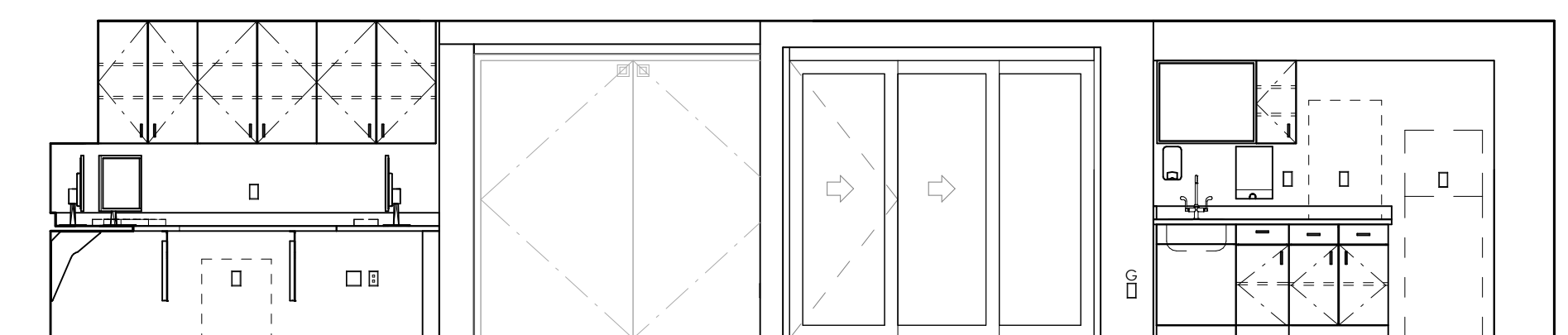
7 GI ENTRY CORRIDOR  
1/4" = 1'-0"



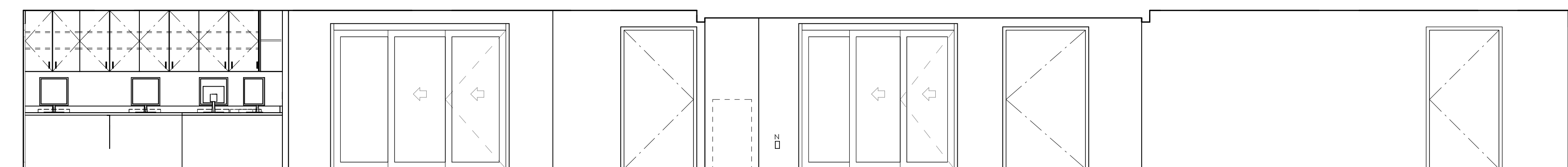
6 CHPS ENTRY CORRIDOR  
1/4" = 1'-0"



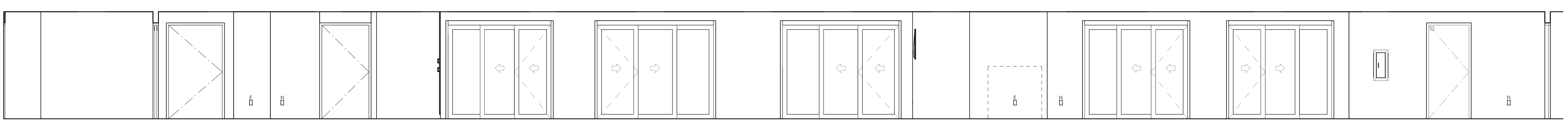
5 CHPS CORRIDOR  
1/4" = 1'-0"



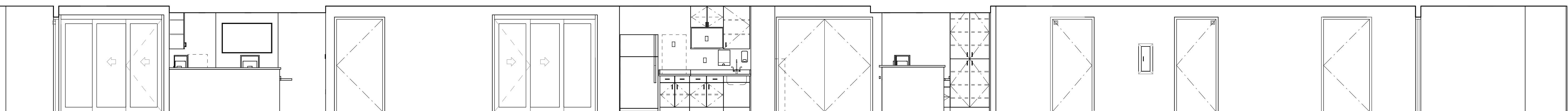
4 CHPS CORRIDOR  
1/4" = 1'-0"



3 CHPS CORRIDOR  
1/4" = 1'-0"

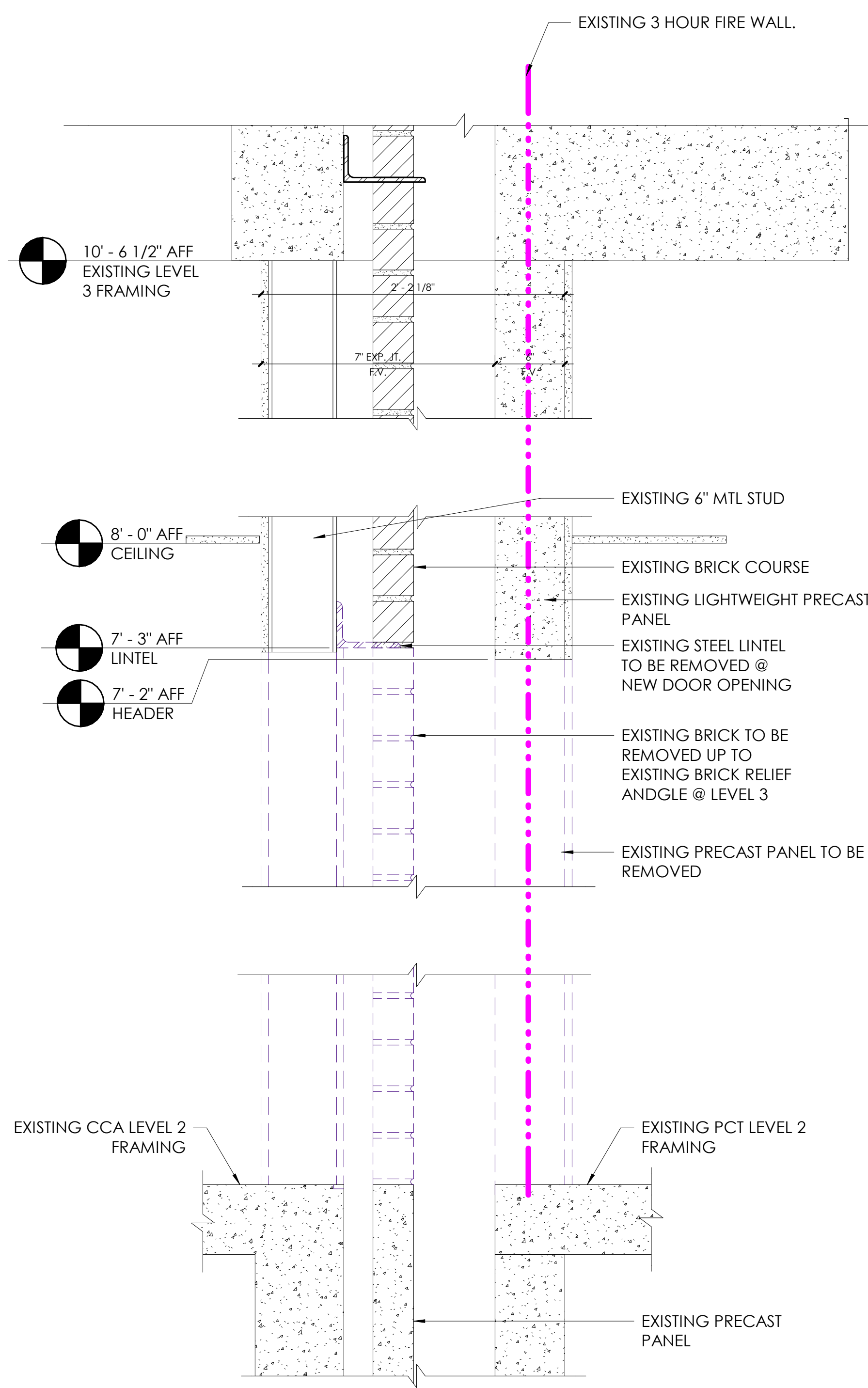


2 CBCU CORRIDOR  
1/4" = 1'-0"

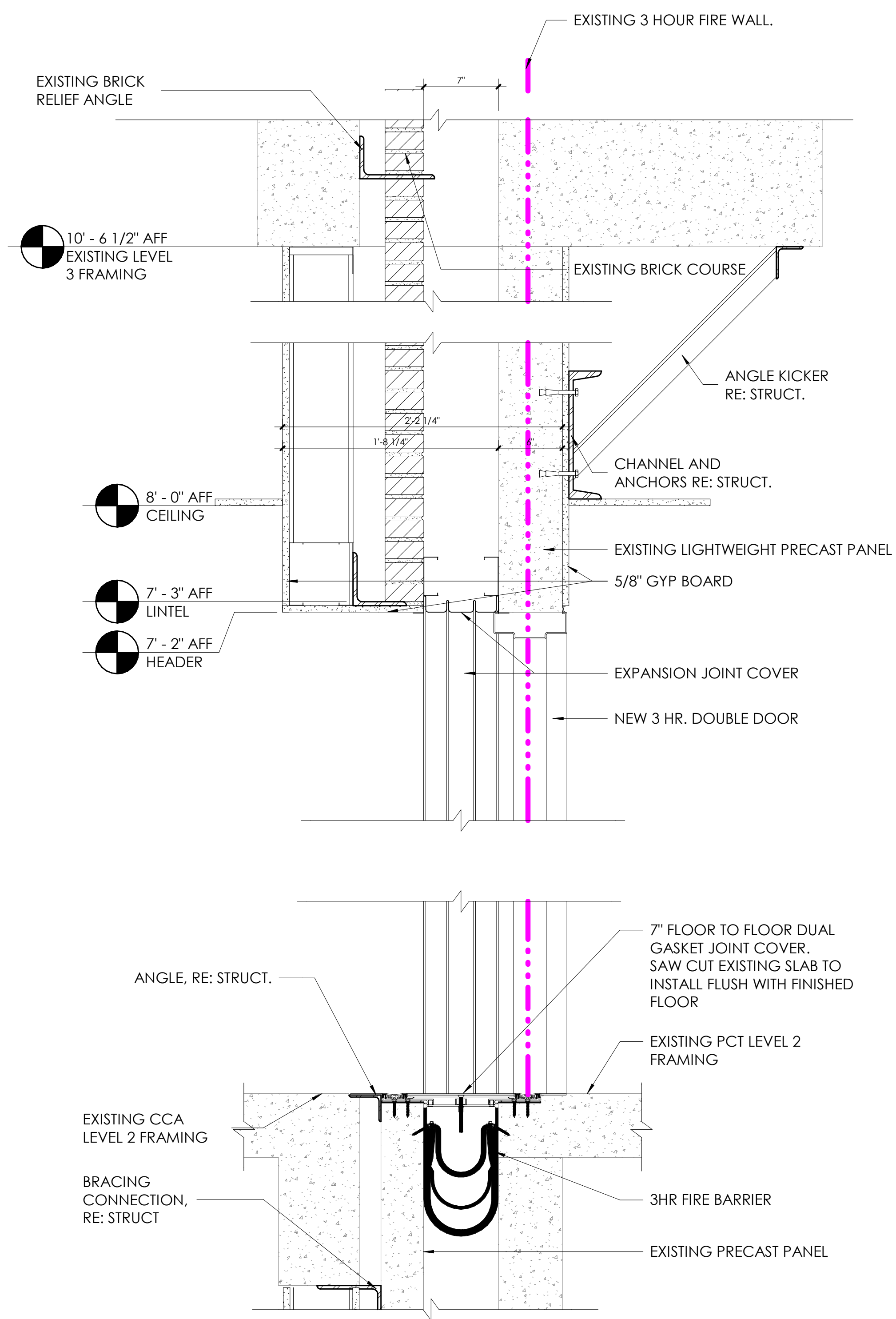


1 CBCU CORRIDOR  
1/4" = 1'-0"

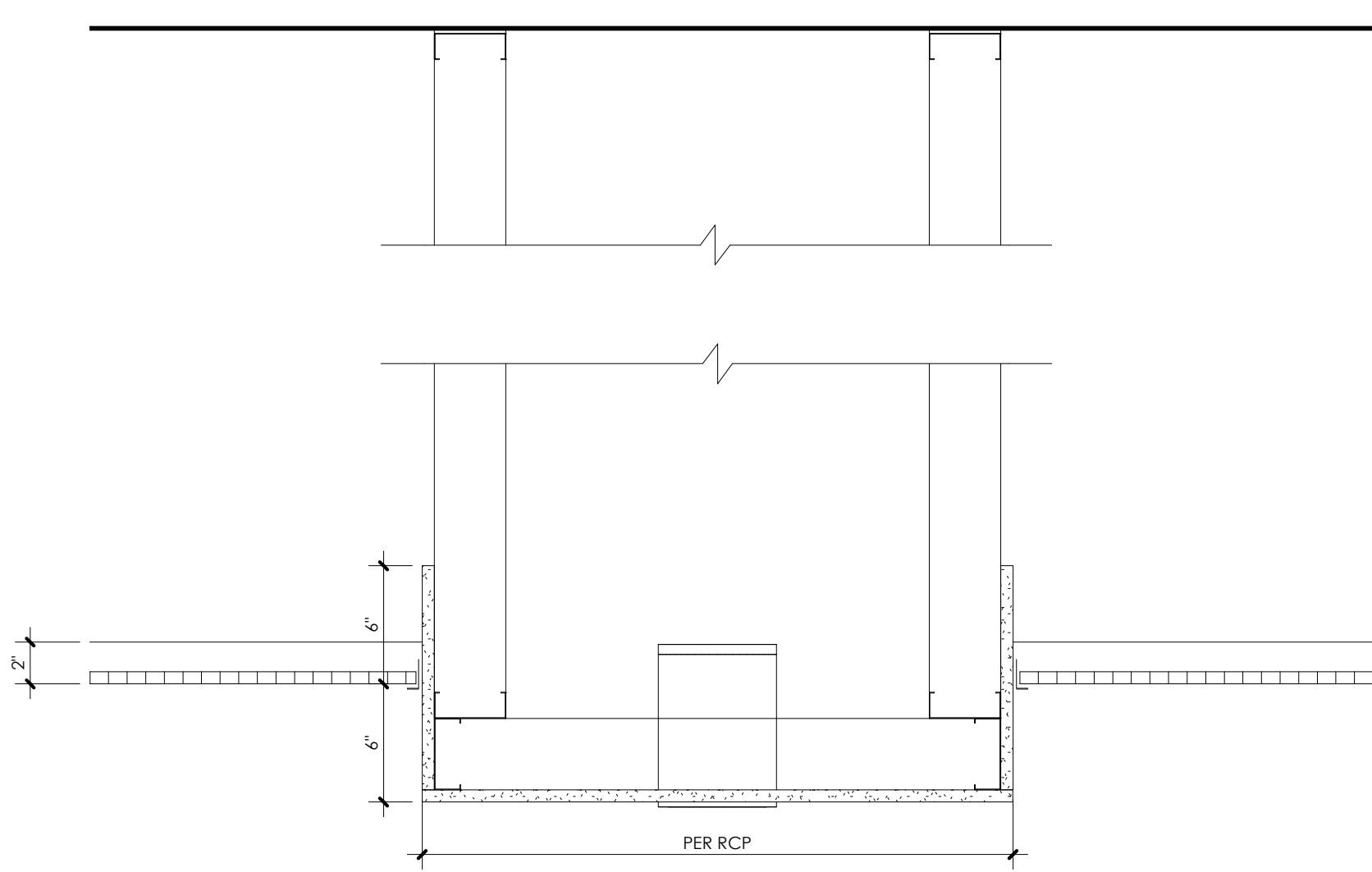




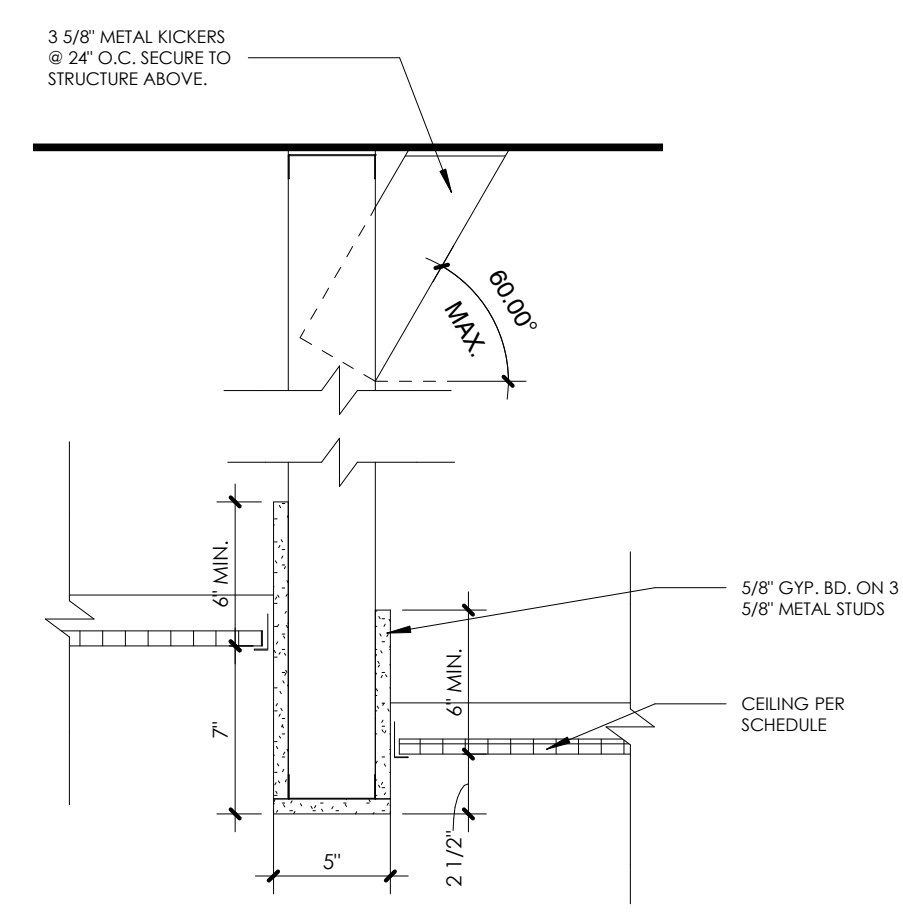
**3 DEMO WALL SECTION @ BLDG THRESHOLD**  
1 1/2" = 1'-0"



**4 WALL SECTION @ BLDG THRESHOLD**  
1 1/2" = 1'-0"



**1 SOFFIT DETAIL**  
1 1/2" = 1'-0"



**2 SOFFIT DETAIL**  
1 1/2" = 1'-0"



bc DESIGN GROUP  
12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-2011007290

**Project Team:**  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
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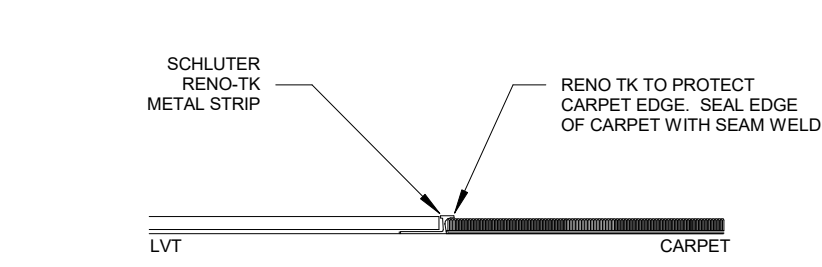
**A701**  
DETAILS



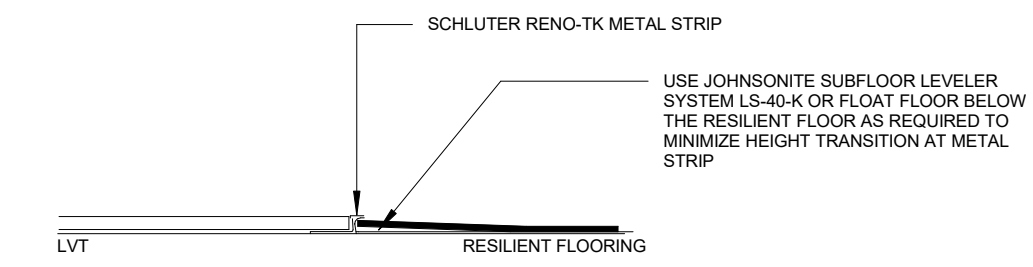


MATERIAL FINISH LEGEND - PAGE 1									
ABBREVIATION	MANUFACTURER	PRODUCT	COLOR NAME	COLOR NUMBER	WIDTH / SIZE	DETAILS	REP INFORMATION		
06 41 00 WOOD CASEWORK									
06 41 16 PLASTIC LAMINATE CLAD ARCHITECTURAL CABINETS									
PL-1	WILSONART	STANDARD HPL FINISH LAMINATE	SHAKER CHERRY	7935K-07	5'X12' SHEETS	VERTICAL CASEWORK (CBCU)	SANDRA DEWITT 314.809.5115		
PL-3	FORMICA	STANDARD HPL FINISH LAMINATE	GLAMOUR CHERRY	6208	5'X12' SHEETS	VERTICAL CASEWORK (CHPS)	RICHELE SMITH 816.377.6235		
06 61 00									
06 61 16 SOLID SURFACING FABRICATIONS									
SS-1	CORIAN	SOLID SURFACE	CONCRETE	--	--	TRANSACTION COUNTER (CBCU)	JOSH WELCH 314.803.5569		
SS-2	CORIAN	SOLID SURFACE	SAVANNAH	--	--	TRANSACTION COUNTER (CHPS)	JOSH WELCH 314.803.5569		
09 30 00 TILING									
09 30 13.13 PORCELAIN TILING									
CT-1	ISC SURFACES	AMERICAN OLEAN ST. GERMAIN, 12"X24"	BLANC	SE60	12" X 24"	INSTALL-STAGGER 33% OFFSET, GROUT JOINT 1/16"	NIKKI STELLOH 314.327.9764		
CT-2	ISC SURFACES	AMERICAN OLEAN ST. GERMAIN, LINEAR MOSAIC	BLANC	SE60	1" X 2"	MOSAIC	NIKKI STELLOH 314.327.9764		
CT-3	ISC SURFACES	AMERICAN OLEAN ST. GERMAIN, 6"X24"	CREME	SE61	6" X 24"	INSTALL-STAGGER 33% OFFSET, GROUT JOINT 1/16"	NIKKI STELLOH 314.327.9764		
CT-4	ISC SURFACES	AMERICAN OLEAN ST. GERMAIN, 6"X12" COVE BASE	CREME	SE61	6" X 12"	INSTALL-INCLUDE MATCHING COVE BASE CORNERS	NIKKI STELLOH 314.327.9764		
CT-5	DALTILE	GRANITE RADIANCE	SANTA CECIL BLEND	GR65	5/8" X 5/8", 12" X 12" SHEET	MOSAIC	JOANNA WHITTAKER 314.629.0125		
CT-6	ISC SURFACES	AMERICAN OLEAN ST. GERMAIN, 12"X24"	SABLE	SE64	12" X 24"	INSTALL-STAGGER 33% OFFSET, GROUT JOINT 1/16"	NIKKI STELLOH 314.327.9764		
09 60 00 FLOORING									
09 65 13.13 RESILIENT WALL BASE									
RB-1	TARKETT	TIGHTLOCK - CARPET	EITHER ORE	66	4 1/2"	--	BRIAN AYRES 314.324.0086		
RB-2	TARKETT	TIGHTLOCK - RESILIENT	EITHER ORE	66	4 3/8"	--	BRIAN AYRES 314.324.0086		
09 65 16.23 SHEET FLOORING									
SV-1	SHANNON SALES	TEKNOFOR - FORESTSCAPES	MEDIUM WALNUT	31097	6'X75' ROLL	INSTALL-HEAT WELDING, 4" FLASH COVE	ERIN FERNANDES 314.276.2196		
SV-2	MANNINGTON	ASSURANCE III	MARL	16345	6'6" ROLL	INSTALL-HEAT WELDING, 4" FLASH COVE	KRISTEN KOMIS 314.250.3040		
SV-3	TARKETT	ACCZENT FLOURISH	PROSPER SOLSTICE	301	6'6" ROLL	INSTALL-HEAT WELDING, 4" FLASH COVE	BRIAN AYRES 314.324.0086		
SV-4	SHANNON SALES	TEKNOFOR - FORESTSCAPES	FRUITWOOD	52206	6'X75' ROLL	INSTALL-HEAT WELDING	ERIN FERNANDES 314.276.2196		
SV-5	ARMSTRONG	MEDINTECH	DESERT GOLD	84390	6'6" ROLL	INSTALL-HEAT WELDING	BRENT TESREAU 636.300.0984		
09 65 19 RESILIENT TILE FLOORING									
LVT-1	MANNINGTON	SPACIA - STONE	GOLDEN SLATE	SS5S4604	18" X 18"	INSTALL-STAGGER MIN. 6" OFFSET	KRISTEN KOMIS 314.250.3040		
09 68 13 TILE CARPETING									
CPT-1	MANNINGTON	PRECISION	PROBABILITY	84588	24" X 24"	INSTALL-MONOLITHIC	KRISTEN KOMIS 314.250.3040		
09 70 00 WALL FINISHES									
09 72 16.13 FLEXIBLE VINYL WALLCOVERING									
VWC-1	MAHARAM	CHAMBRAY #397140	REED	136	54"W	--	AMBER KRAMER 314.443.9573		
VWC-2	MDC	BOLTA STROBE	TECHNO TAN	BBRB10	54"W	--	JILL PATTERSON 314.250.1993		
09 90 00 PAINTING AND COATING									
09 91 00 PAINTING									
PT-1	SHERWIN WILLIAMS	EPOXY COATING	NANTUCKET DUNE	SW7527	--	--	HANK MEINKING 314.281.5005		
PT-2	SHERWIN WILLIAMS	EPOXY COATING	KILIM BEIGE	SW6106	--	--	HANK MEINKING 314.281.5005		
PT-3	SHERWIN WILLIAMS	SEMI-GLOSS PAINT	KILIM BEIGE	SW6106	--	--	HANK MEINKING 314.281.5005		
PT-4	SHERWIN WILLIAMS	SEMI-GLOSS PAINT	MOODY BLUE	SW6221	--	--	HANK MEINKING 314.281.5005		
PT-5	SHERWIN WILLIAMS	FLAT PAINT	KEYSTONE GRAY	SW7504	--	--	HANK MEINKING 314.281.5005		
PT-6	SHERWIN WILLIAMS	FLAT PAINT	EXTRA WHITE	SW7006	--	--	HANK MEINKING 314.281.5005		
PT-7	SHERWIN WILLIAMS	EPOXY COATING	EXTRA WHITE	SW7006	--	--	HANK MEINKING 314.281.5005		
10 21 00 COMPARTMENTS AND CUBICLES									
10 21 23.13 CUBICLE CURTAINS									
CC-1	CF STINSON	FISH TALE	AQUARIUM	FTL35	--	--	KATE FREVERT 816.305.1399		
10 26 00									
10 26 16 BUMPER RAILS									
CR-1	C/S ACRYVYN	CRASH RAIL	IRISH CREAM	997	6" SCR-F SERIES	--	JOE FILLA 636.349.5005		
CR-2	C/S ACRYVYN	CRASH RAIL	BEIGE	103	6" SCR-F SERIES	--	JOE FILLA 636.349.5005		
10 26 00 WALL AND DOOR PROTECTION									
10 26 13 CORNER GUARDS									
CG-1	C/S ACRYVYN	CORNER GUARDS	IRISH CREAM	997	SSM SERIES	--	JOE FILLA 636.349.5005		
CG-2	C/S ACRYVYN	CORNER GUARDS	BEIGE	103	SSM SERIES	--	JOE FILLA 636.349.5005		
10 26 23 PROTECTIVE WALLCOVERING									
10 26 23.13 IMPACT RESISTANT WALL PROTECTION									
WP-1	C/S ACRYVYN	WALL PROTECTION	IRISH CREAM	997	RIDGID SHEET - SUEDE TEXTURE	COLOR MATCH CAULK	JOE FILLA 636.349.5005		
WP-2	C/S ACRYVYN	WALL PROTECTION	BEIGE	103	RIDGID SHEET - SUEDE TEXTURE	COLOR MATCH CAULK	JOE FILLA 636.349.5005		
12 36 00 COUNTERTOP SPECIFICATIONS									
12 36 23.13 PLASTIC LAMINATE CLAD COUNTERTOPS									
PL-2	NEVAMAR	STANDARD HPL FINISH LAMINATE	CLASSIC ROCK	RK2001T	--	2 LAYERS OF 3/4" PLYWOOD WITH MATCHING PVC T-MOLDING	SUZANNE GERMAIN 913.788.0937		
PL-4	WILSONART	STANDARD HPL FINISH LAMINATE	KALAHARI TOPAZ	4588-07	--	2 LAYERS OF 3/4" PLYWOOD WITH MATCHING PVC T-MOLDING	SANDRA DEWITT 314.809.5115		

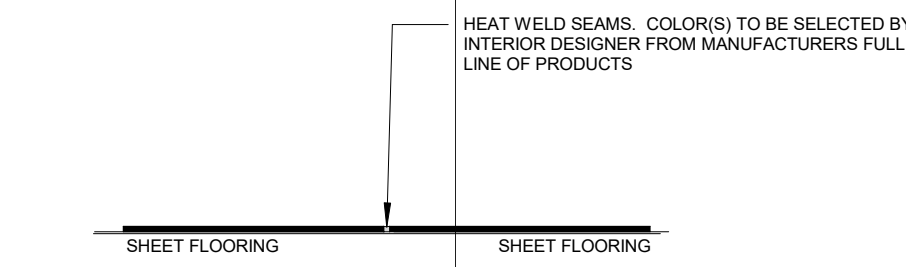
GROUT COLOR	TILE SPECIFICATION
TEC POWER GROUT - PARCHMENT 991	CT-1, CT-2
LATICRETE EPOXY GROUT - MUSHROOM 39	CT-3, CT-4, CT-5
LATICRETE EPOXY GROUT - MOCHA 35	CT-6



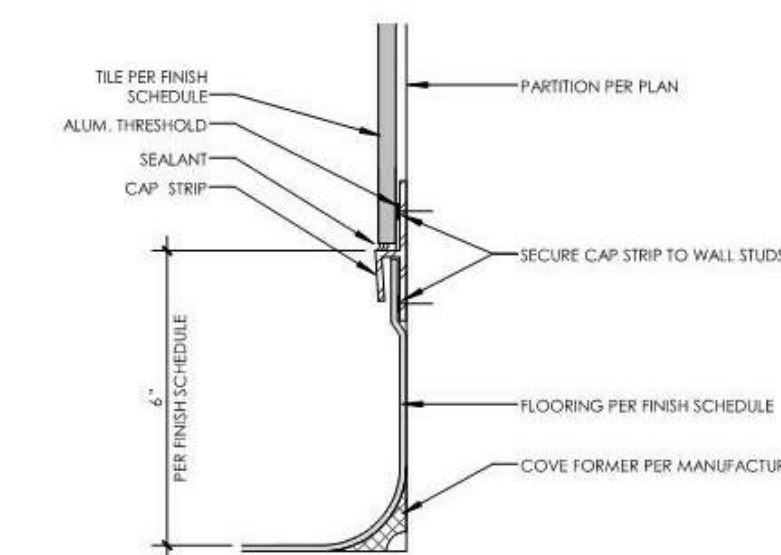
1 LVT TO CARPET  
3" = 1'-0"



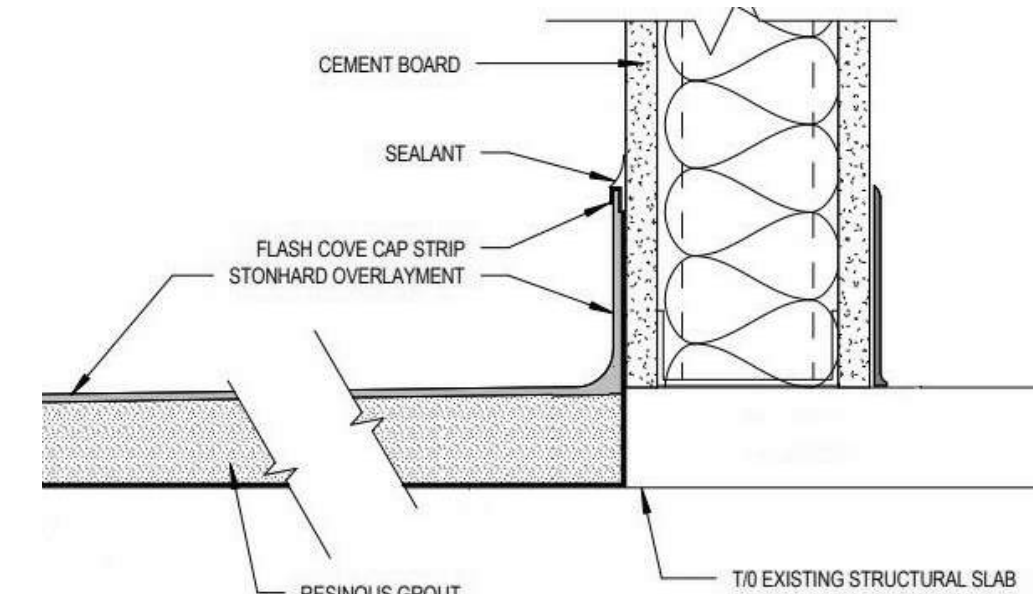
2 LVT TO RESILIENT FLOOR  
3" = 1'-0"



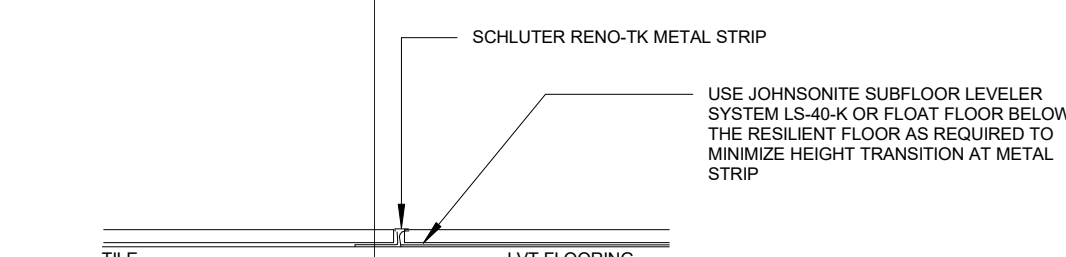
3 SHEET TO SHEET FLOOR  
3" = 1'-0"



4 FLASHCOVE WET ROOM - DETAIL  
3" = 1'-0"



5 FLASHCOVE (NON WET) - DETAIL  
3" = 1'-0"



6 TILE TO LVT FLOOR  
3" = 1'-0"



bcDESIGN GROUP

12101 W 110th Street Suite 100  
Overland Park, KS 66210

913.232.2123

MO Certificate of Authority Number  
A-201102790

Project Team:

ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 6319  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

B08 D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
Kansas City, MO 64111

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 University of Missouri, Columbia, Missouri



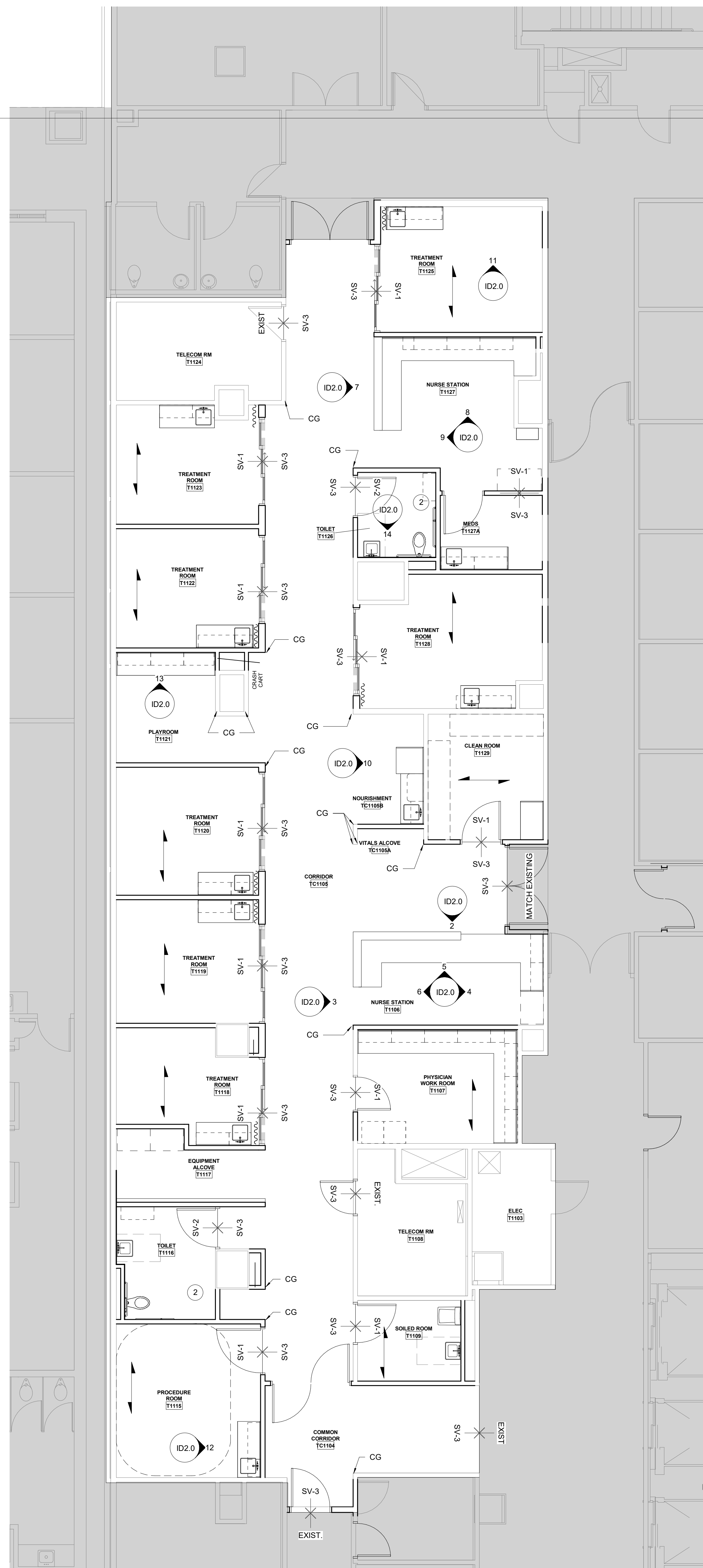
Issue Date: 12/9/2020  
Issue: Date:

Drawn by: Author

bcdg Project #: 12275.43  
MU Project #: CP210751

**ID1.1**

MATERIAL LEGEND

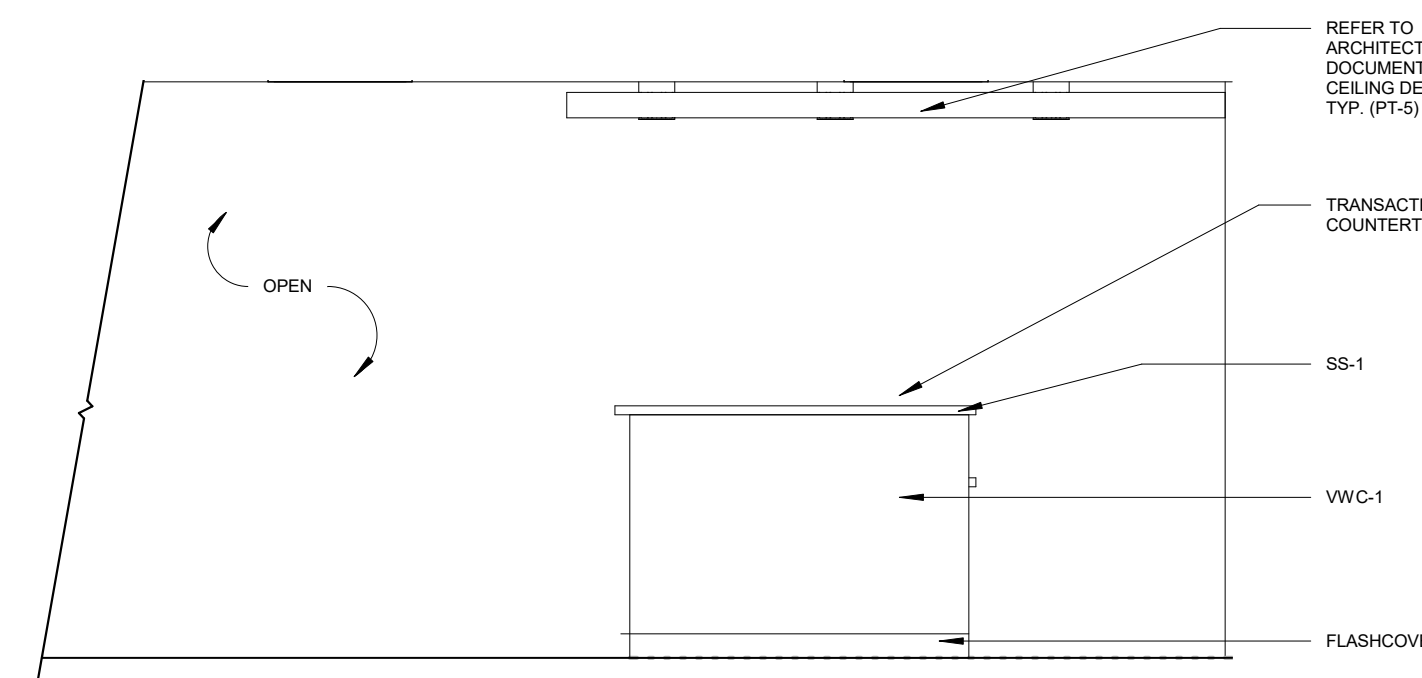


1 LEVEL 1 - FINISH PLAN  
3/16" = 1'-0"

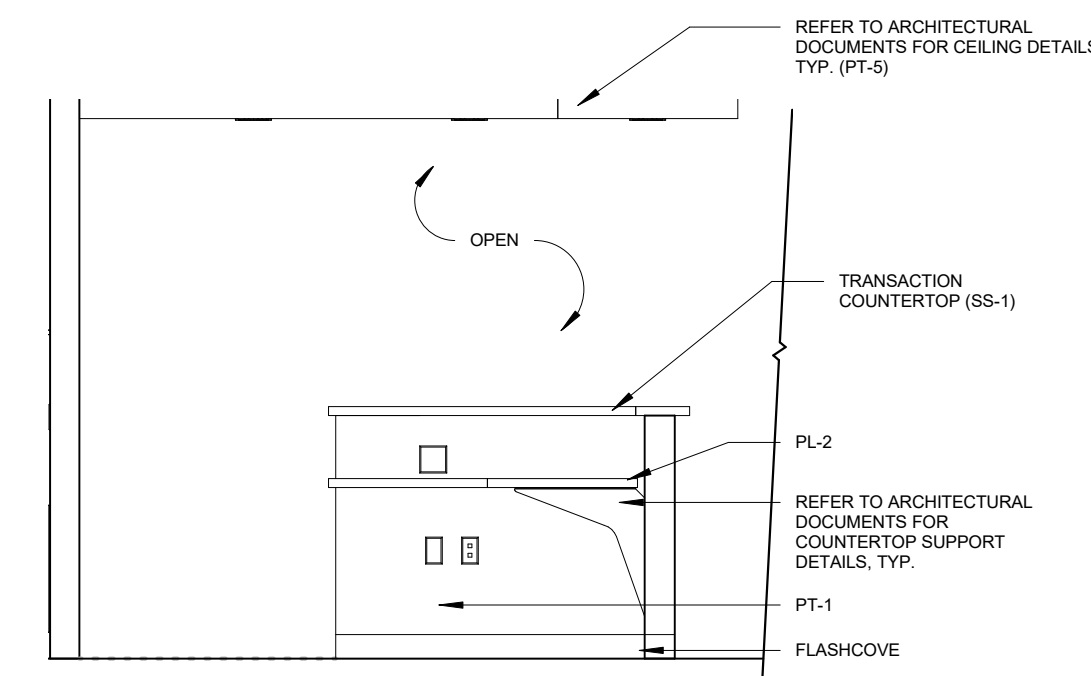
**FINISH PLAN KEYNOTES:**

1. FIELD VERIFY EXISTING FLOOR TRANSITIONS LOCATIONS FOR INSTALLATION OF NEW FINISHES PRIOR TO INSTALL.
2. PLUMBING, PLUMBING ACCESSORIES, MIRROR, TOWE/SOAP DISPENSERS, ETC. - REFER TO ARCHITECTURAL DOCUMENTS FOR DETAILS.

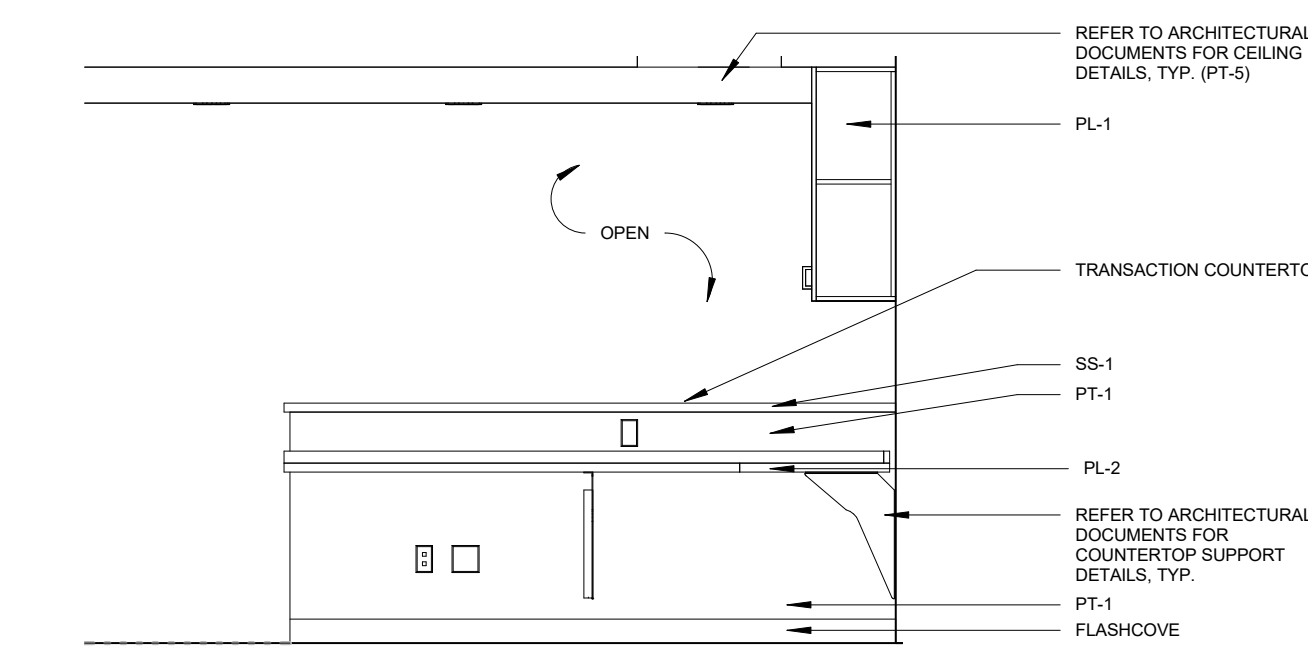
2 ID - ELEV CBCU NURSE STATION FACE SOUTH  
3/8" = 1'-0"



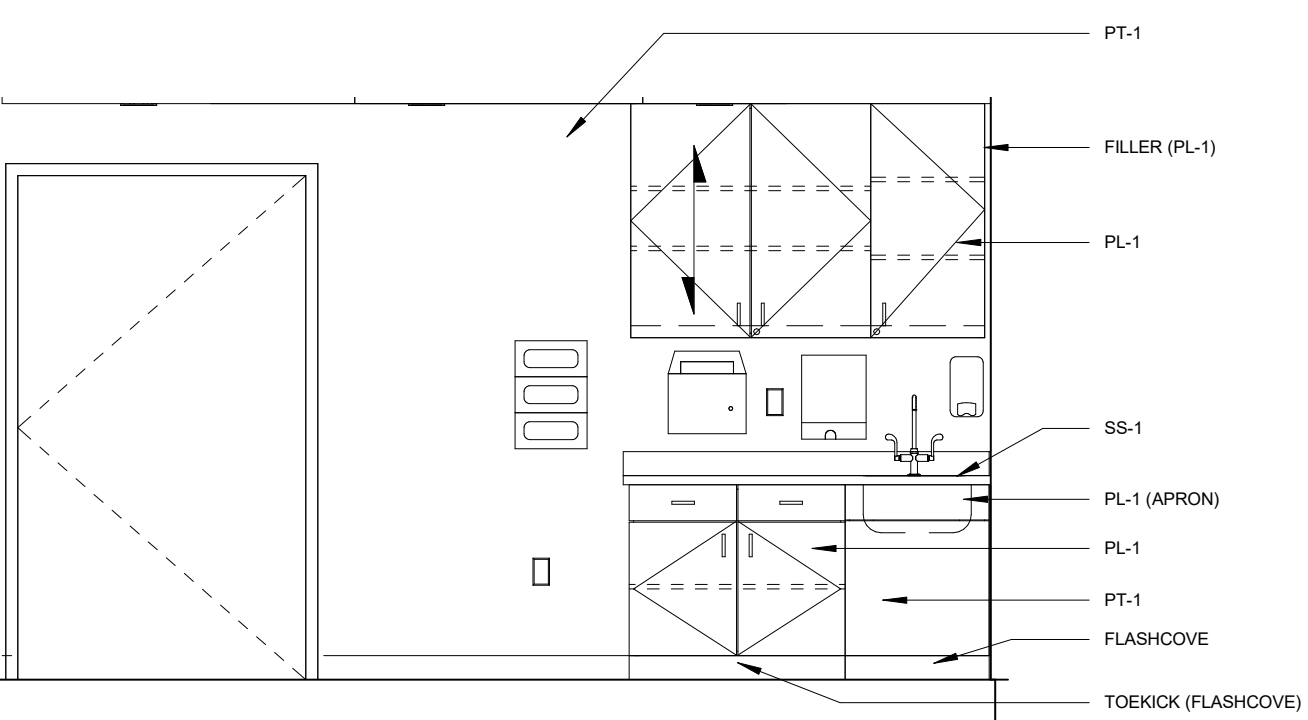
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3/8" = 1'-0"



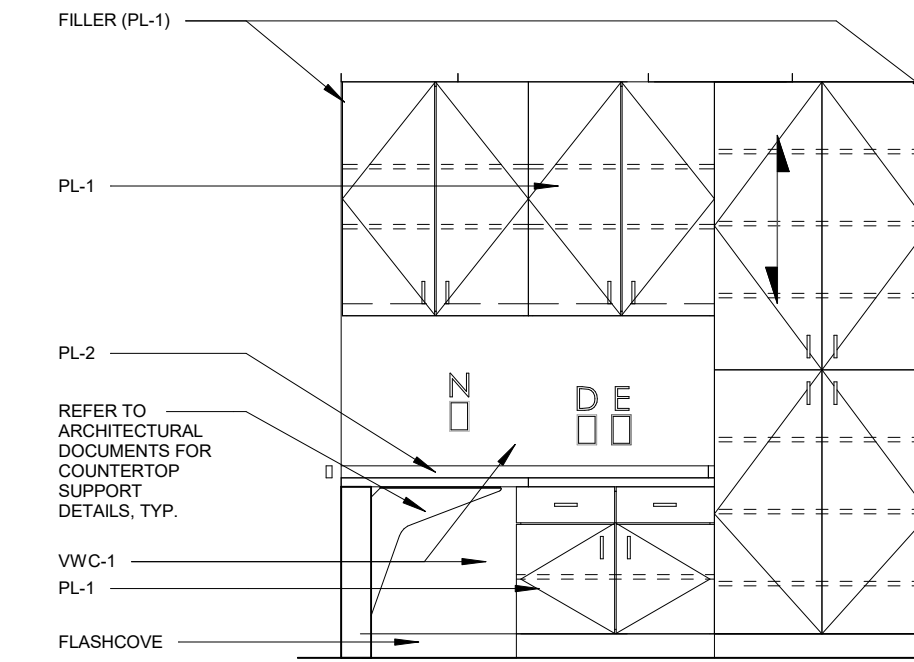
4 ID - ELEV CBCU NURSE STATION INT WEST  
3/8" = 1'-0"



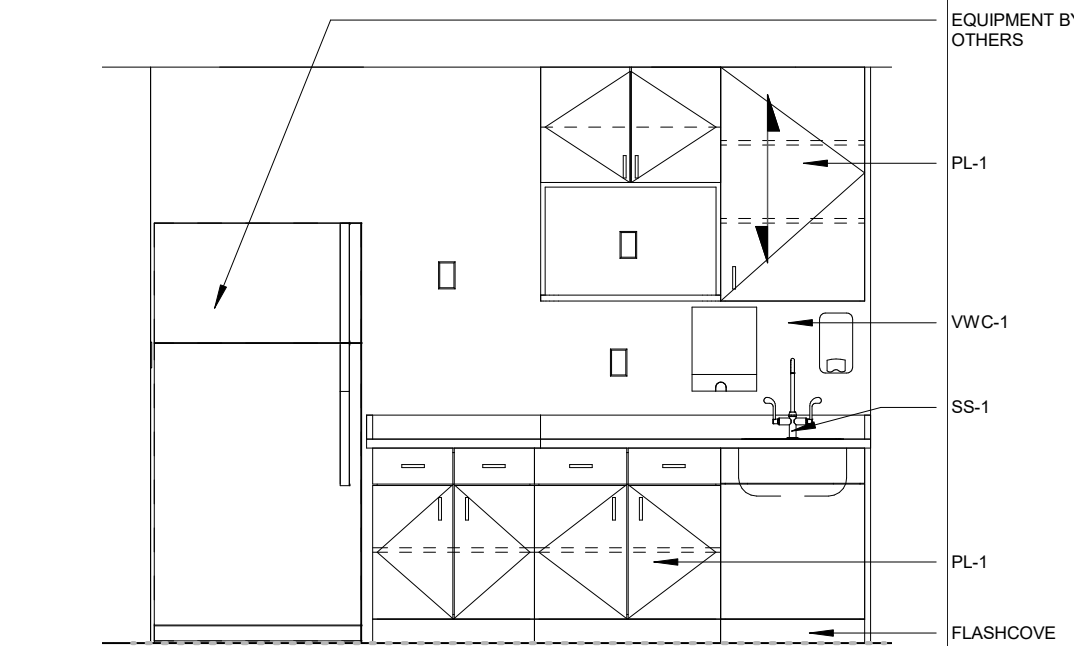
5 ID - ELEV CBCU NURSE STATION T1127  
3/8" = 1'-0"



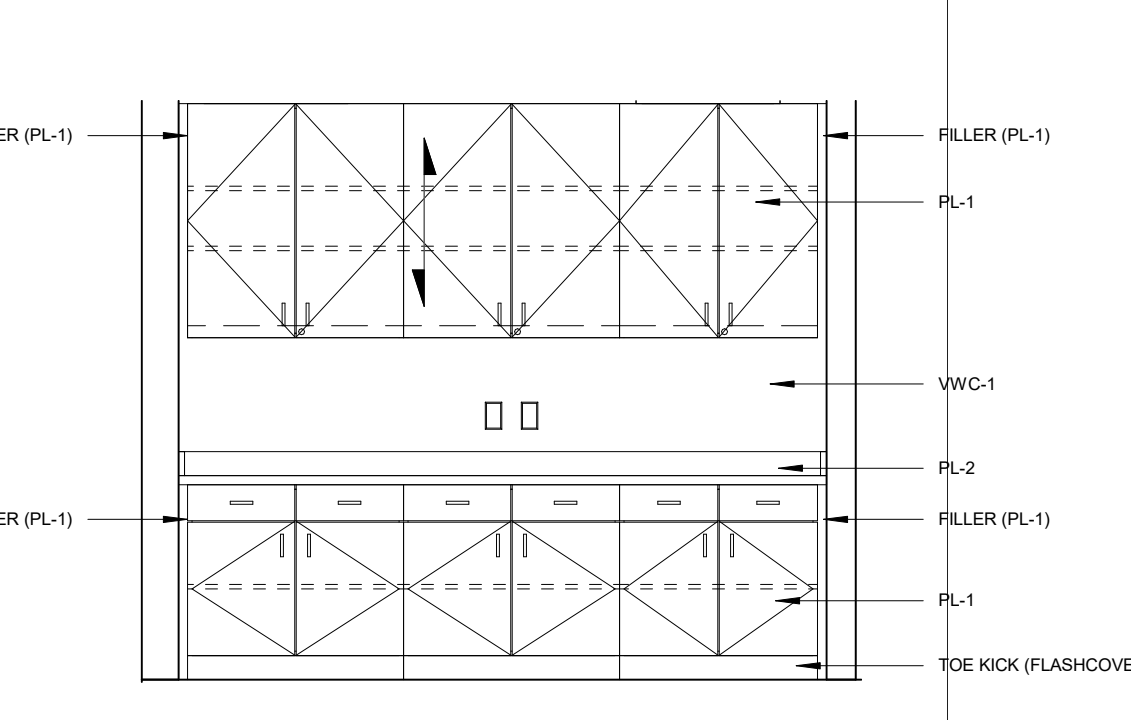
6 ID - ELEV CBCU NURSE STATION INT EAST  
3/8" = 1'-0"



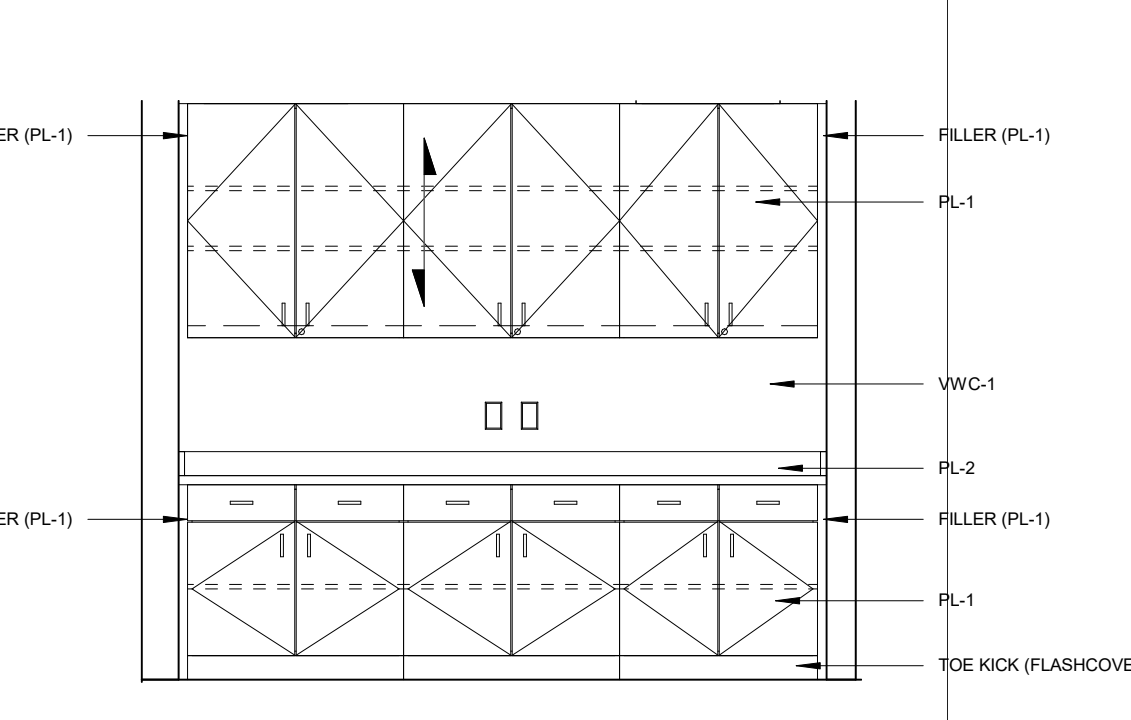
7 ID - ELEV CBCU NURSE STATION T1127 FACE  
3/8" = 1'-0"



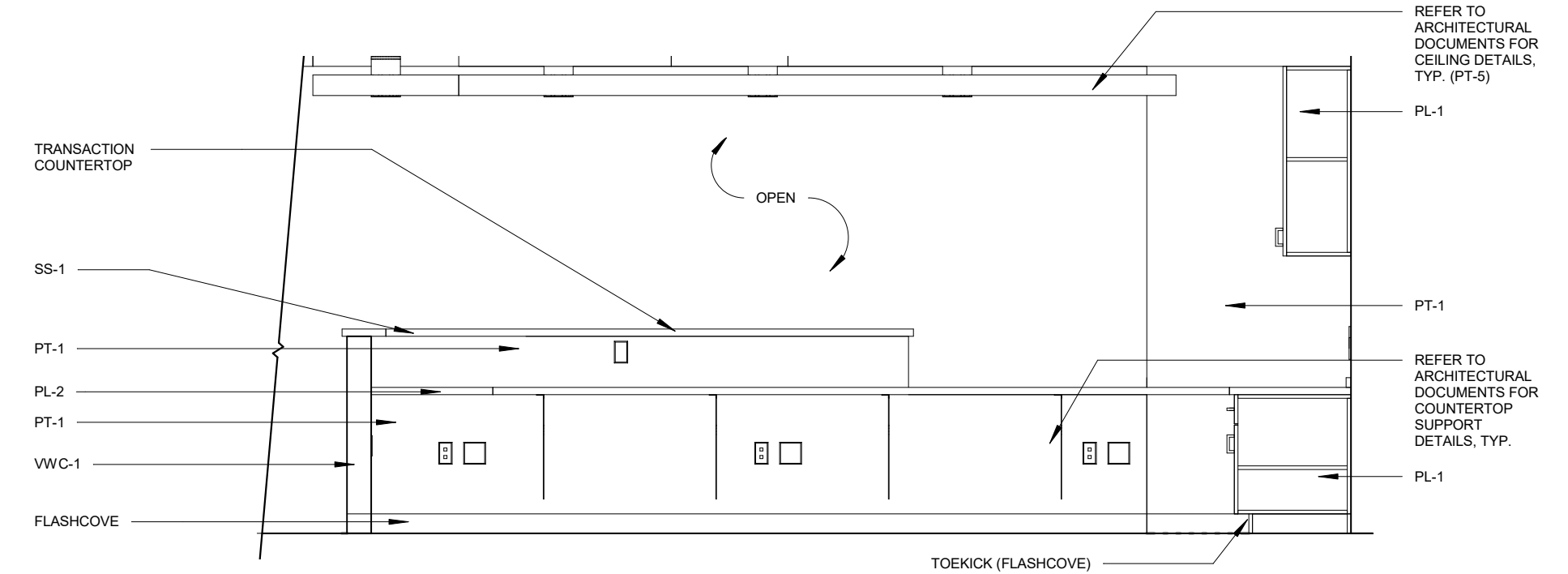
8 ID - ELEV CBCU CORRIDOR CASEWORK STATION  
3/8" = 1'-0"



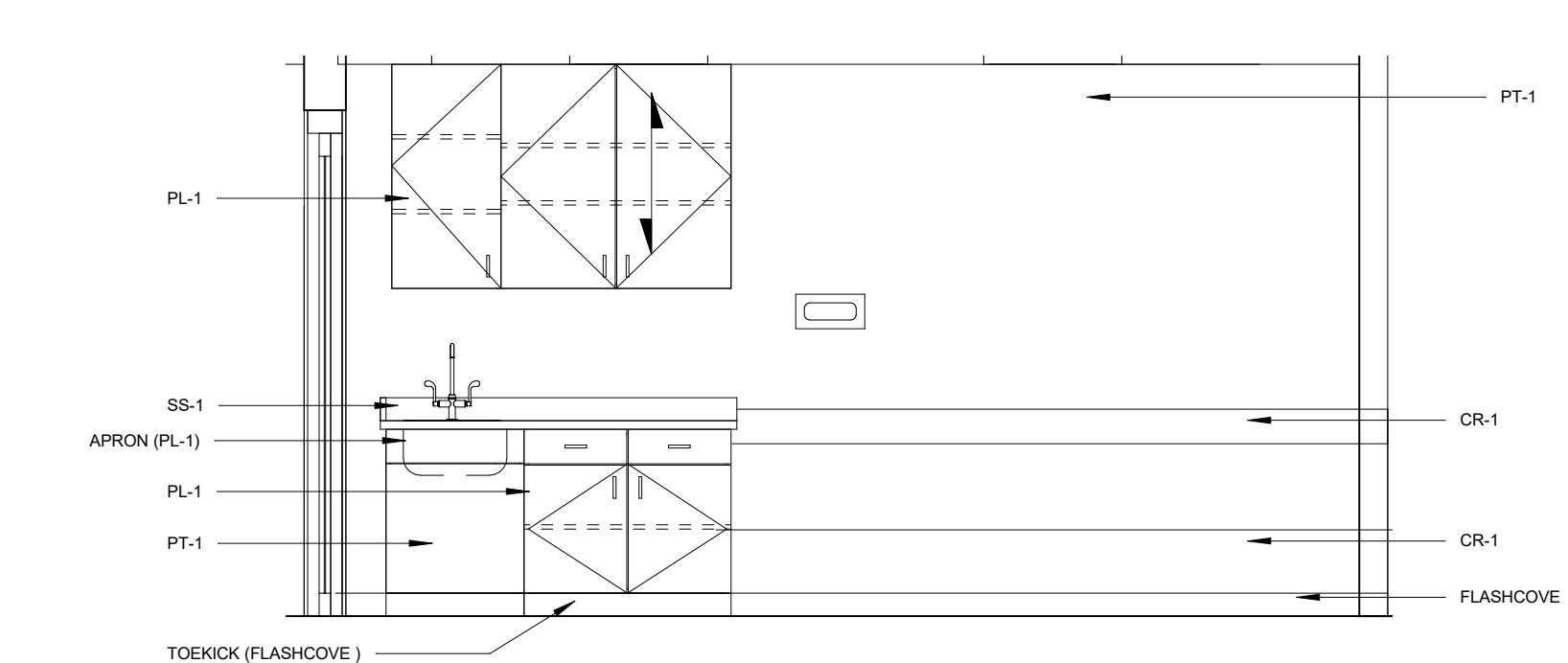
9 ID - ELEV CBCU PLAY ROOM CASEWORK  
3/8" = 1'-0"



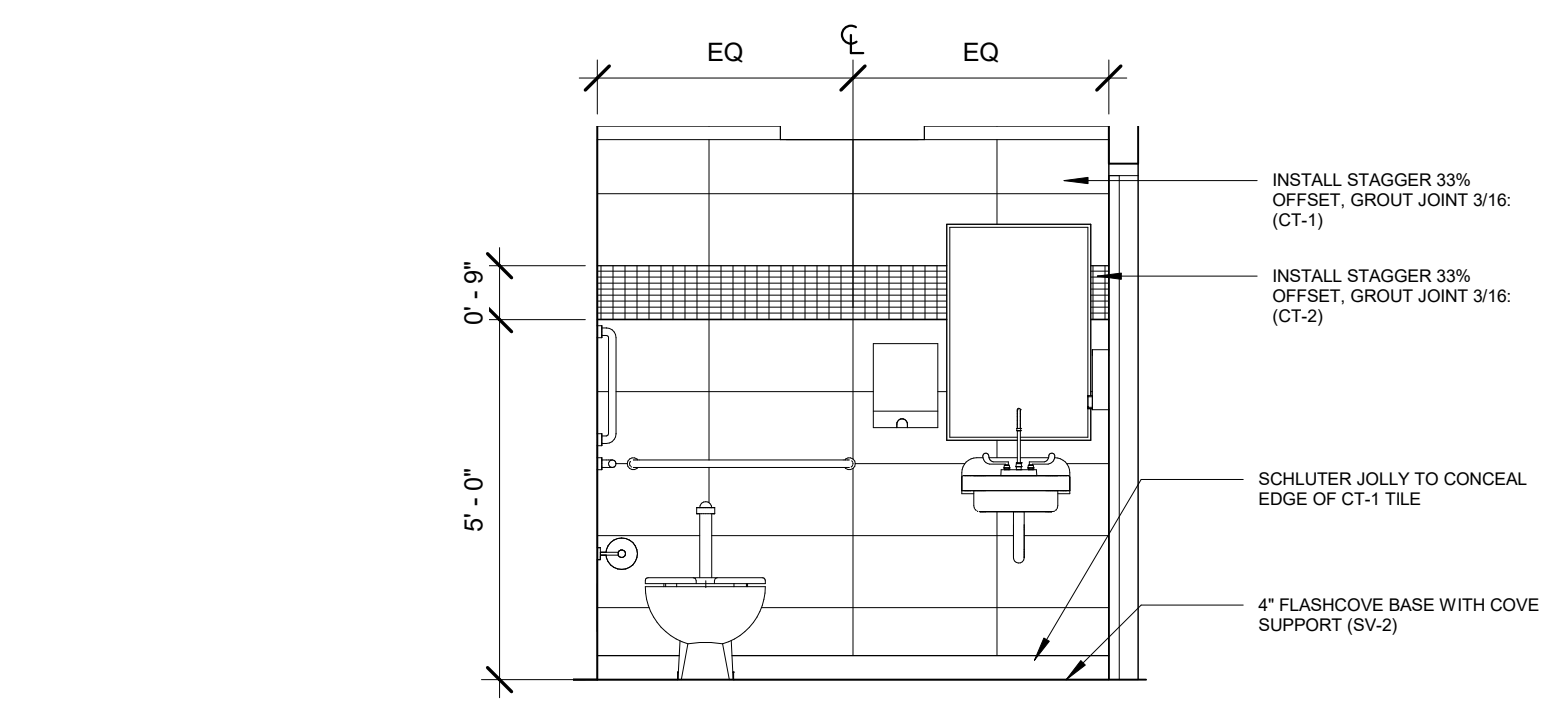
10 ID - ELEV CBCU NURSE STATION INT NORTH  
3/8" = 1'-0"



11 ID - ELEV TYPICAL TREATMENT CBCU INT NORTH  
3/8" = 1'-0"



12 ID - ELEV TYPICAL RESTROOM WALL TILE CBCU  
3/8" = 1'-0"



bcDESIGNGROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123

MO Certificate of Authority Number  
A-201102790

Project Team:

ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
Kansas City, MO 64111

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
University of Missouri, Columbia, Missouri

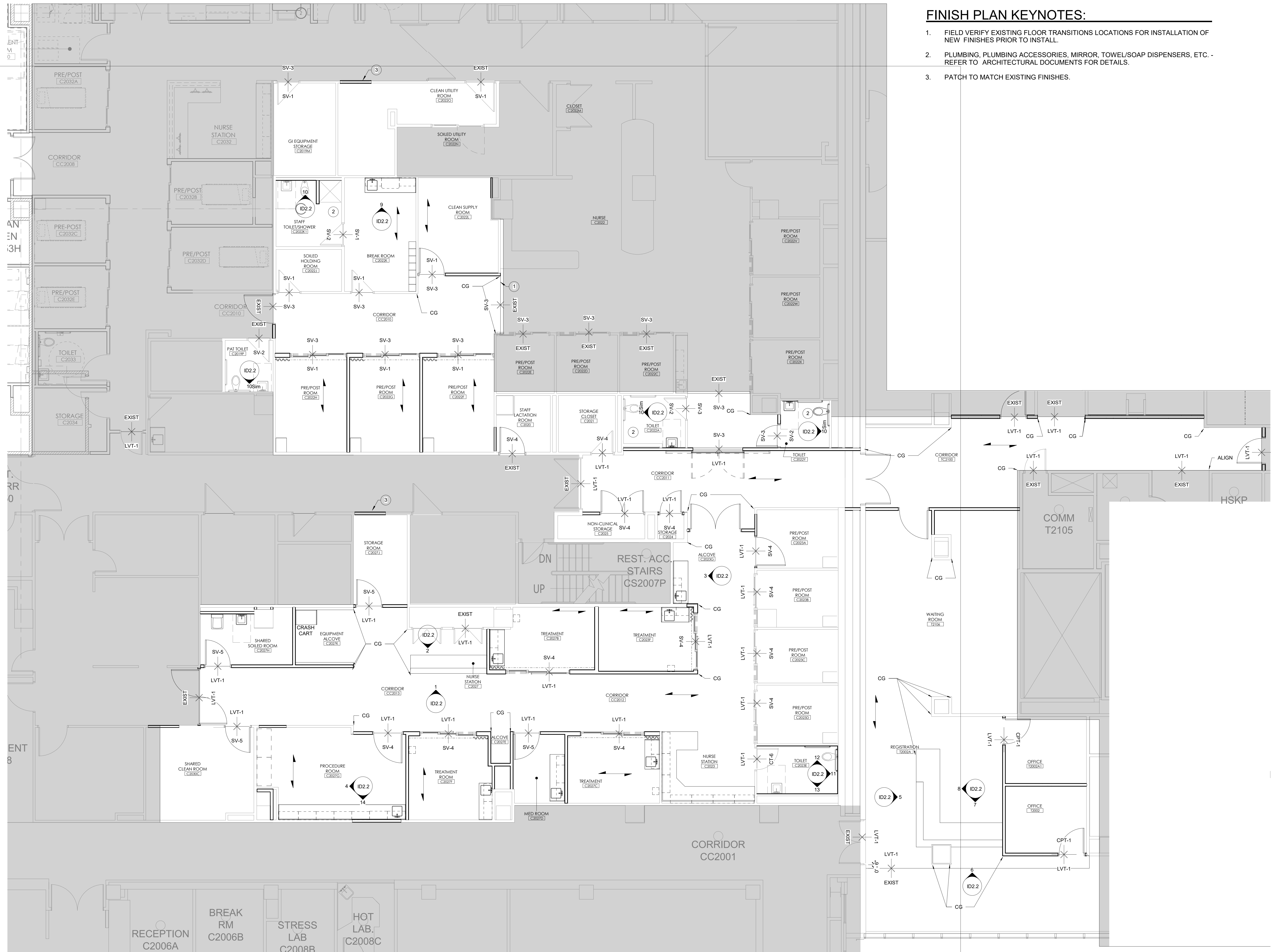


Issue Date: 12/9/2020  
Issue: Date:

Drawn by: Author

bcdg Project #: 12275.43  
MU Project #: CP210751

**ID2.0**  
LEVEL 1 INTERIOR FINISH PLAN  
& INTERIOR ELEVATIONS



**FINISH PLAN KEYNOTES:**

1. FIELD VERIFY EXISTING FLOOR TRANSITIONS LOCATIONS FOR INSTALLATION OF NEW FINISHES PRIOR TO INSTALL.
2. PLUMBING, PLUMBING ACCESSORIES, MIRROR, TOWEL/SOAP DISPENSERS, ETC. - REFER TO ARCHITECTURAL DOCUMENTS FOR DETAILS.
3. PATCH TO MATCH EXISTING FINISHES.

1 LEVEL 2 - FINISH PLAN  
3/16" = 1'-0"



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123

MO Certificate of Authority Number  
A-201103720

Project Team:

ROSS & BARUZZI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
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Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
University of Missouri, Columbia, Missouri



Issue Date: 12/9/2020  
Issue: Date:

Drawn by: Author

bcdg Project #: 12275.43  
MU Project #: CP210751

**ID2.1**

LEVEL 2 INTERIOR FINISH PLAN



bcDESIGNGROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790

Project Team:  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellview Avenue  
Kansas City, MO 64111

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
University of Missouri, Columbia, Missouri



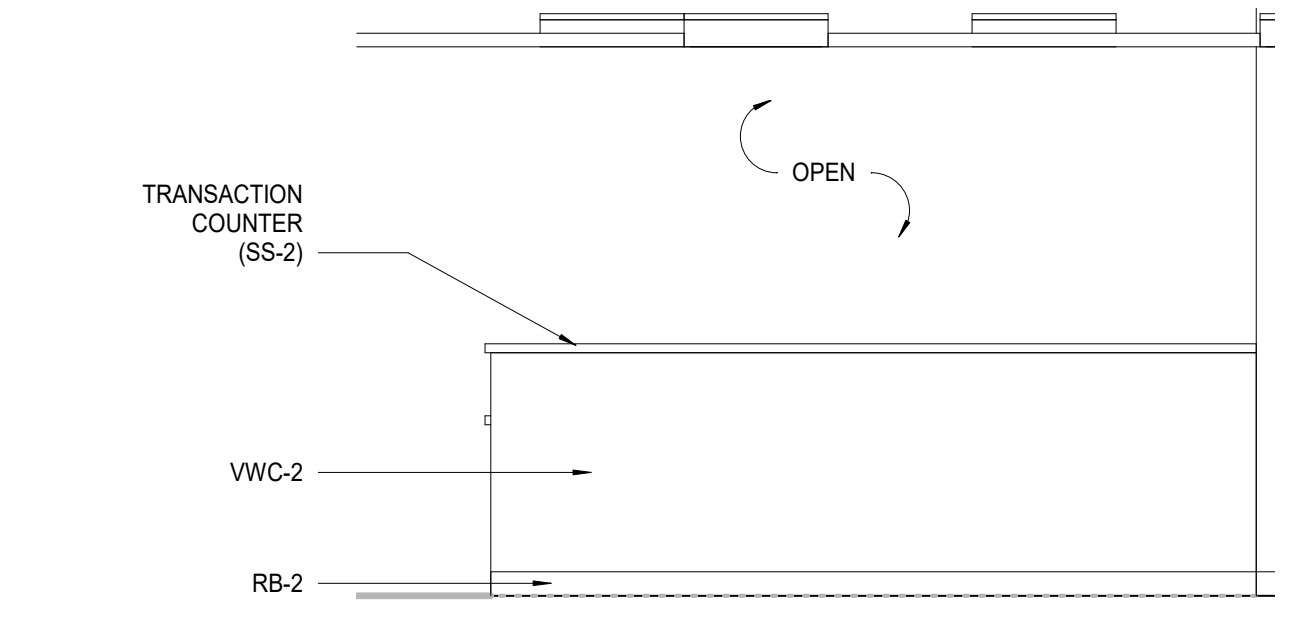
Issue Date: 12/9/2020  
Issue: Date:

Drawn by: Author  
bcdg Project #: 12275.43  
MU Project #: CP210751

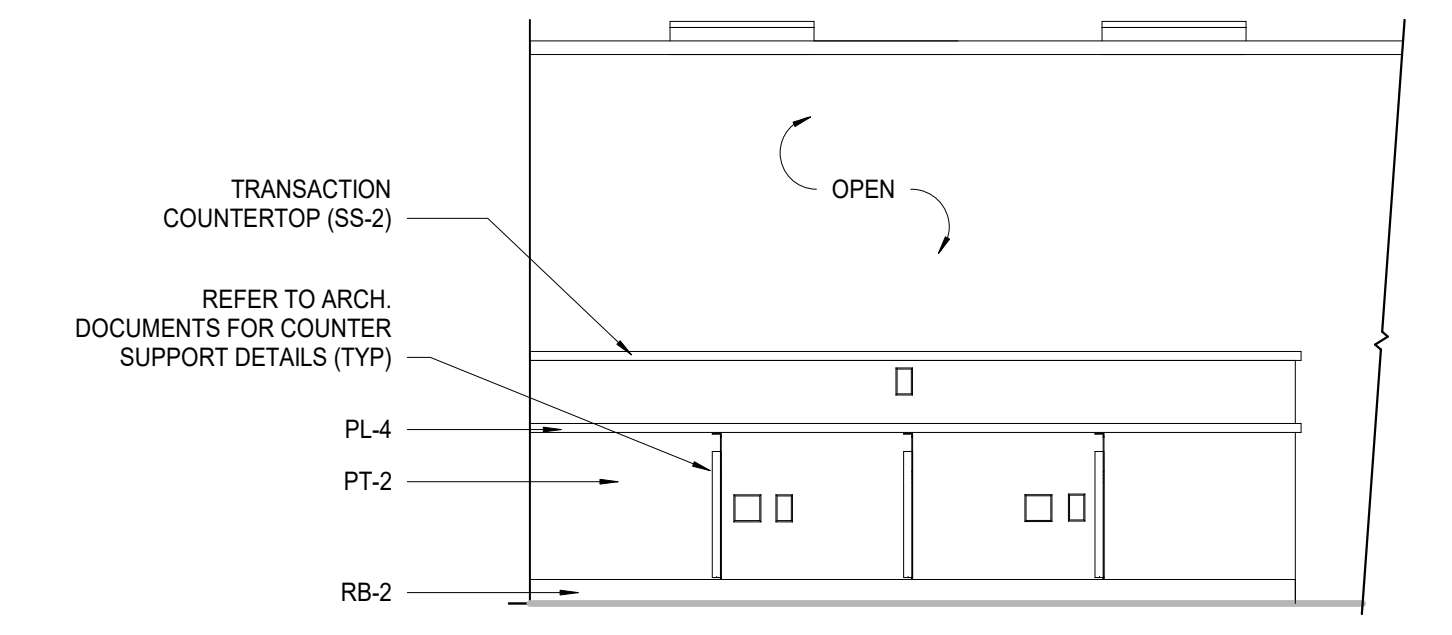
**ID2.2**

LEVEL 2 INTERIOR ELEVATIONS

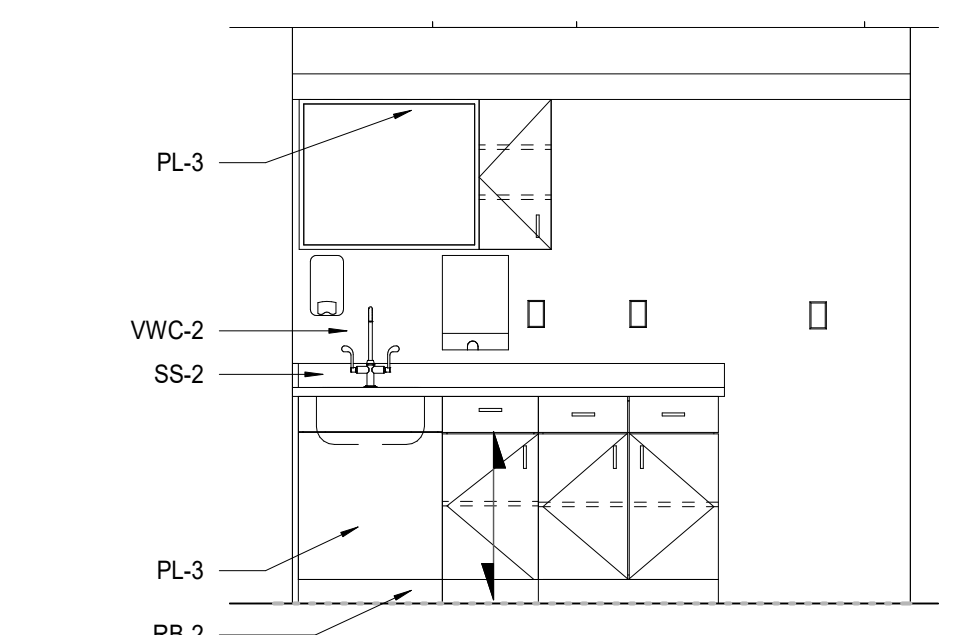
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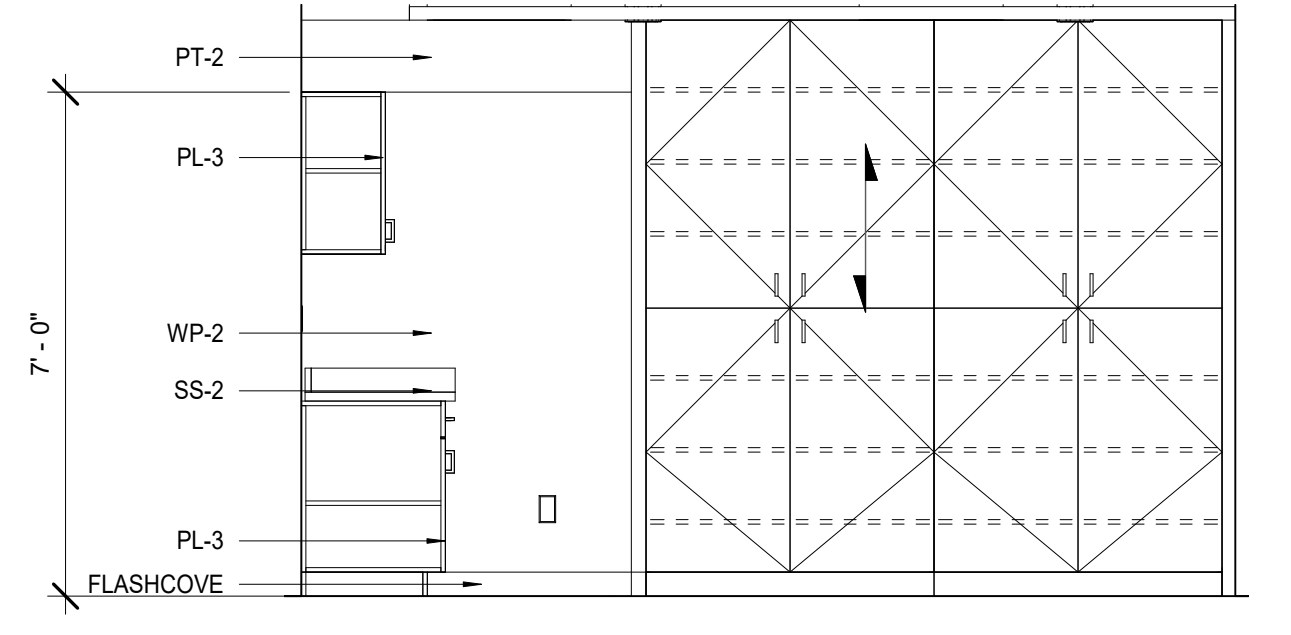
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FACE  
3/8" = 1'-0"



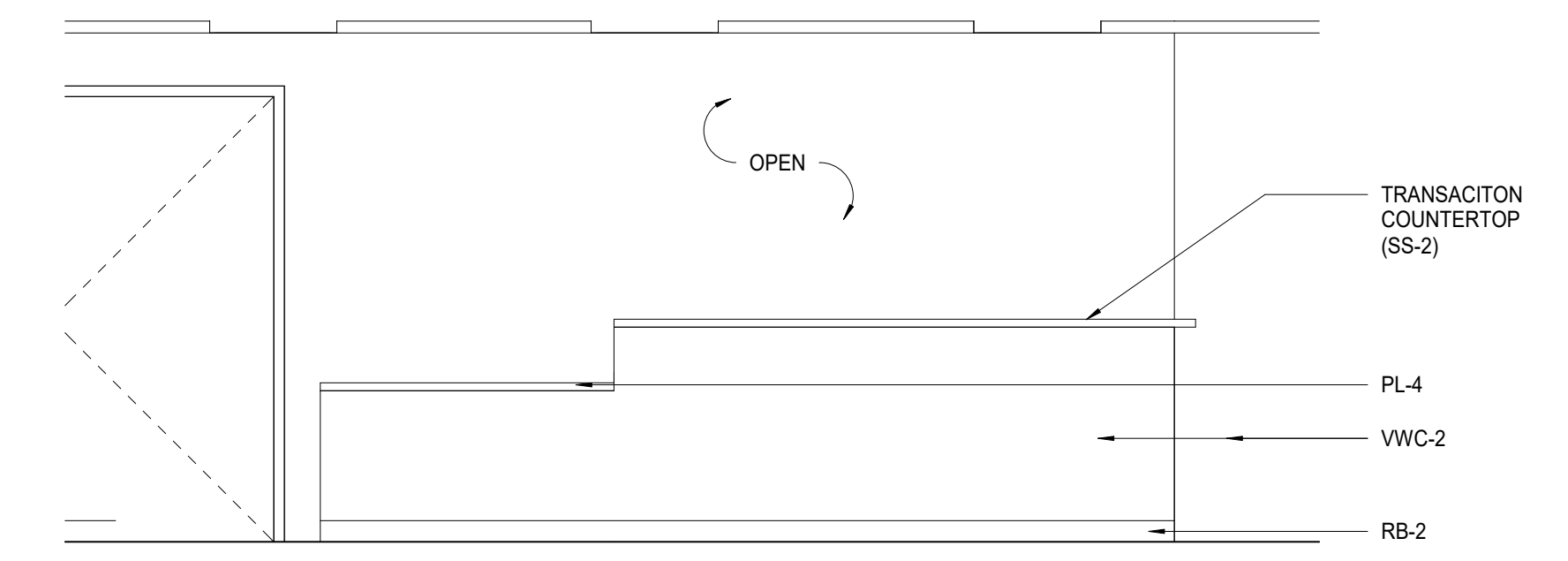
2 ID - ELEV CHPS NURSE STATION C2027  
INT  
3/8" = 1'-0"



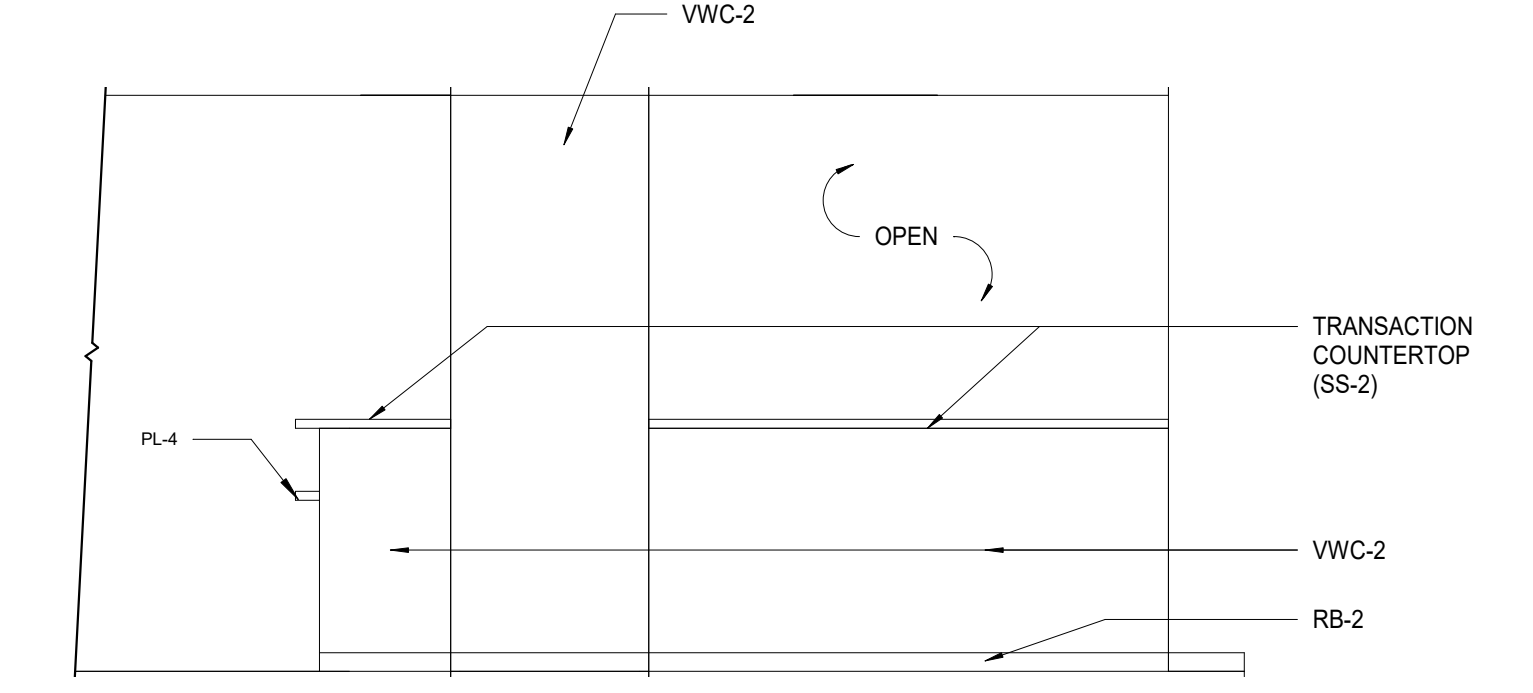
3 ID - ELEV CHPS CORRIDOR CASEWORK  
3/8" = 1'-0"



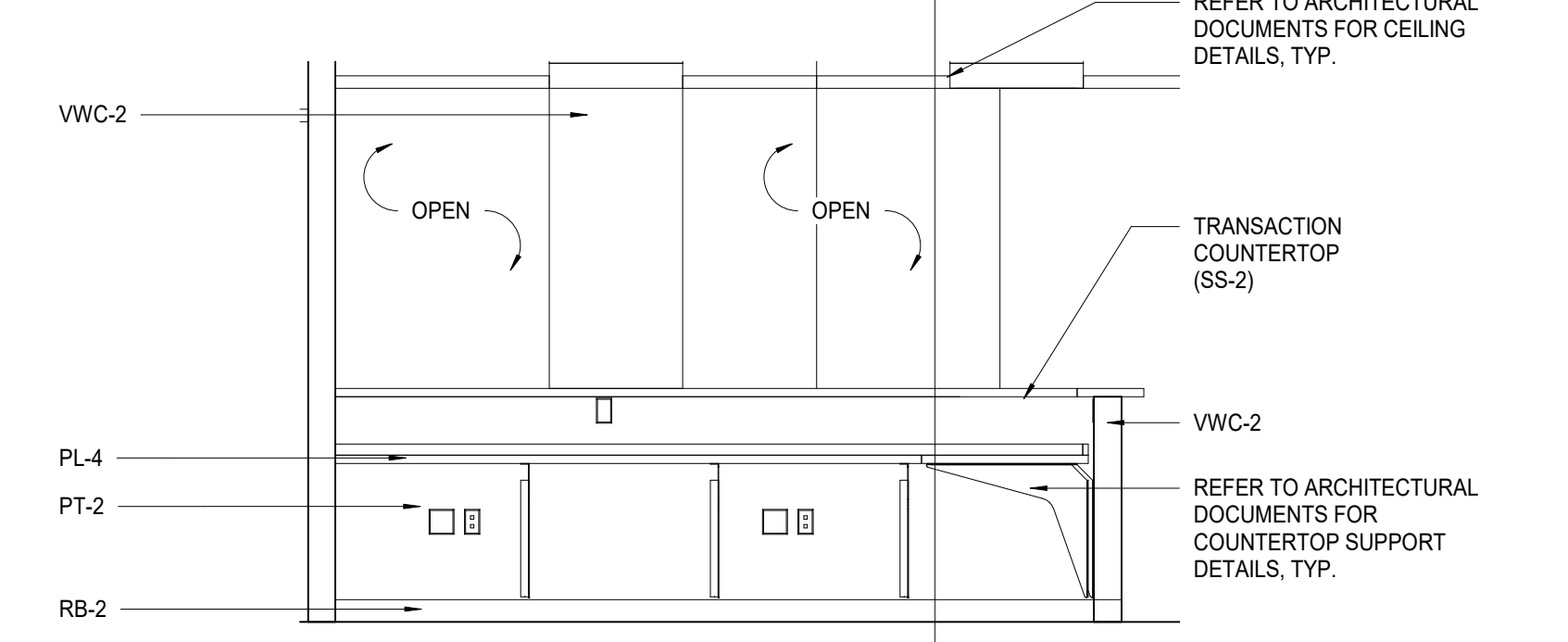
4 ID - ELEV CHPS PROCEDURE C2027G  
3/8" = 1'-0"



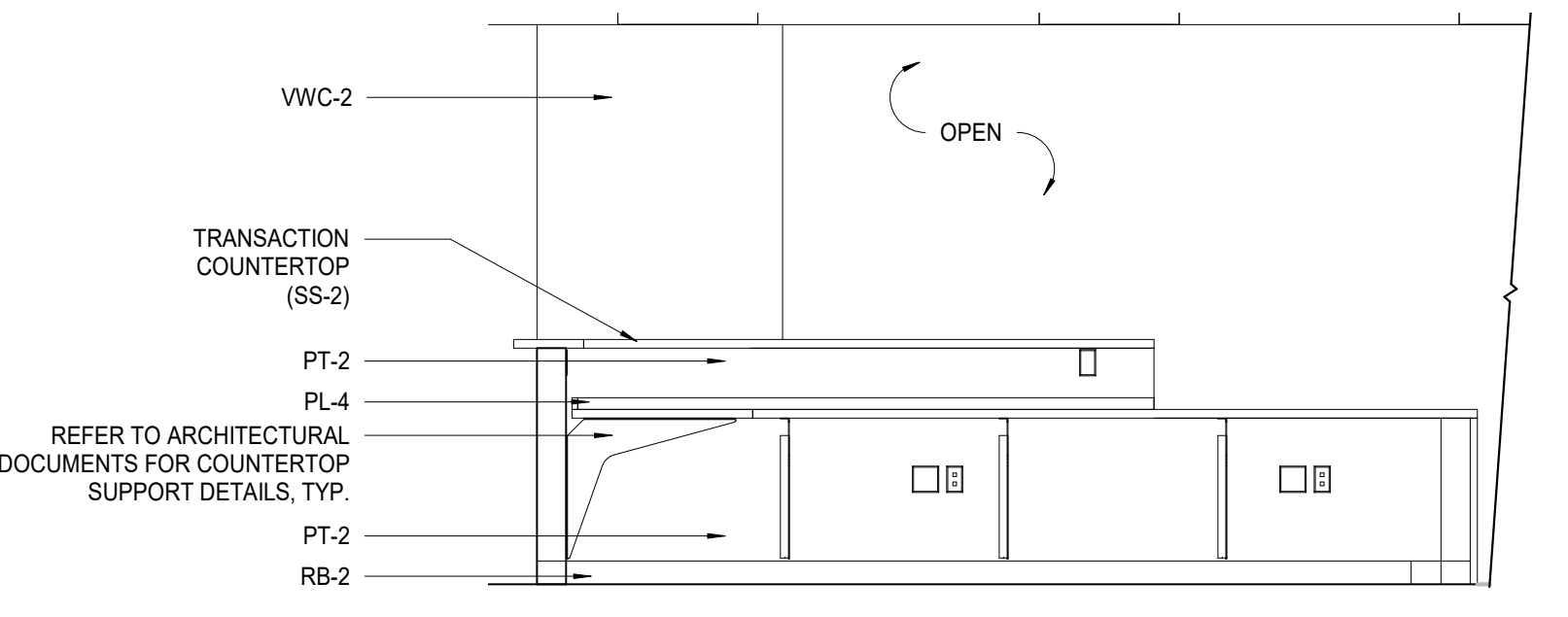
5 ID - ELEV CHPS REGISTRATION EAST  
FACE T2002A  
3/8" = 1'-0"



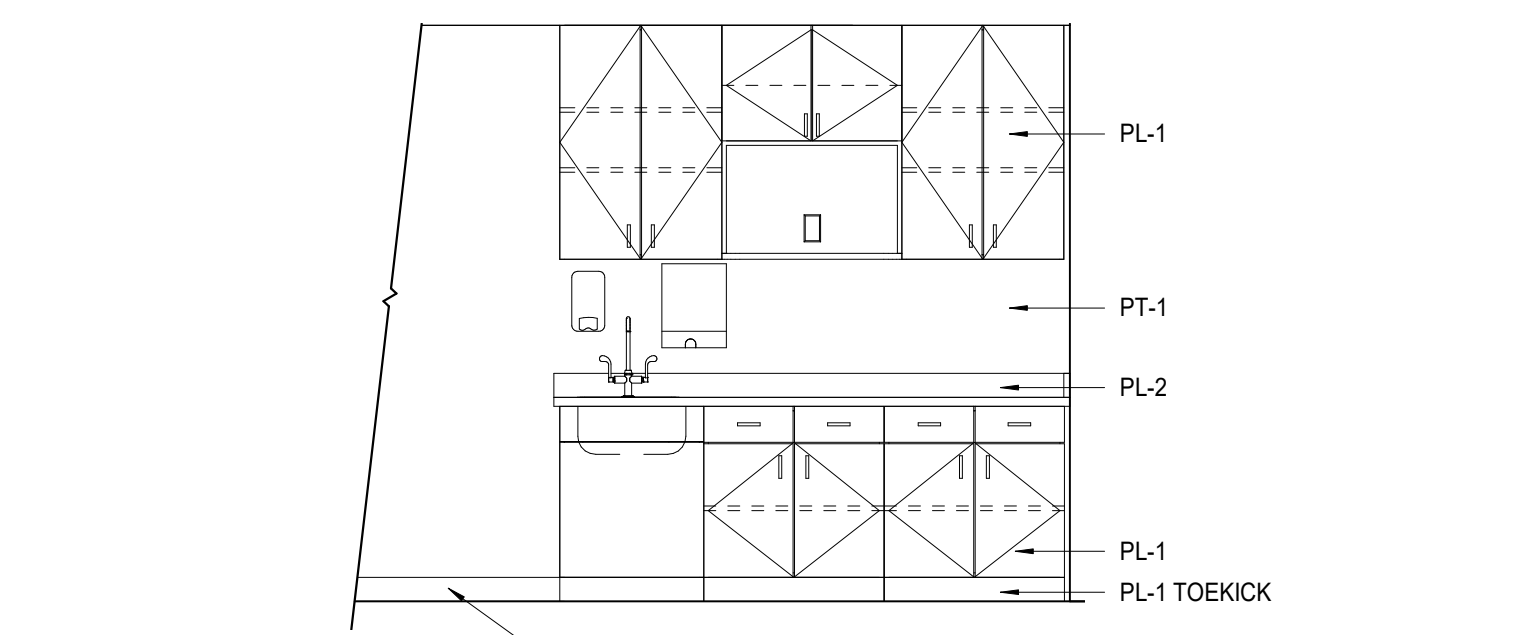
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FACE T2002A  
3/8" = 1'-0"



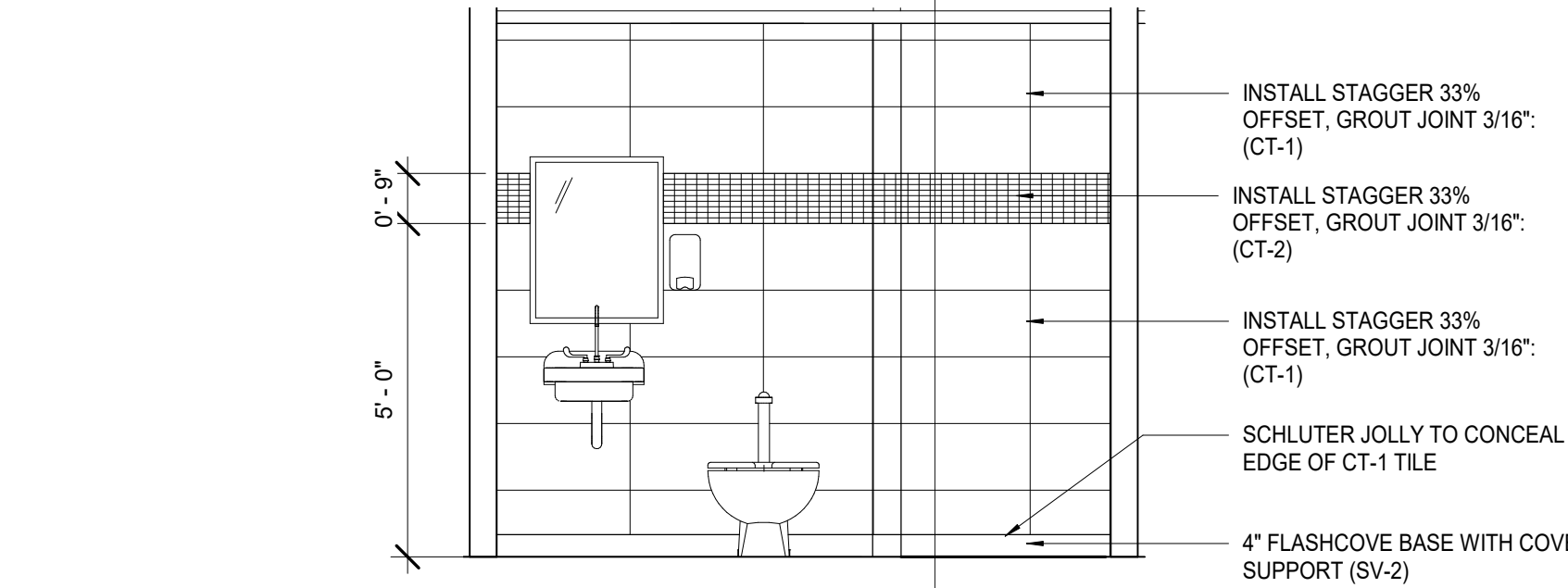
7 ID - ELEV CHPS REGISTRATION SOUTH  
FACE T2002A  
3/8" = 1'-0"



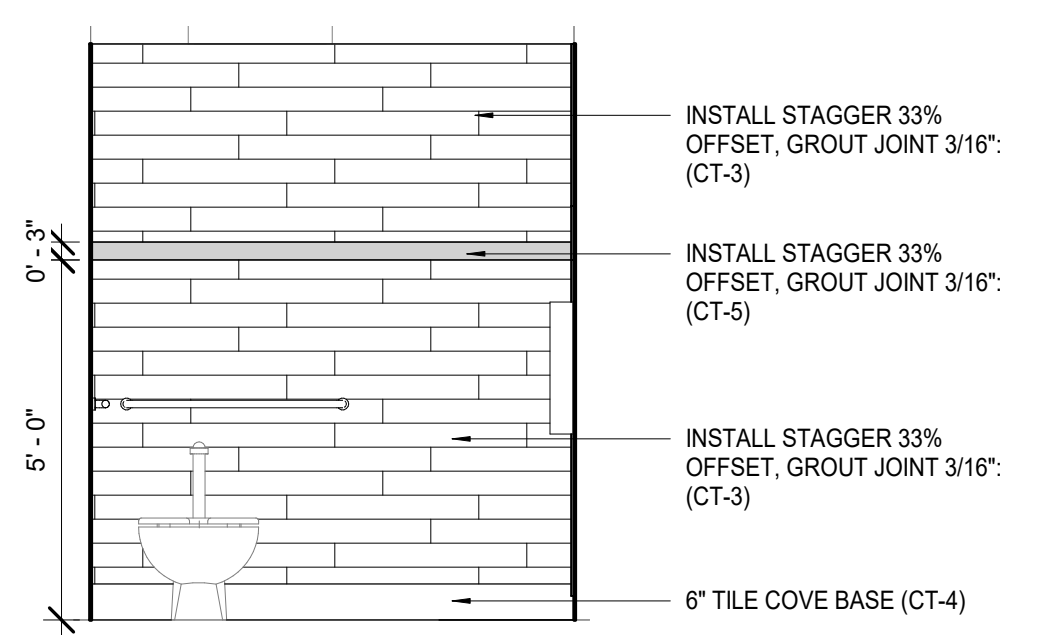
8 ID - ELEV CHPS REGISTRATION WEST  
INT T2002A  
3/8" = 1'-0"



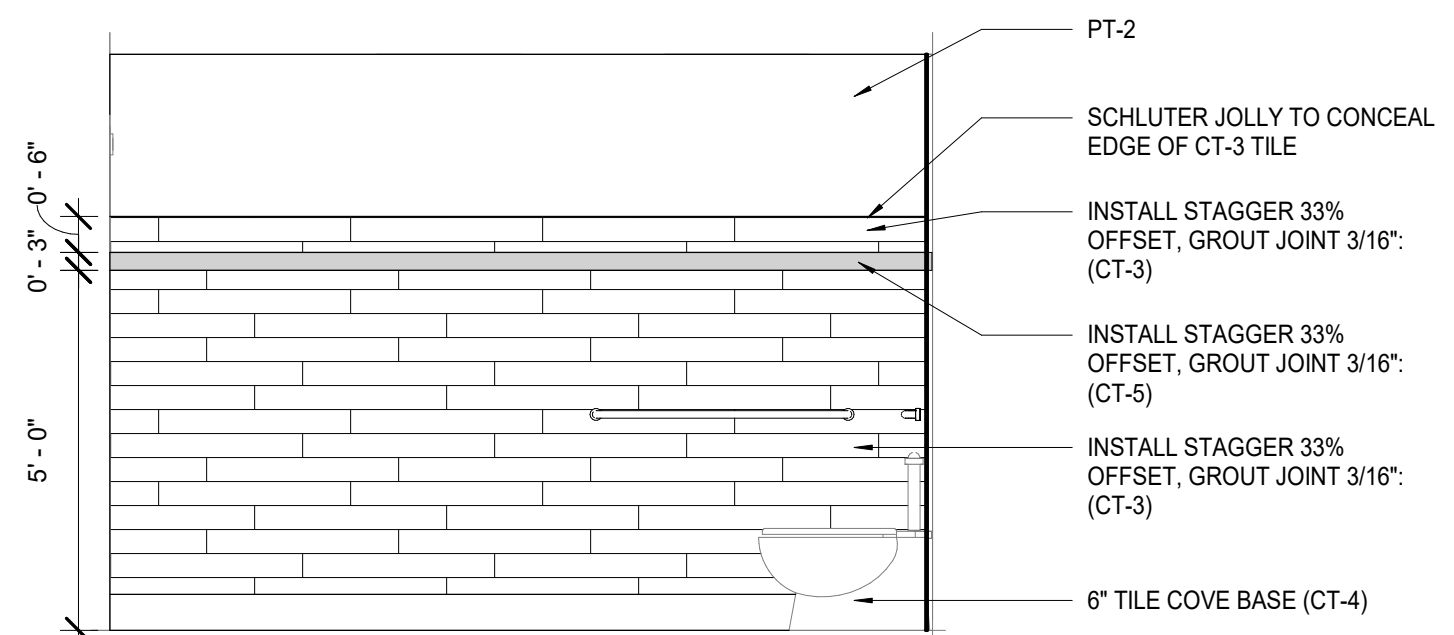
9 ID - ELEV GI BREAKROOM C2023C  
CASEWORK  
3/8" = 1'-0"



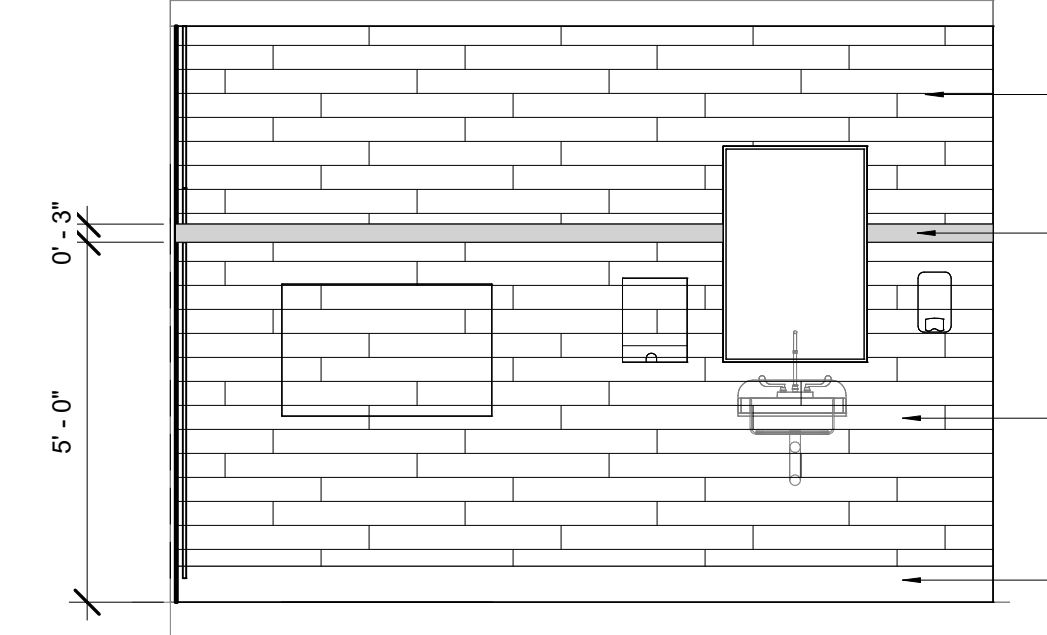
10 ID - ELEV GI STAFF TOILET/SHOWER  
C2023G  
3/8" = 1'-0"



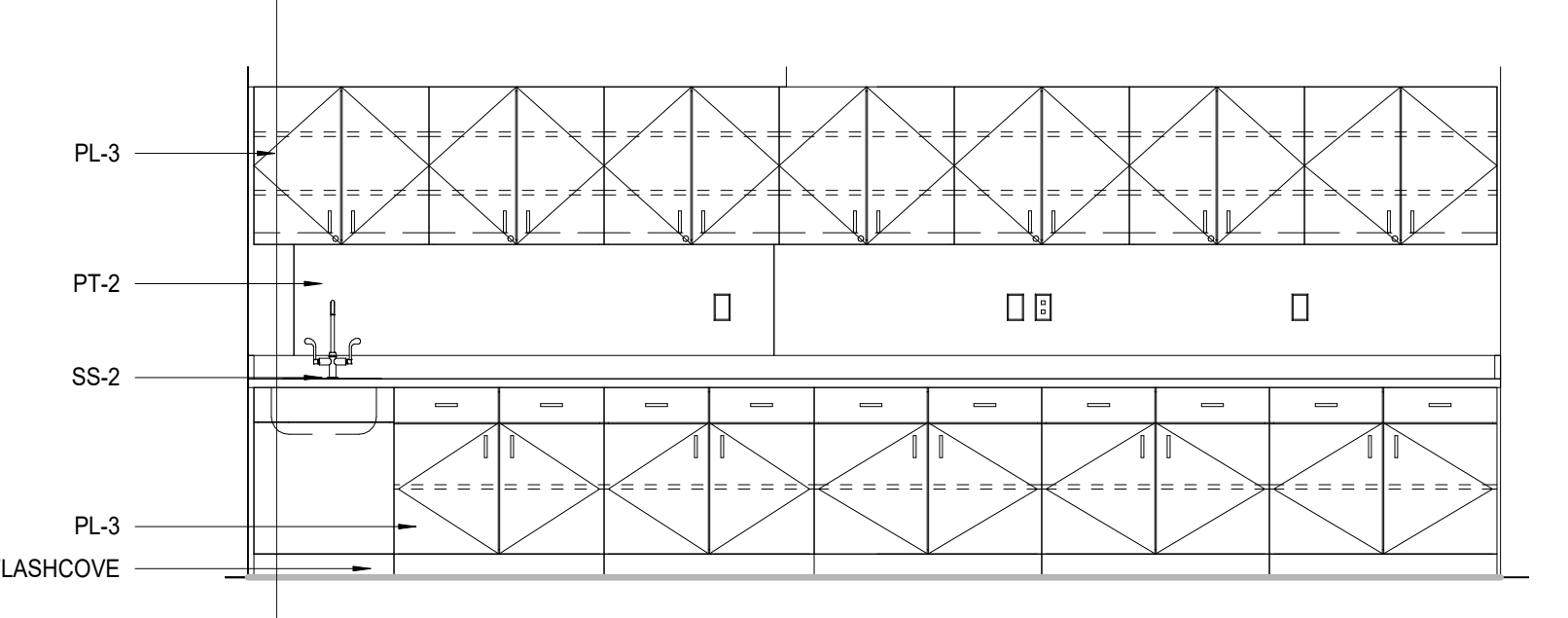
11 ID - ELEV CHPS TOILET EAST C2023E  
3/8" = 1'-0"



12 ID - ELEV CHPS TOILET NORTH C2023E  
3/8" = 1'-0"



13 ID - ELEV CHPS TOILET SOUTH C2023E  
3/8" = 1'-0"



14 ID - ELEV CHPS PROCEDURE C2027G  
SOUTH  
3/8" = 1'-0"

**GENERAL NOTES - STRUCTURAL**

**1. General Information**

- A. The contractor shall verify dimensions and conditions before construction and notify the engineer of any discrepancies, inconsistencies, or difficulties affecting the work before proceeding.
- B. The contractor shall coordinate all disciplines, verifying size and location of all openings, whether shown on structural drawings or as called for on architectural, mechanical, or electrical drawings. In the case of work in an existing building the contractor shall scan existing structure to locate all rebar in the area of the new opening using ground penetrating radar and notify the engineer of record for review prior to cutting. Conflicts, inconsistencies, or other difficulties affecting structural work shall be called to the architect or engineer's attention for direction before proceeding.
- C. All design and construction work for this project shall conform to the requirements of the following governing design codes:
  - 1.) International Building Code (IBC 2018) as amended by the University of Missouri.
  - 2.) Minimum Design Loads for Buildings and Other Structures (ASCE7-16)
  - 3.) Specification for Structural Steel Buildings (AISC 360-16)
  - Member Design Basis is Allowable Stress Design (ASD)
  - Connection Design Basis is Allowable Stress Design (ASD)
  - 4.) Structural Welding Code (AWS D1.4D1.4M-17)
  - 5.) Building Code Requirements for Structural Concrete (ACI 318-14)
  - 6.) Building Code Requirements for Masonry Structures (TMS 402-16)
  - 7.) North American Specification for the Design of Cold-Formed Steel Structural Members (ANSI S100-16)
  - 8.) National Design Specification (NDS) for Wood Construction with 2018 Supplements (ANSI/AWC NDS-2018)
  - 9.) Special Design Provisions for Wind and Seismic (AWC SDPW-2025)
- D. These drawings are for this specific project and no other use is authorized.

**2. Structural Load Design Criteria**

- A. Overhead Exam Light:  
Weight = 15 lbs  
Moment = 266 in-lbs
- B. This project is designed to resist the most critical effects resulting from the load combinations of section 1605.3 of the International Building Code.

**3. Structural Steel**

- A. All structural steel beams and columns shall be ASTM A992, grade 50 steel and all miscellaneous steel shall be ASTM A36 grade steel (except at moment connections where plates shall be ASTM A572, grade 50). Hollow Structural Sections (HSS) shall be ASTM A500, grade C. Fabrication and erection shall be in accordance with AISC 303-16 "Code of Standard Practice for Steel Buildings and Bridges" in the 15th Edition of the AISC Steel Construction Manual.
- B. All welding shall conform to the recommendations of the AWS.
- C. All anchor bolts shall be 3/4" diameter, ASTM F1554, Grade 36 unless noted otherwise. Washers of minimum size and thickness for the given anchor diameter in Table 14-2 of the AISC Steel Construction Manual shall be provided at every column anchor bolt. Washers shall have a standard size hole for the anchor bolt.

**4. Post Installed Anchors**

- A. Post-installed anchors shall be used only where specified on the drawings unless approved in writing by the engineer of record. See drawings for anchor diameter, spacing and embedment. Performance values of the anchors shall be obtained for specified products using appropriate design procedures and/or standards as required by the governing building code. Anchors installed in concrete shall have an ICC-ES Evaluation Service Report. Special inspection is required for all post installed anchors. The contractor shall coordinate an on-site meeting with the post installed anchor manufacturer field representative to educate the construction team on the anchor installation guidelines and requirements.
- B. Mechanical anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ACI 308.3 and ICC-ES AC108. All anchors shall be installed per the anchor manufacturer's written instructions.
- C. Adhesive anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ICC-ES AC308. All anchors shall be installed per the anchor manufacturer's written instructions.

**5. Light Gage Metal Structural Framing**

- A. All load bearing, light gage structural studs, track and bridging shall be of the type, size, gage, and spacing as shown on the plans, minimum.
- B. All materials shall be 33,000 psi minimum yield, except studs of 16 gage or heavier shall have a minimum yield of 50,000 psi.
- C. All properties, fabrication, and erection shall be in accordance with latest editions of the AISI "Specifications for the Design of Cold-Formed Structural Members".
- D. All framing components shall be cut squarely or at an angle to fit squarely against abutting members. Splicing of axially loaded members is not permitted. Members shall be held firmly in place until properly fastened. Attachments of similar components shall be by welding, screw attachment, or bolting. Wire tying of components is not permitted.
- E. Tracks shall be securely anchored to floor and overhead members. Special anchorage requirements required for wind bracing shall be as shown on the plans.

**6. Shop Drawing Review**

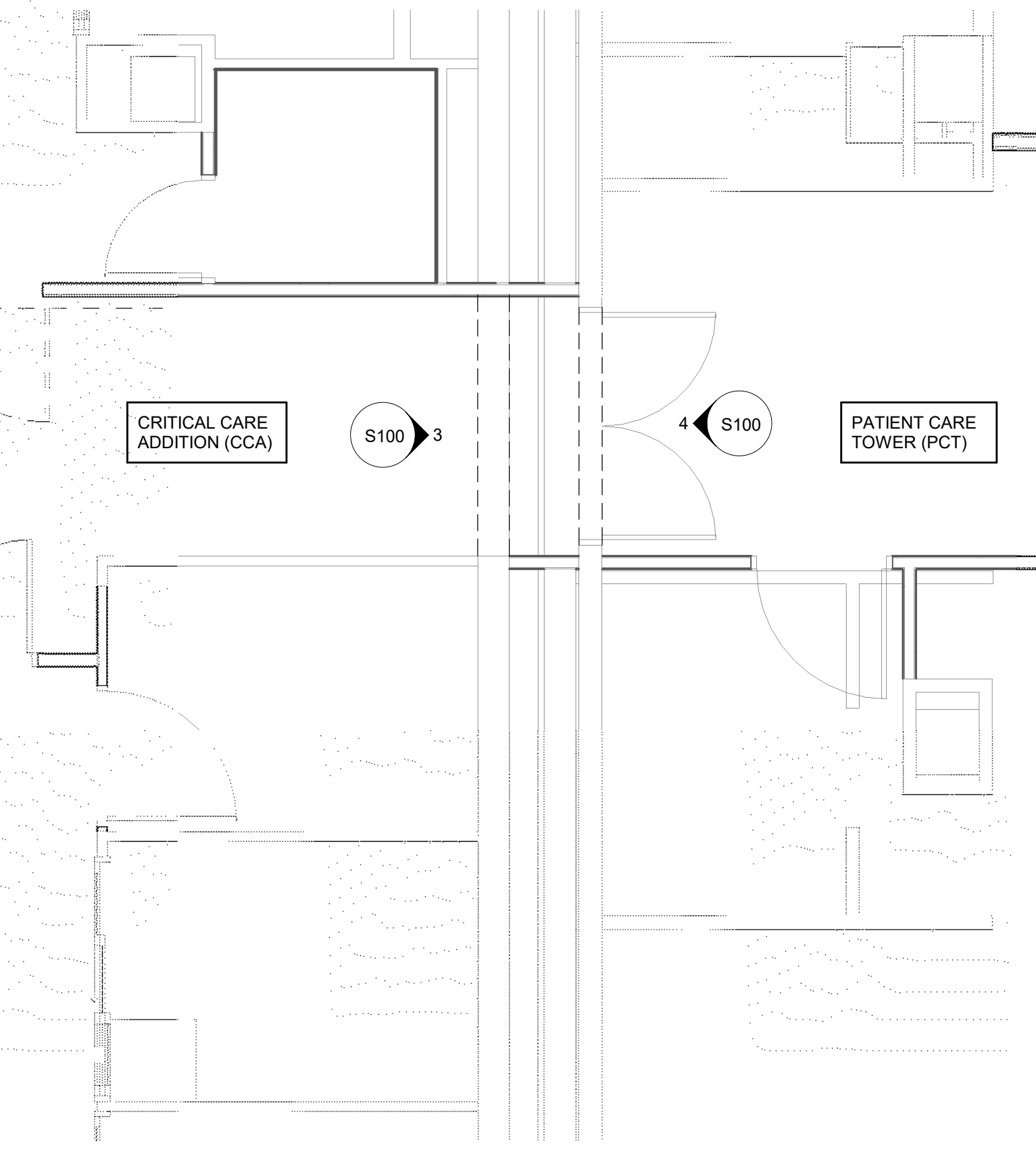
- A. Bob D. Campbell and Company, Inc. will review the General Contractor's (GC) shop drawings and related submittals (as indicated below) with respect to the ability of the detailed work, when complete, to be a properly functioning integral element of the overall structural system designed by Bob D. Campbell and Company, Inc.
- B. Prior to submittal of a shop drawing or any related material to Bob D. Campbell and Company, Inc., the GC shall:
  - 1.) Review each submission for conformance with the means, methods, techniques, sequences and operations of construction and safety precautions and programs incidental thereto, all of which are the sole responsibility of the GC.
  - 2.) Stamp and approve each submission.
  - 3.) Stamp each submission as approved.
- C. Bob D. Campbell and Company, Inc. shall assume that no submission comprises a variation unless the GC advises Bob D. Campbell and Company, Inc. with written documentation.
- D. Bob D. Campbell and Company, Inc. shall review shop drawings and related materials with comments provided that each submission has met the above requirements. Bob D. Campbell and Company, Inc. shall return without comment unrequired material or submittals without GC approval stamp.
- E. Shop drawings and related material (if any) required are indicated below. Should Bob D. Campbell and Company, Inc. require more than ten (10) working days to perform the review, Bob D. Campbell and Company, Inc. shall so notify the GC.
  - 1.) Structural steel shop drawings including erection drawings and piece details. Include miscellaneous framing specified on the structural drawings, but do not submit framing specified on non-structural drawings for Bob D. Campbell and Company, Inc. review.
  - 2.) Miscellaneous anchors shown on the structural drawings.

**7. Statement of Structural Special Inspections**

- A. The structural design for this project is based on completion of special inspections during construction in accordance with section 1704 of the International Building Code. The owner shall employ one or more qualified special inspectors to provide the required special inspections.
- B. The special inspector shall furnish inspection reports to the building official, owner, architect and structural engineer, and any other designated person.
- C. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design authority, building official and structural engineer.
- D. The special inspector shall submit a final signed report stating that the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions of the building code.
- E. The following inspections and tests are required with the frequency (continuous or periodic) as defined within the referenced section or standard listed below. The General Contractor shall provide notification to the inspector when items requiring inspection are ready to be inspected and provide access for those inspections.
  1. Steel Construction per Section 1705.2 and the quality assurance requirements of AISC 341 Chapter J (as referenced by AISC 360)
  2. Concrete Construction per Section 1705.3 and Table 1705.3
    - a. Post Installed Anchors

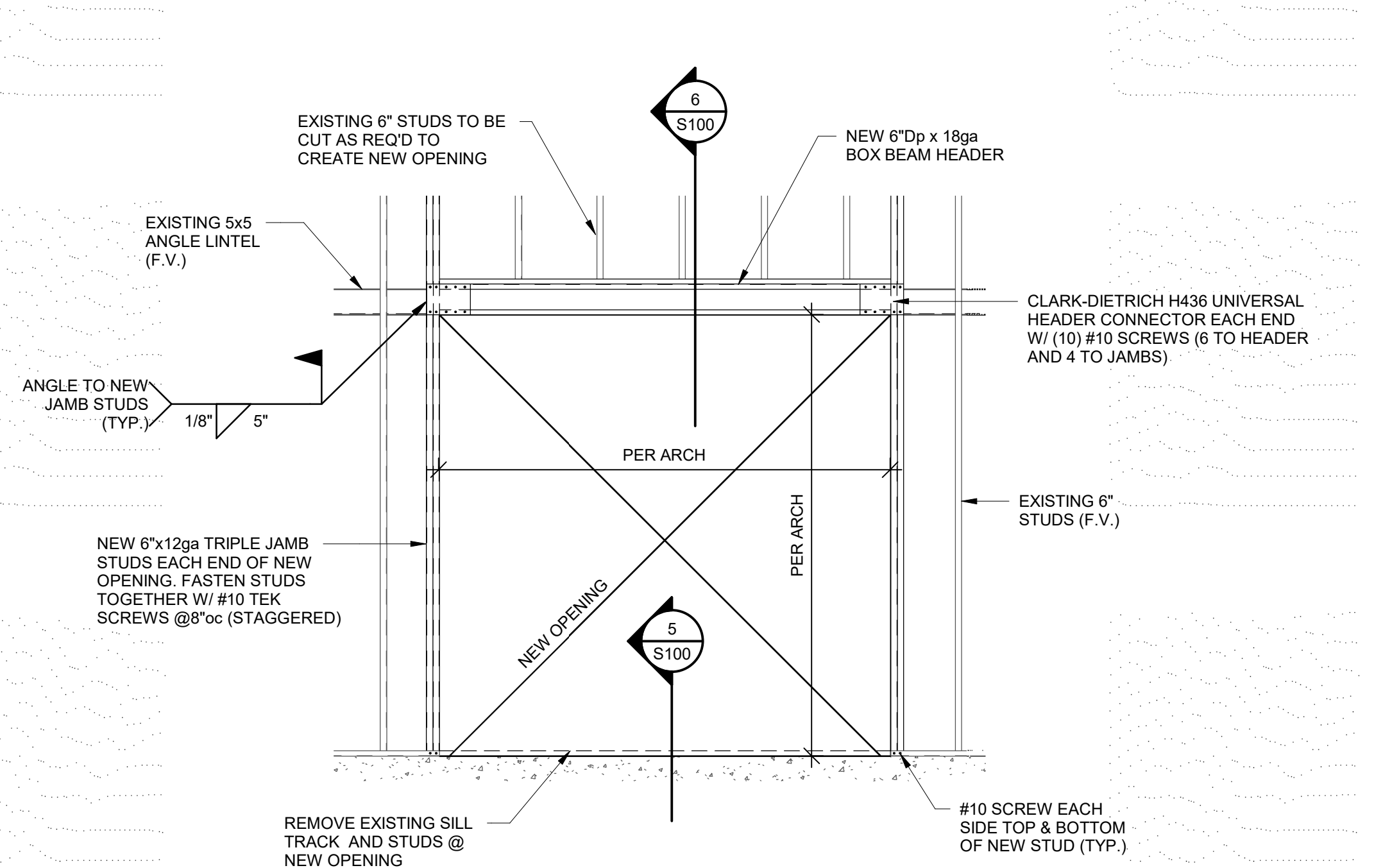
**8. Copyright and Disclaimer**

- A. All drawings in the structural set (S-series drawings) are the copyrighted work of Bob D. Campbell and Company, Inc. These drawings may not be photographed, traced, or copied in any manner without the written permission of Bob D. Campbell and Company, Inc. Exception: Original drawings may be printed for distribution to the owner, architect, and general contractor for coordination, bidding, and construction. Subcontractors may not reproduce these drawings for any purpose or in any manner.
- B. I, Richard C. Crabtree, P.E., registered engineer and a representative of Bob D. Campbell and Company, Inc., do hereby accept professional responsibility as required by the professional registration laws of this state for the structural design drawings consisting of S-series drawings. I hereby disclaim responsibility for all other drawings in the construction document package, they being the responsibility of other design professionals whose seals and signed statements may appear elsewhere in the construction document package.

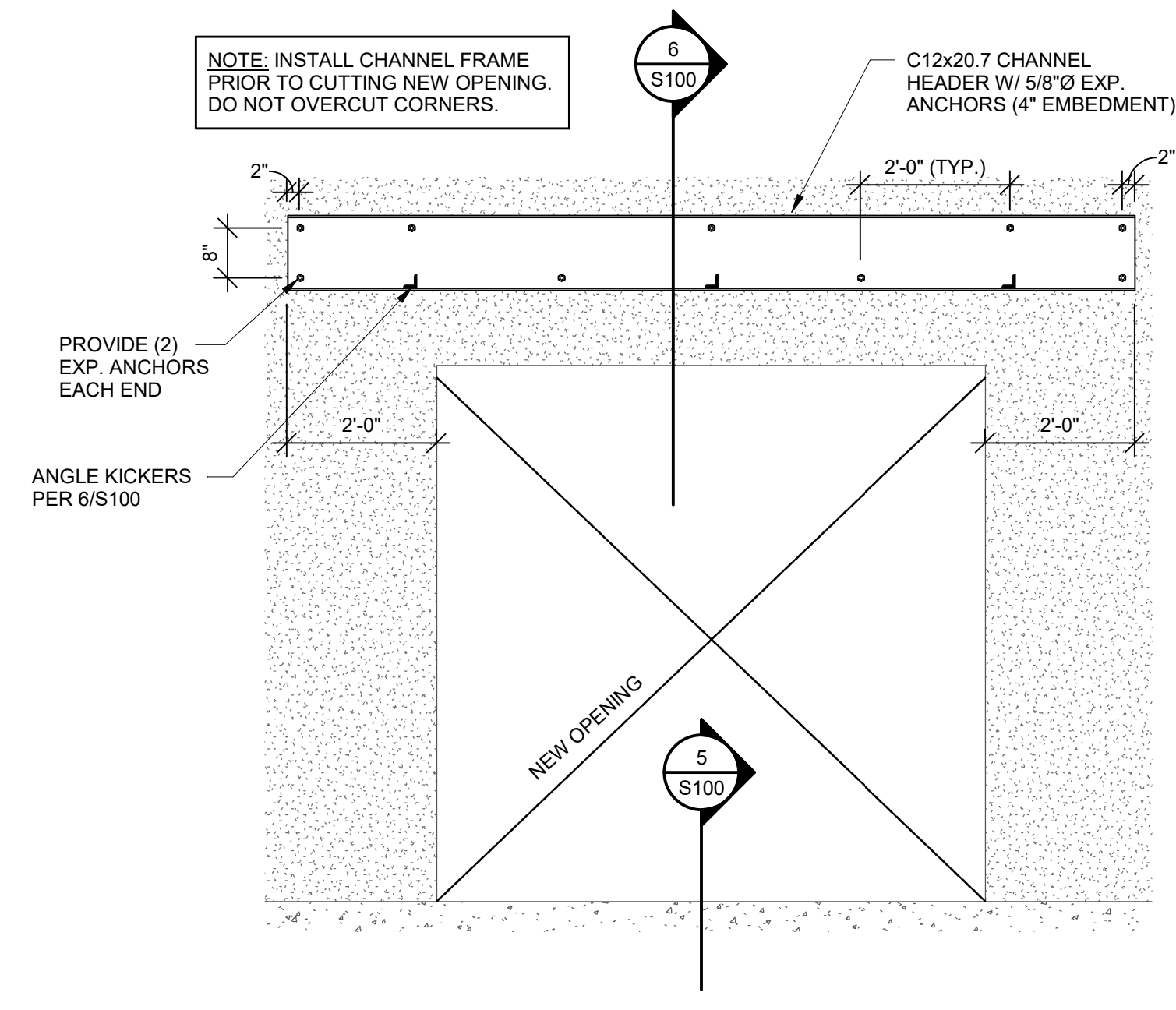


**1 LEVEL 2 FRAMING PLAN**  
1/4" = 1'-0"

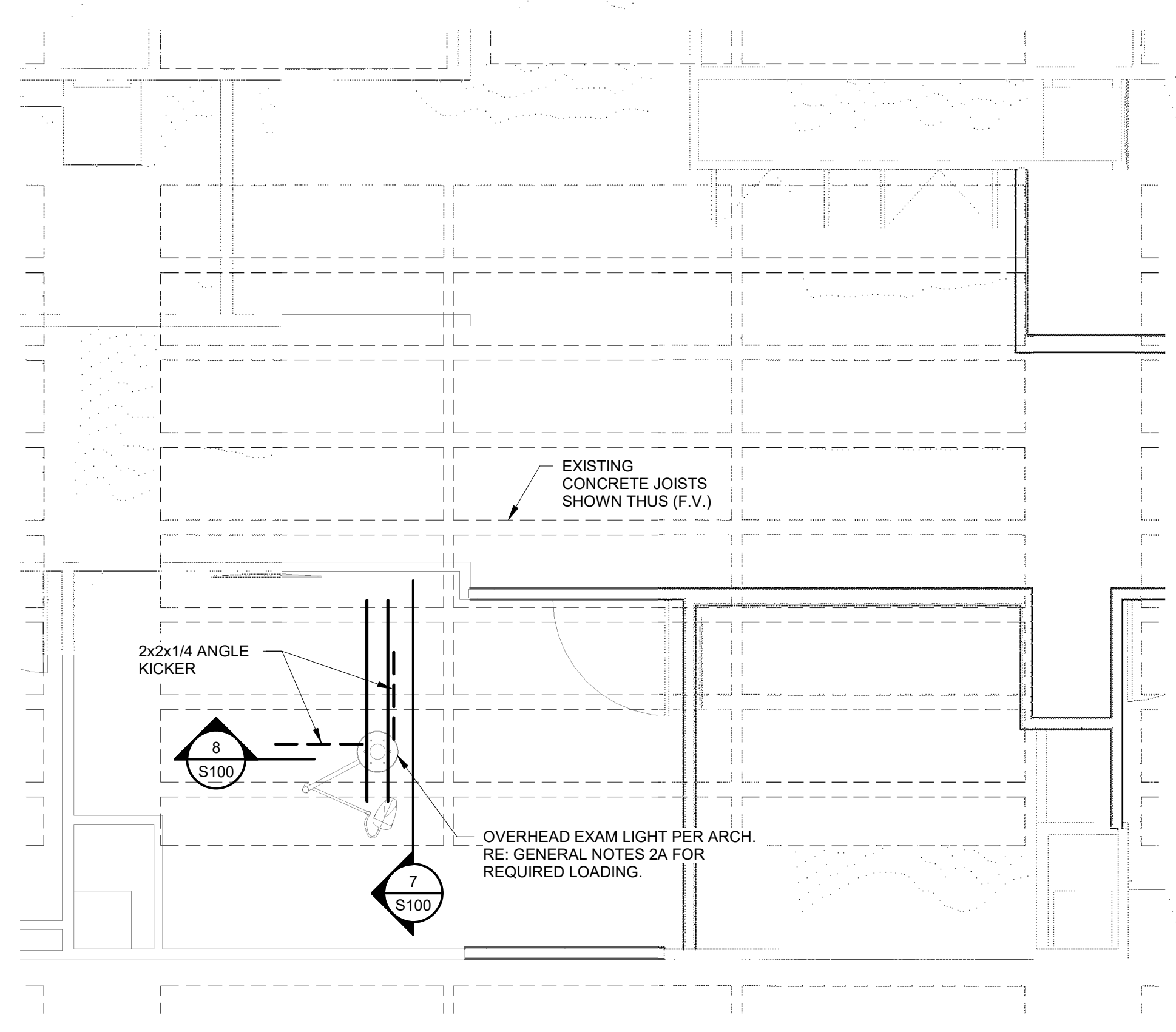
- NOTES:
1. REFER TO GENERAL NOTES ON THIS SHEET.
  2. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
  3. REFER TO SEQUENCE NOTES ON THIS SHEET.



**3 ELEVATION**  
1/2" = 1'-0"

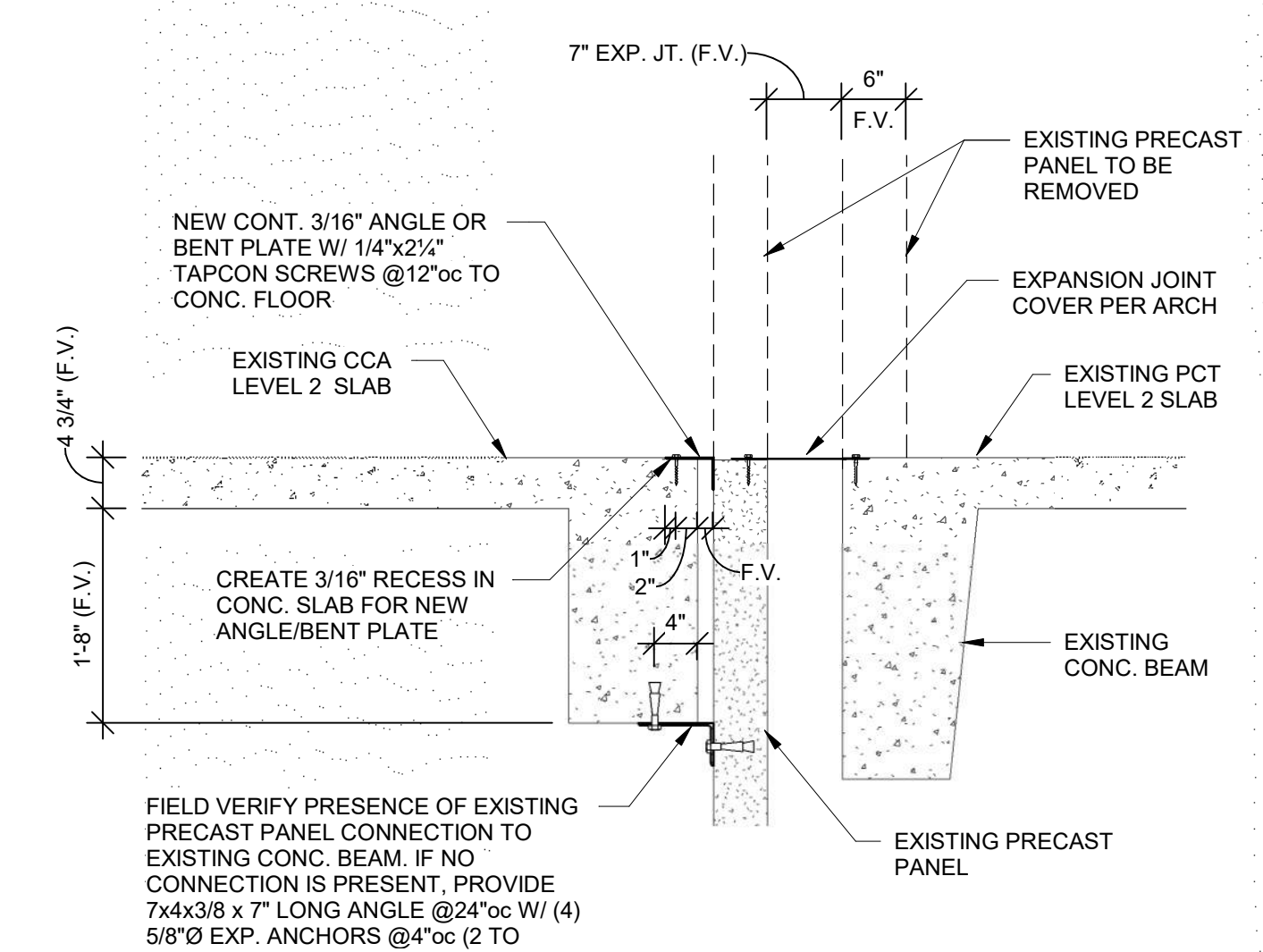


**4 ELEVATION**  
1/2" = 1'-0"

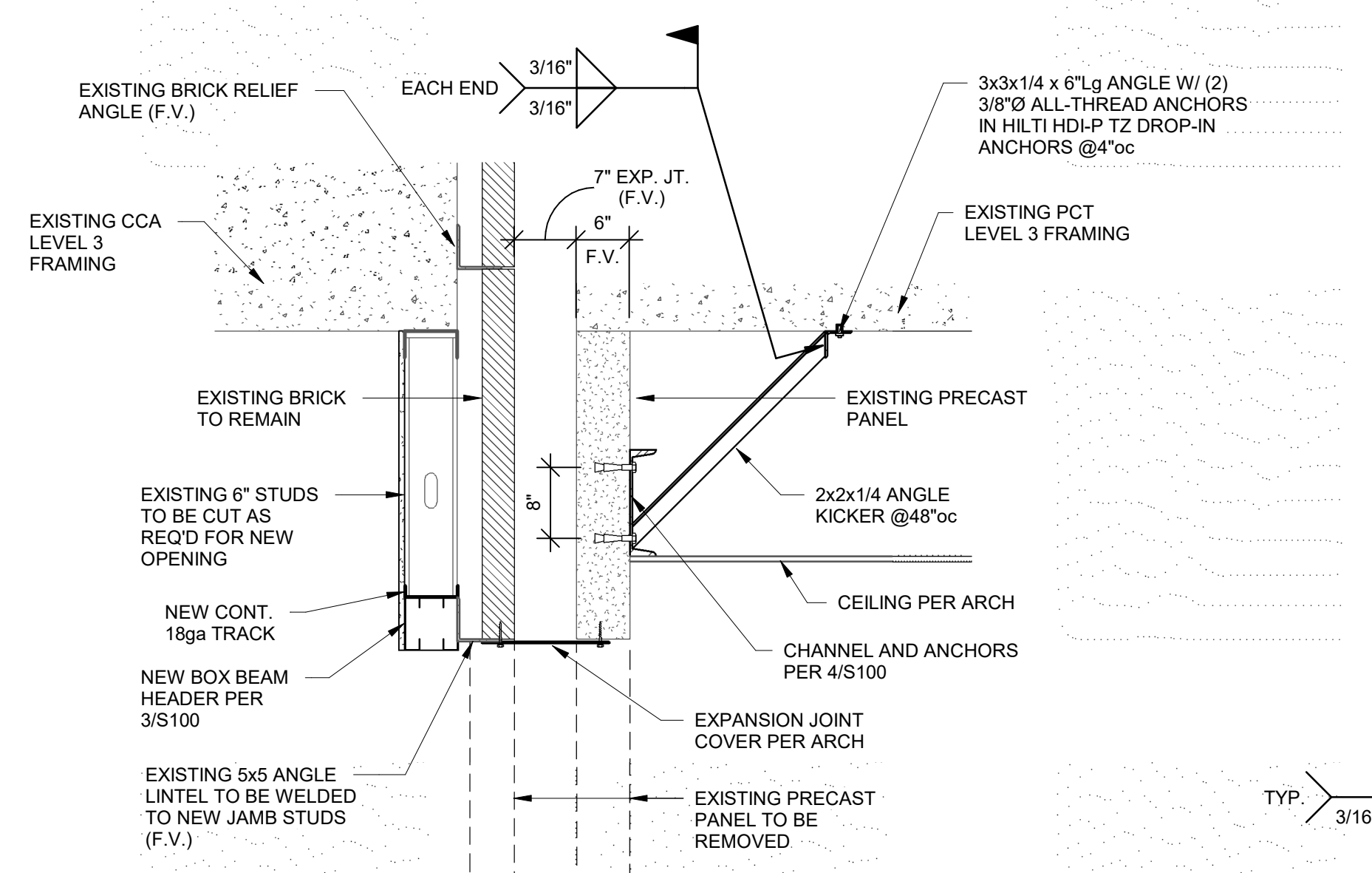


**2 LEVEL 3 FRAMING PLAN**  
1/4" = 1'-0"

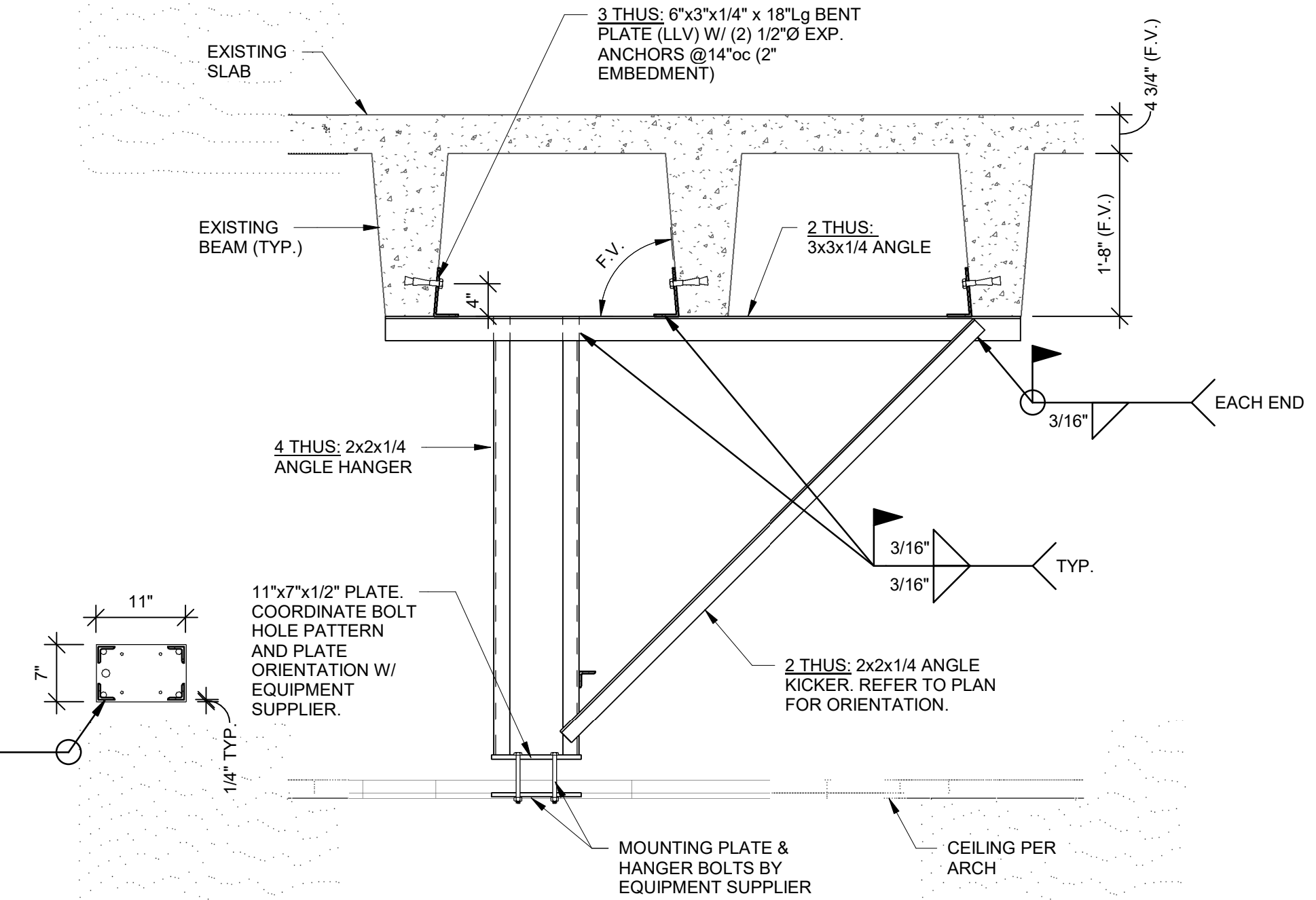
- NOTES:
1. REFER TO GENERAL NOTES ON THIS SHEET.
  2. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION.



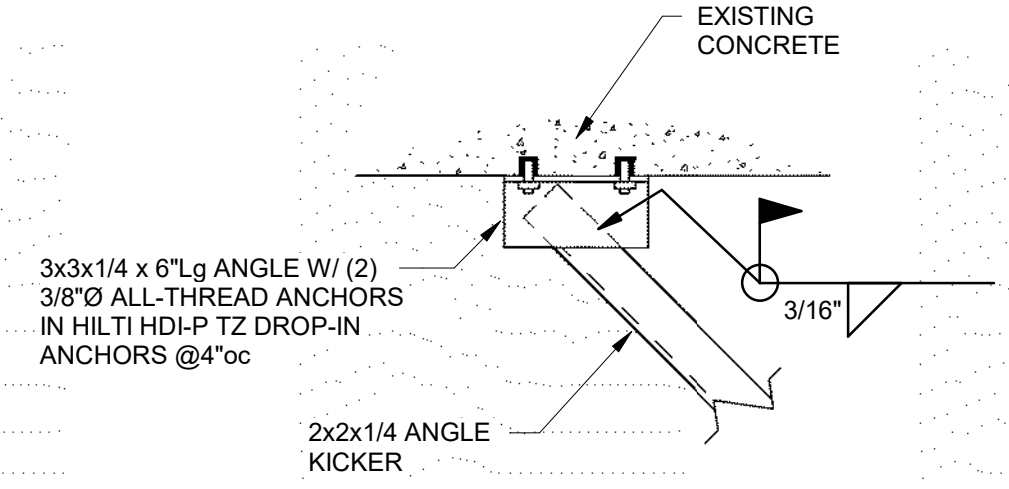
**5 SECTION**  
3/4" = 1'-0"



**6 SECTION**  
3/4" = 1'-0"



**7 SECTION**  
3/4" = 1'-0"



**8 SECTION**  
1 1/2" = 1'-0"

- SEQUENCE NOTES:**
1. INSTALL CHANNEL HEADER PER 4/S100 AND 6/S100.
  2. INSTALL ANGLE KICKERS PER 6/S100.
  3. CUT NEW OPENING IN EXISTING PCT PRECAST PANEL. DO NOT OVERCUT CORNERS.
  4. INSTALL FULL HEIGHT LIGHT GAGE JAMB STUDS IN CCA WALL PER 3/S100.
  5. WELD EXISTING 5x5 ANGLE LINTEL TO NEW JAMB STUDS AS INDICATED IN 3/S100.
  6. CUT EXISTING METAL STUDS AND BOTTOM TRACKS AS REQUIRED TO CREATE NEW OPENING.
  7. INSTALL LIGHT GAGE HEADER PER 3/S100.
  8. FIELD VERIFY PRESENCE OF EXISTING PRECAST PANEL CONNECTION TO EXISTING CCA SECOND FLOOR BEAM PER S100. IF NO CONNECTION IS PRESENT, INSTALL NEW CONNECTIONS PER 5/S100.
  9. CUT NEW OPENING IN EXISTING CCA PRECAST PANEL. DO NOT OVERCUT CORNERS.
  10. INSTALL 3/16" CLOSURE PLATE PER 5/S100.



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

913.232.2123

MO Certificate of Authority Number  
A-201100729

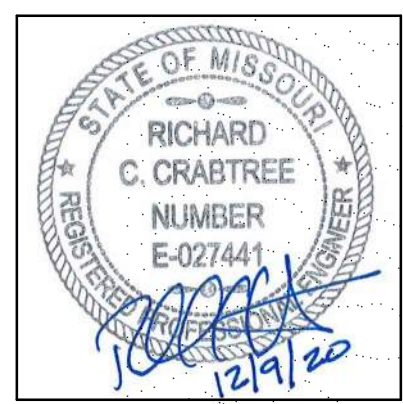
Project Title:

ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383

SPELLMAN BRADY & COMPANY  
825 Maryland Avenue | Suite 300  
St. Louis, MO 63105

BOB D. CAMPBELL 7 CO.  
4338 Bellevue Avenue  
Kansas City, MO 64111

**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 University of Missouri, Columbia, Missouri



Issue Date: 12/09/2020

Issue: Date:

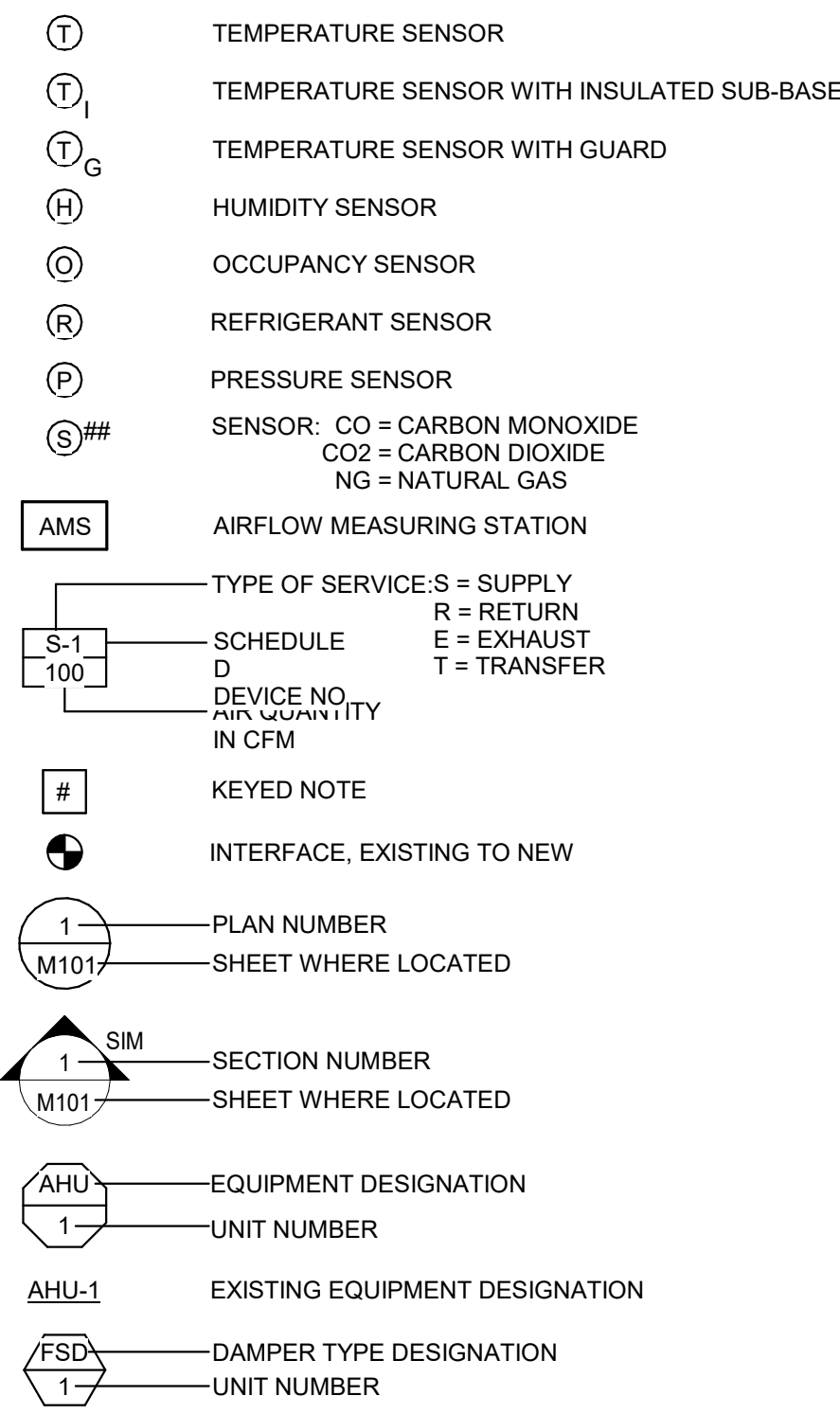
Drawn by: SJB

bcdg Project #: 12275.43  
MU Project #: CP210751

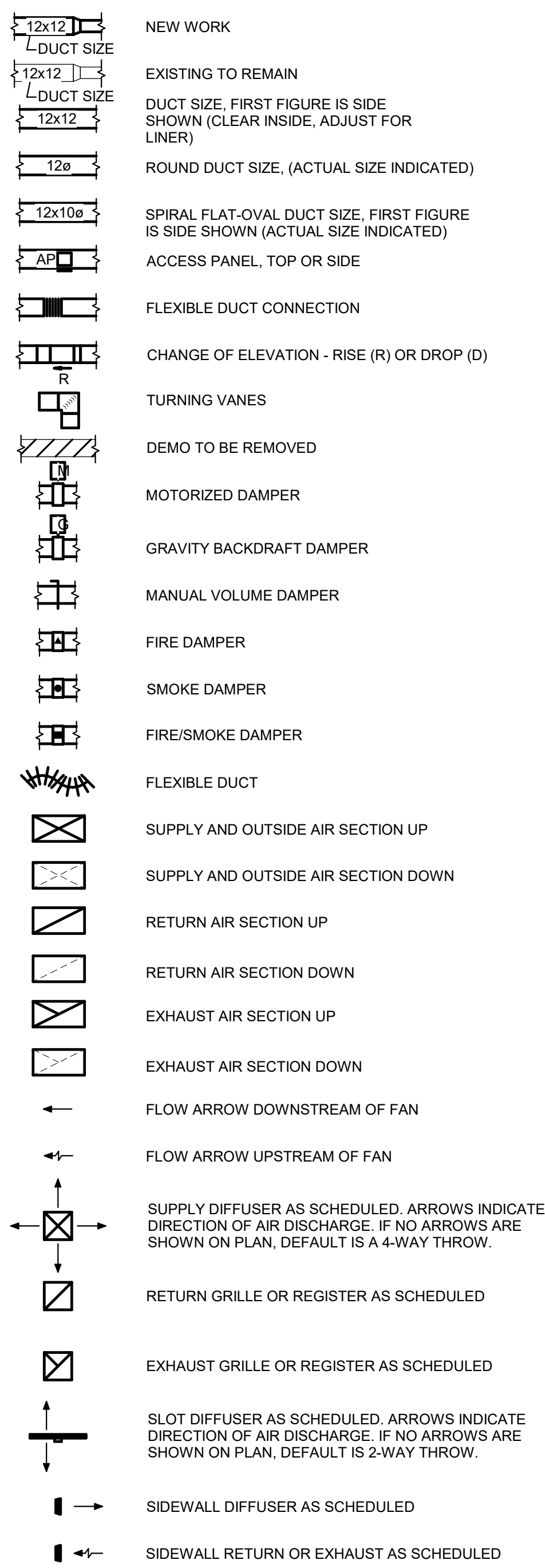
**\$100**

GENERAL NOTES & DETAILS

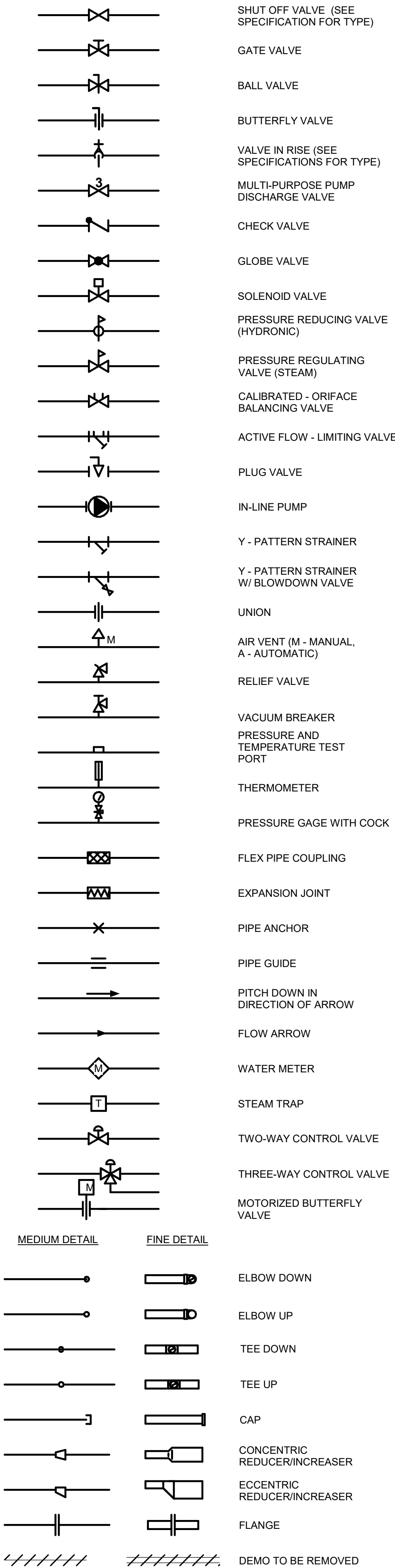
**GENERAL SYMBOLS**



**DUCT SYSTEM SYMBOLS**



**PIPE LINE SYMBOLS**



**PIPE SYSTEM ABBREVIATIONS**

BD	BLOW DOWN
CA	COMPRESSED AIR
CD	CONDENSATE (STEAM) DRAIN
CF	CHEMICAL FEED
CHR	CHILLED/HOT WATER RETURN
CHS	CHILLED/HOT WATER SUPPLY
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
CW	COLD WATER, DOMESTIC
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
D	DRAIN
E	EQUALIZING LINE
FOF	FUEL OIL FILL
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
G	NATURAL GAS
GLR	GLYCOL RETURN
GLS	GLYCOL SUPPLY
HGR	REFRIGERANT HOT GAS
HPR	HIGH PRESSURE CONDENSATE RETURN (100 PSIG)
HPS	HIGH PRESSURE STEAM SUPPLY (100 PSIG)
HW	DOMESTIC HOT WATER
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
LPG	LIQUEFIED PETROLEUM GAS
LPR	LOW PRESSURE CONDENSATE RETURN (15 PSIG)
LPS	LOW PRESSURE STEAM SUPPLY (15 PSIG)
MPR	MEDIUM PRESSURE CONDENSATE RETURN (60 PSIG)
MPS	MEDIUM PRESSURE STEAM SUPPLY (60PSIG)
MU	MAKE-UP WATER (NON-POTABLE)
PC	PUMPED CONDENSATE
PD	PUMP DISCHARGE
PCWR	PRIMARY CHILLED WATER RETURN
PCWS	PRIMARY CHILLED WATER SUPPLY
PHWR	PRIMARY HEATING WATER RETURN
PHWS	PRIMARY HEATING WATER SUPPLY
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
RV	REFRIGERANT VENT
SCWR	SECONDARY CHILLED WATER RETURN
SCWS	SECONDARY CHILLED WATER SUPPLY
SHWR	SECONDARY HEATING WATER RETURN
SHWS	SECONDARY HEATING WATER SUPPLY
SRV	STEAM RELIEF VENT
V	VENT

**EQUIPMENT DESIGNATION**

AC	AIR CURTAIN
ACC	AIR COOLED CONDENSER
ACU	AIR CONDITIONING UNIT
AF	AIR FILTER
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
B	BOILER
BCU	BLOWER COIL UNIT
CAV	CONSTANT AIR VOLUME
CB	CHILLED BEAM
CC	COOLING COIL
CCP	CHEMICAL FEED PUMP
CH	CHILLER
CH	CONDENSER WATER PUMP
CR	COMPUTER ROOM AIR CONDITIONING UNIT
CRP	CONDENSATE RETURN PUMP
CSG	CLEAN STEAM GENERATOR
CT	COOLING TOWER
CTF	COOLING TOWER FILTER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CVR	CONVECTOR
CWP	CHILLED WATER PUMP
DFH	DEAERATING FEEDWATER HEATER
EOV	EXHAUST AIR VALVE
EF	EXHAUST FAN
EJ	EXPANSION JOINT
ERU	ENERGY RECOVERY UNIT
ETU	EXPANSION TANK
EVC	EVAPORATIVE COOLER
F	FAN
FAV	FUME AIR VALVE
FC	FLUID COOLER
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FSD	COMBINATION FIRE/SMOKE DAMPER
FT	FLASH TANK
FTR	FIN-TUBE RADIATION
FTU	FAN TERMINAL UNIT
GP	GLYCOL PUMP
GV	GRAVITY VENTILATOR
H	HUMIDIFIER
HC	HEATING COIL
HEV	HEAT EXCHANGER
HPU	HEAT PUMP UNIT
HRU	HEAT RECOVERY UNIT
HWP	HEATING WATER PUMP
HX	HEAT EXCHANGER
L	LOUVER
MAU	MAKE-UP AIR UNIT
MD	MOTORIZED DAMPER
P	PUMP
PAC	PACKAGED AIR CONDITIONING UNIT
PCWP	PRIMARY CHILLED WATER PUMP
PG	PIPE GUIDE
PHWP	PRIMARY HEATING WATER PUMP
PHX	PLATE HEAT EXCHANGER
PRV	PRESSURE REGULATING VALVE
SCWP	SECONDARY CHILLED WATER PUMP
SD	SMOKE DAMPER
SF	SUPPLY FAN
SHWP	SECONDARY HEATING WATER PUMP
ST	STEAM TRAP
T	TANK
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME BOX
WCC	WATER COOLED CONDENSER

**GENERAL ABBREVIATIONS**

A	AIR OR AMP (PER CONTEXT)
ACC	ACCESSORIES
AD	ACCESS DOOR
AF	ABOVE FINISHED FLOOR
AFS	AIR FLOW SWITCH
AHRI	AIR CONDITIONING, HEATING, AND REFRIGERATION INSTITUTE
AI	ANALOG SIGNAL INPUT
AMB	AMBIENT
AO	ANALOG SIGNAL OUTPUT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
APLV	APPLICATION PART LOAD VALUE
APPROX	APPROXIMATE
ARCH	ARCHITECTURE/ARCHITECT
AUX	AUXILIARY
AV	AUTOMATIC VENT
AVG	AVERAGE
BDD	BACK DRAFT DAMPER
BFC	BELOW FINISHED CEILING
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BI	BINARY SIGNAL INPUT
BMS	BUILDING MANAGEMENT SYSTEM
BO	BINARY SIGNAL OUTPUT
BOB	BOTTOM OF BEAM
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BS	BEAM SPACE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
BWE	BAKED WHITE ENAMEL
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CFM	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CLG	COOLING DUCT (COLD DUCT)
CO	CLEAN OUT
COMP	COMPRESSOR
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECTION
CORR	CORRIDOR
CV	CONTROL VALVE
D	DEPTH
DB	DRY BULB
DBA	A-WEIGHTED DECIBELS
DEFL	DEFLECTION
DEG	DEGREES
DEG F	DEGREES FAHRENHEIT
DES	DESIGN
DIA	DIAMETER
DIM	DIMENSION
DISCH	DISCHARGE
DIV	DIVISION
DN	DOWN
DP	DIFFERENTIAL PRESSURE SENSOR
DP	DIFFERENTIAL PRESSURE SWITCH
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
DTL	DETAIL
DWG(S)	DRAWING(S)
EA	EXHAUST AIR OR EACH (PER CONTEXT)
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENT RATIO
EFF	EFFICIENCY
ELEC	ELECTRIC
ELEV	ELEVATION
EQU	EQUAL
ESP	EXTERNAL STATIC PRESSURE
EWB	ENTERING AIR WET BULB TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST	EXISTING
EXT	EXTERNAL
F	FAHRENHEIT
F&T	FLOAT AND THERMOSTATIC
FC	FLEXIBLE CONNECTION
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FIN	FINISHED
FLR	FLOOR
FPF	FINS PER FOOT
FPM	FEET PER MINUTE
FS	FLOW SWITCH
FT	FEET
FT-HD	HEAD IN FEET
GA	GAUGE
GAL	GALLONS
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H	HEIGHT
HD	HEAD
HEV	HOSE END VALVE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HTG	HEATING DUCT (HOT DECK)
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HW	HOT WATER
HZ	HERTZ
IB	INVERTED BUCKET
IE	INVERT ELEVATION
IN	INCH-INCHES
INDIC	INDICATOR

**GENERAL ABBREVIATIONS, CONTINUED**

IRLV	INTEGRATED PART-LOAD VALUE
ISP	INTERNAL STATIC PRESSURE
JS	JOIST SPACE
KW	KILOWATTS
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LB(S)	POUNDS
LF	LINEAR FEET
LRA	LOCKED ROTOR AMPS
LS	LIGHT SPACE
LVL	LEVEL
LWT	LEAVING WATER TEMPERATURE
MAN	MANUAL
MANU	MANUFACTURER
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MERV	MINIMUM EFFICIENCY REPORTING VALUE (ASHRAE 52.2)
MFR	MANUFACTURER
MIN	MINIMUM OR MINUTE (PER CONTEXT)
MTD	MOUNTED
MTL	METAL
MANUAL VENT	MANUAL VENT
NC	NORMALLY CLOSED OR NOISE CRITERIA (PER CONTEXT)
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN OR NUMBER (PER CONTEXT)
NOM	NOMINAL
NPLV	NON-STANDARD PART LOAD VALUE
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OPBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OT	OIL TRAP
PA	PIPE ANCHOR
PBD	PARALLEL BLADE DAMPER
PD	PRESSURE DROP
PENT	PENTHOUSE
PH	PHASE
PHG	PREHEAT COIL
PLSG	POUNDS PER SQUARE INCH
PNEU	PNEUMATIC
PPH	POUNDS PER HOUR
PRESS	PRESSURE
PRV	PRESSURE REGULATING VALVE
DEFLECTION	DEFLECTION
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
QTY	QUANTITY
RETUR AIR	RETURN AIR
RAD	RADIATED
RD	ROOF DRAIN
REFR	REFRIGERANT
REQ	REQUIRED
RH	RELATIVE HUMIDITY
RLA	RUNNING LOAD AMPS
RM	ROOM
RND	ROUND
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SAN	SANITARY
SECN	SECTION
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SENS	SENSIBLE
SF	SQUARE FOOT
SH	SENSIBLE HEAT
SHT	SHEET
SND	SOUND
SOLENOID	SOLENOID
STATIC PRESSURE	STATIC PRESSURE
SPD	STATIC PRESSURE DIFFERENTIAL
SPT	STATIC PRESSURE TRANSMITTER
SQ	SQUARE
SST	STAINLESS STEEL
STL	STEEL
STM	STEAM
T&P	TEMPERATURE AND PRESSURE
TC	TEMPERATURE CONTROL
TD	THERMODYNAMIC OR TEMPERATURE DIFFERENTIAL (PER CONTEXT)
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
TOT	TOTAL
TPD	TOTAL PRESSURE DROP
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UC	UNDERCUT DOOR
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
VAC	VACUUM
VD	VOLUME DAMPER (MANUAL)
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
VTR	VENT THRU ROOF
W	WATT OR WIDTH (PER CONTEXT)
WITH	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER COLUMN
WG	WATER GAUGE
WPD	WATER PRESSURE DIFFERENTIAL
WT	WEIGHT

**GENERAL NOTES:**

- THESE PLANS ARE DIAGRAMMATIC IN NATURE. THE CONTRACTOR SHALL BE PREPARED TO MAKE SOME ALTERATIONS TO THE EXACT LOCATION OF DUCTWORK, PIPING AND EQUIPMENT FROM THE LOCATION INDICATED ON THESE DRAWINGS TO FIT ACTUAL JOB CONDITIONS.
- ALL ELBOWS, FITTINGS, ETC., IN PIPING AND DUCTWORK REQUIRED TO CLEAR ALL JOB OBSTRUCTIONS ARE NOT NECESSARILY INDICATED. ALL NECESSARY TRANSITIONS, FITTINGS AND OFFSETS ARE REQUIRED WHETHER SHOWN OR NOT.
- BECAUSE OF THE LIMITED SPACE AVAILABLE TO INSTALL ALL OF THE MECHANICAL WORK, COORDINATION BETWEEN THE VARIOUS TRADES IS OF THE UTMOST IMPORTANCE. SEE SPECIFICATION 230100 FOR REQUIRED COORDINATION DRAWINGS.
- THE CONTRACTOR SHALL COORDINATE STAGING AND SCHEDULING WITH THE OWNER'S REPRESENTATIVE.
- EXISTING CONDITIONS ARE BASED ON INFORMATION OBTAINED FROM PREVIOUS CONSTRUCTION DOCUMENTS AND INFORMAL FIELD OBSERVATION AND SHALL NOT BE CONSIDERED AS "AS BUILT." THE CONTRACTOR SHALL FIELD-VERIFY EXISTING CONDITIONS BEFORE THE ONSET OF CONSTRUCTION.
- DEMOLISH ALL PIPING, DUCTWORK EQUIPMENT, ETC., SHOWN TO BE REMOVED, IN ITS ENTIRETY, INCLUDING ALL HANGERS AND SUPPORTS.
- WHERE CONTRACTOR IS REQUIRED TO CONCEAL NEW WORK, REMOVE OR MODIFY EXISTING CONSTRUCTION OR EQUIPMENT, OR ATTACH TO EXISTING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR OR REPLACE EXISTING CONSTRUCTION AND MATERIALS TO MATCH CONDITIONS AT THE ONSET OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE AND REPLACE EXISTING CEILING AND WALLS REQUIRED FOR INSTALLATION OF MECHANICAL SYSTEMS.
- THE OWNER SHALL MAINTAIN ALL SALVAGE RIGHTS OF EQUIPMENT AND MATERIALS REMOVED. ALL EQUIPMENT AND MATERIALS NOT CLAIMED BY THE OWNER SHALL BE REMOVED FROM THE PREMISES BY THIS CONTRACTOR. REFER TO DEMOLITION DRAWINGS FOR SPECIFIC AIR TERMINAL UNIT, AIR TERMINAL UNIT DDC CONTROLS, AND DDC THERMOSTATS TO BE TURNED OVER TO OWNER.
- CONTRACTOR SHALL PROVIDE SEISMIC BRACING AND MOUNTING OF EQUIPMENT AND MATERIALS IN COMPLIANCE WITH ALL LOCAL CODE REQUIREMENTS AND THE REQUIREMENTS OF SPECIFICATION SECTION SEISMIC PROTECTION.
- ALL WORK SHALL BE INSTALLED PER THE REFERENCE DETAILS, REGARDLESS OF WHETHER OR NOT THE DETAILS ARE CALLED OUT ON THE PLANS. SEE SHEET M500.
- DO NOT SCALE THE LOCATION OF HVAC CEILING ELEMENTS, SUCH AS AIR INLETS AND OUTLETS, FROM THE M-SERIES DRAWINGS. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT HVAC CEILING ELEMENT LOCATIONS, REFLECTED CEILING PLANS GOVERN THE LOCATION OF DIFFUSERS, REGISTERS, AND GRILLES. M-SERIES DRAWINGS GOVERN TYPE, STYLE, AND SIZE OF DIFFUSERS, REGISTERS, AND GRILLES.
- ALL DUCTWORK SHALL COMPLY WITH "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," 3RD EDITION, SMACNA 2005, EXCEPT WHERE MORE RESTRICTIVE REQUIREMENTS ARE SPECIFIED. ANY PLAN REFERENCES TO "SMACNA FIGURE -" REFERS TO THIS STANDARD. SEE SPECIFICATIONS FOR SCHEDULE OF DUCT PRESSURE CLASS AND SEAL CLASS.
- IT IS THE INTENT OF THESE DRAWINGS THAT A MANUAL BALANCING DAMPER BE PROVIDED IN THE BRANCH DUCT TO EVERY INDIVIDUAL DUCTED AIR DEVICE. VAV BOXES WITH SINGLE DIFFUSERS ARE NOT REQUIRED TO HAVE A BALANCING DAMPER.
- ALL EXISTING TEMPERATURE CONTROLS THAT ARE BEING DEMOLISHED OR DISABLED AS WORK OF THIS CONTRACTOR SHALL BE COMPLETELY REMOVED FROM BUILDING.
- THE CONTRACTOR SHALL CONNECT THE NEW HVAC SYSTEM TO THE OWNER'S EXISTING BUILDING CONTROL SYSTEM. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- PROVIDE VENTS AT ALL HYDRONIC PIPING HIGH POINTS, AND DRAINS AT ALL PIPING LOW POINTS, REGARDLESS OF WHETHER SHOWN OR NOT.



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790

Project Team:  
ROSS & BARUZZINI, INC.  
5 South Old Orchard | St. Louis, MO 63119  
314.878.8888  
Missouri Certificate of Authority Missouri Certificate of Authority #032-01

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
UNIVERSITY OF MISSOURI HEALTHCARE



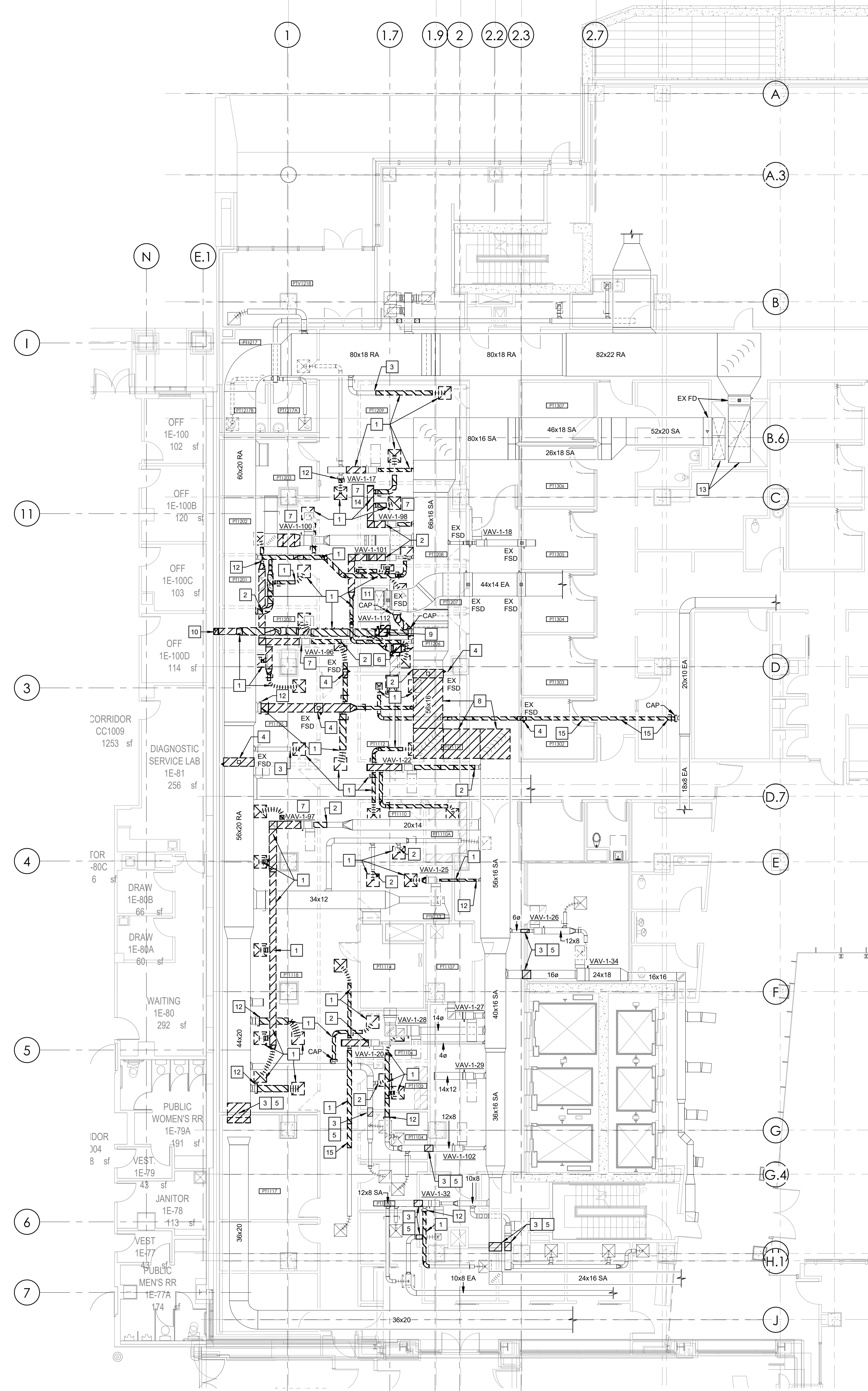
TORI JANELLE GILLESPIE  
PE-2018000203

Issue Date: 12/9/2020

Drawn by: Author

bcdg Project #: 12275.43  
MU Project #: CP210751

**M000**  
MECHANICAL SYMBOLS & ABBREVIATIONS



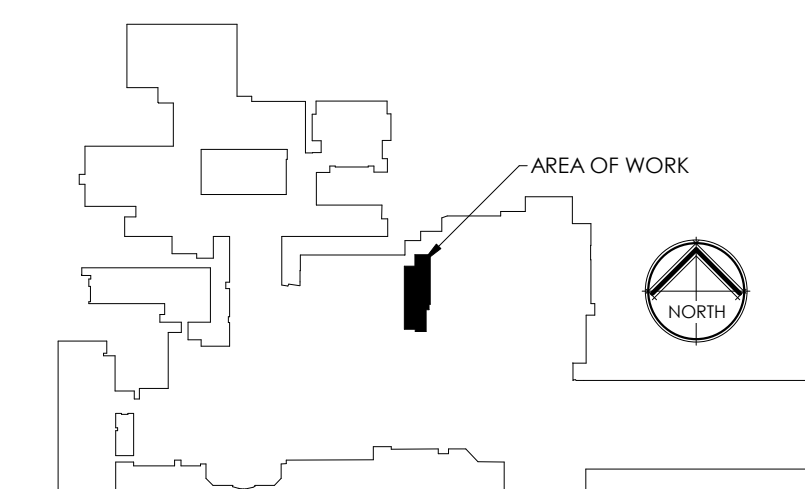
1 FIRST FLOOR CBU - MECHANICAL DUCTWORK - DEMOLITION  
1/8" = 1'-0"

**GENERAL NOTES**

- REFER TO SHEET M000 FOR GENERAL NOTES.
- WEEKNIGHTS ARE DEFINED AS 6 PM TO 3 AM. WEEKENDS ARE DEFINED AS 6 PM FRIDAY TO 3 AM MONDAY.

- KEYED NOTES**
- REMOVE EXISTING AIR DEVICES AND DUCTWORK TO POINT SHOWN.
  - PROVIDE PROTECTIVE COVER OVER OPEN END OF DUCT/ AIR TERMINAL UNIT DURING CONSTRUCTION UNTIL NEW WORK IS CONNECTED. REFER TO SHEET M101 FOR NEW WORK.
  - PROVIDE TEMPORARY CAP IN EXISTING DUCTWORK UNTIL NEW DUCTWORK IS INSTALLED. EXISTING SYSTEM MUST REMAIN OPERATIONAL AT ALL TIMES.
  - REMOVE EXISTING COMBINATION FIRE-SMOKE DAMPER. REFER TO SHEET M101 FOR NEW WORK.
  - REMOVE PORTION OF EXISTING DUCT FOR INSTALLATION OF NEW COMBINATION FIRE-SMOKE DAMPER. REFER TO SHEET M101 FOR NEW WORK.
  - REMOVE EXISTING EXHAUST AIR TERMINAL UNIT AND TURN OVER TO OWNER. EXISTING DDC CONTROLLER TO BE REMOVED BY OWNER. THE EXISTING FC BUS SHALL REMAIN INTACT DURING CONSTRUCTION AND ANY EXISTING CONTROL WIRES THAT ARE TOO SHORT SHALL BE REPULED, NOT SPLICED.
  - REMOVE EXISTING AIR TERMINAL UNIT AND ASSOCIATED DDC CONTROLLER AND RELOCATE. REFER TO SHEET M101 FOR NEW WORK. THE EXISTING FC BUS SHALL REMAIN INTACT DURING CONSTRUCTION AND ANY EXISTING CONTROL WIRES THAT ARE TOO SHORT SHALL BE REPULED, NOT SPLICED.
  - REMOVE PORTION OF EXISTING AHU-1 SUPPLY MAIN AS SHOWN. REFER TO SHEET M101 FOR NEW WORK.
  - REMOVE EXISTING AIR TERMINAL UNIT AND TURN OVER TO OWNER. EXISTING DDC CONTROLLER TO BE REMOVED BY OWNER. THE EXISTING FC BUS SHALL REMAIN INTACT DURING CONSTRUCTION AND ANY EXISTING CONTROL WIRES THAT ARE TOO SHORT SHALL BE REPULED, NOT SPLICED.
  - REMOVE EXISTING SIDEWALL EXHAUST GRILLE. PATCH WALL TO MATCH EXISTING FINISH.
  - EXISTING EXHAUST RISER FROM EXISTING EF-3, LOCATED ON THIRD FLOOR ROOF.
  - CAP EXISTING DUCT AIRTIGHT WITH SHEETMETAL. IF DUCT IS SUPPLY DUCT, INSULATE CAP WITH 1-1/2" THICK FOIL FACED DUCT WRAP INSULATION.
  - EXISTING SUPPLY AND RETURN RISERS FROM EXISTING VARIABLE VOLUME AIR HANDLING UNIT AHU-1 WITH DDC CONTROLS LOCATED IN GROUND FLOOR MECHANICAL ROOM P10017. UNIT CONSISTS OF THE FOLLOWING COMPONENTS: MIXING / ECONOMIZER SECTION, AIR BLENDER, MERV 8 PRE-FILTER, HOT WATER PREHEAT COIL, PRIMARY HUMIDIFIER, CHILLED WATER COOLING COIL, SUPPLY FAN, DIFFUSER SECTION, SILENCER, MERV 14 FINAL FILTER. UNIT ALSO SERVES AREAS ON SECOND FLOOR ABOVE.
  - EXISTING AIR TERMINAL UNIT REQUIRES RELOCATION DUE TO INTERFERENCE WITH NEW PARTITION. RELOCATE EXISTING UNIT AS QUICK AS POSSIBLE TO PROVIDE SUPPLY AIRFLOW TO EXISTING LOCKER ROOM LOCATED OUTSIDE OF PROJECT SCOPE AREA. WORK MAY BE REQUIRED TO BE PERFORMED ON WEEKNIGHTS OR WEEKENDS. COORDINATE PROPOSED SCHEDULE WITH OWNER'S REPRESENTATIVE.
  - REMOVAL OF EXISTING DUCT IN THIS AREA IS OUTSIDE OF PROJECT SCOPE AREA. WORK MAY BE REQUIRED TO BE PERFORMED ON WEEKNIGHTS OR WEEKENDS. COORDINATE PROPOSED SCHEDULE FOR REMOVAL OF DUCT WITH USERS AND OWNER'S REPRESENTATIVE.

PRIOR TO THE DEMOLITION OF EXISTING AHU-1 SUPPLY MAIN, INSTALLATION OF NEW SUPPLY MAIN, REMOVAL OF EXISTING COMBINATION FIRE/SMOKE DAMPER IN RETURN MAIN, AND INSTALLATION OF NEW AND COMBINATION FIRE/SMOKE DAMPER IN RETURN MAIN, FIELD MEASURE AND FABRICATE ALL REQUIRED NEW DUCT FITTINGS TO MINIMIZE AHU-1 DOWNTIME. EXISTING AHU-1 SERVES AREAS OUTSIDE OF PROJECT SCOPE ON FIRST FLOOR AND AREAS ABOVE ON SECOND FLOOR. WORK WILL BE REQUIRED TO BE EXECUTED AFTER HOURS OR WEEKENDS. AFTER HOURS ARE DEFINED AS 6 PM TO 3 AM. WEEKENDS ARE DEFINED AS 6 PM FRIDAY TO 3 AM MONDAY. AHU-1 SHALL BE FUNCTIONAL AT THE END OF EACH DAILY SHIFT OR WEEKEND. CONTRACTOR SHALL PLAN WORK ACCORDINGLY. CONTRACTOR'S SCHEDULE TO BE COORDINATED AND APPROVED BY OWNER'S REPRESENTATIVE.



Keymap 1st Floor  
NTS



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201103729

Project Team:  
ROSS & BARUZZINI, INC.  
6 South Old Orchard | St. Louis, MO 63119  
314.618.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #0331-01

Project Title:  
MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU  
UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE  
PE-2018000203

Issue Date: 12/9/2020  
Date:

Drawn by: Author

bcdg Project #: 12275.43  
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**MD101**  
FIRST FLOOR CBU - MECHANICAL DUCTWORK - DEMOLITION

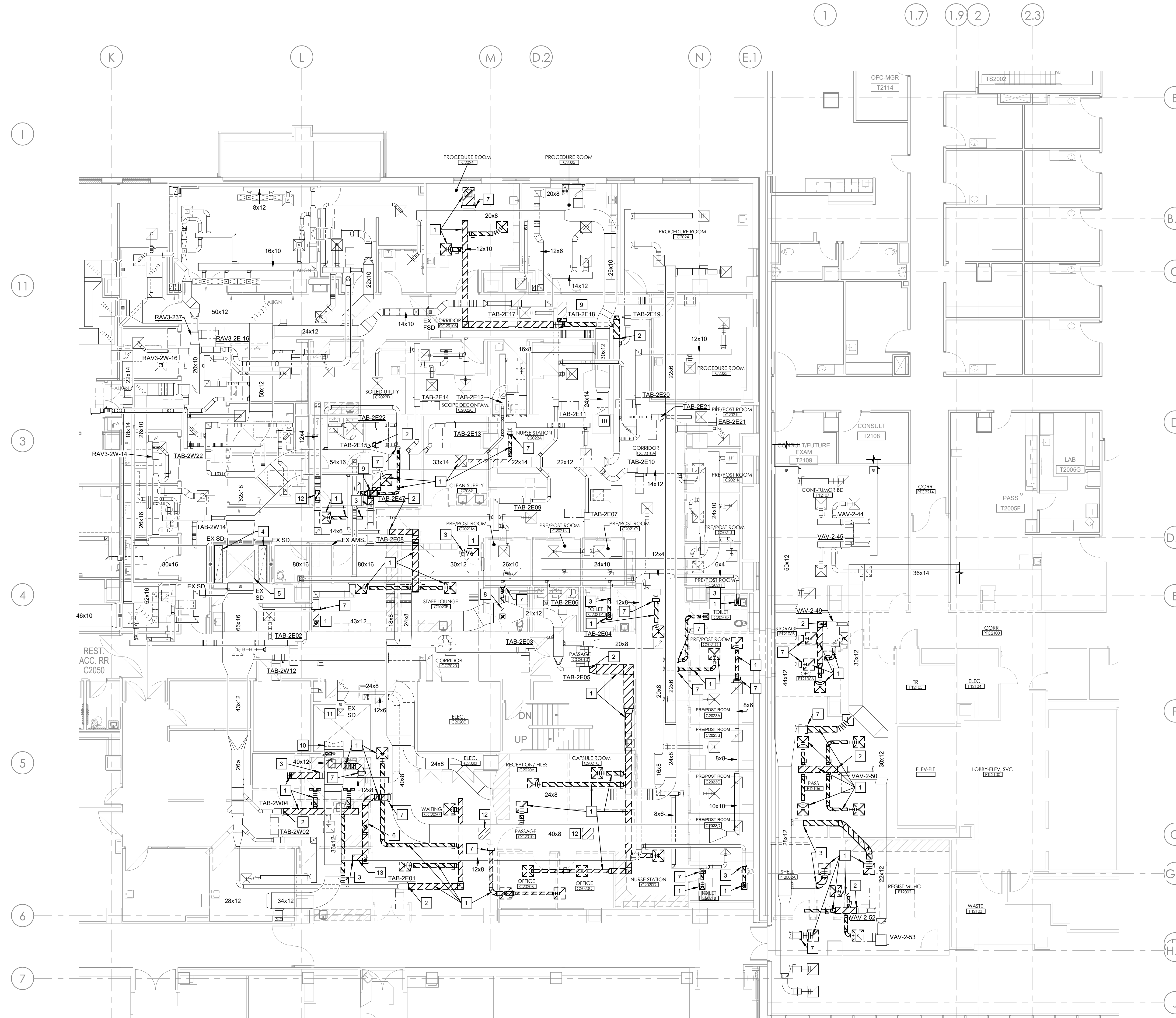


**GENERAL NOTES**

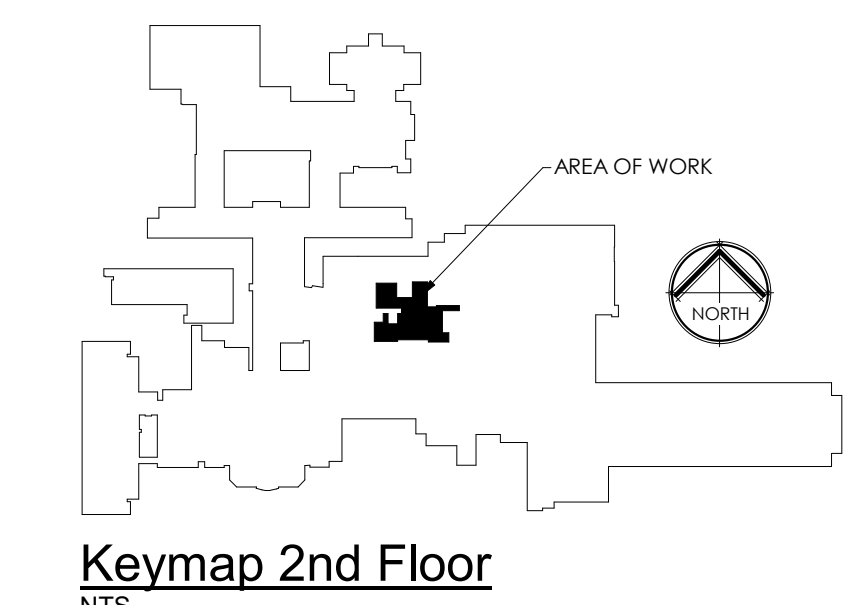
- A. REFER TO SHEET M000 FOR GENERAL NOTES.
- B. WEEKNIGHTS ARE DEFINED AS 6 PM TO 3 AM. WEEKENDS ARE DEFINED AS 6 PM FRIDAY TO 3 AM MONDAY.

**KEYED NOTES**

- 1. REMOVE EXISTING AIR DEVICES AND DUCTWORK TO POINT SHOWN.
- 2. PROVIDE PROTECTIVE COVER OVER OPEN END OF DUCT/ AIR TERMINAL UNIT DURING CONSTRUCTION UNTIL NEW WORK IS CONNECTED. REFER TO SHEET M101 FOR NEW WORK.
- 3. PROVIDE TEMPORARY CAP IN EXISTING DUCTWORK UNTIL NEW DUCTWORK IS INSTALLED. EXISTING SYSTEM MUST REMAIN OPERATIONAL AT ALL TIMES.
- 4. EXISTING RETURN RISERS FROM EXISTING AHJ-3, LOCATED IN GROUND FLOOR MECHANICAL ROOM C013.
- 5. EXISTING SUPPLY RISER FROM EXISTING VARIABLE VOLUME AIR HANDLING UNIT AHJ-3 WITH DDC CONTROLS, LOCATED IN GROUND FLOOR MECHANICAL ROOM C013. UNIT CONSISTS OF THE FOLLOWING COMPONENTS: RETURN FAN, MIXING/ECONOMIZER SECTION, MERV 8 PRE-FILTER, HOT WATER PREHEAT COIL, PRIMARY HUMIDIFIER, SUPPLY FAN, CHILLED WATER COOLING COIL, MERV 14 FINAL FILTER.
- 6. REMOVE EXISTING RETURN AIR DEVICE AND EXISTING RETURN AIR BRANCH DUCT BACK TO MAIN AS SHOWN.
- 7. CAP EXISTING DUCTWORK AIRTIGHT WITH SHEETMETAL. INSULATE CAP WITH 1-1/2" THICK FOIL FACED DUCT WRAP INSULATION IF DUCT IS A SUPPLY DUCT.
- 8. REMOVE EXISTING EXHAUST AIR DEVICE AND EXISTING EXHAUST DUCTWORK TO POINT SHOWN.
- 9. REMOVE EXISTING AIR TERMINAL UNIT AND TURN OVER TO OWNER. EXISTING DDC CONTROLLER TO BE REMOVED BY OWNER. THE EXISTING FC BUS SHALL REMAIN INTACT DURING CONSTRUCTION AND ANY CONTROL WIRES THAT ARE TOO SHORT SHALL BE REPULED. NOT SPLICED.
- 10. EXISTING EXHAUST RISER FROM EXISTING EF-2, LOCATED IN GROUND FLOOR MECHANICAL ROOM C013. EXHAUST MAIN INCLUDES AN AIR CONTROL VALVE ON FIRST FLOOR.
- 11. EXISTING EXHAUST RISER FROM EXISTING EF-12, LOCATED ON ROOF.
- 12. REMOVE EXISTING RETURN AIR DEVICE AND CAP EXISTING BRANCH DUCT ON BOTTOM OF RETURN MAIN AIRTIGHT WITH SHEETMETAL.
- 13. REMOVE PORTION OF EXISTING 12x8" EXHAUST DUCT FOR INSTALLATION OF NEW EXHAUST AIR VALVE. REFER TO SHEET M102 FOR NEW WORK. SOME ROOMS SERVED BY SYSTEM ARE OUTSIDE OF PROJECT SCOPE. WORK MAY BE REQUIRED TO BE PERFORMED ON WEEKNIGHTS OR WEEKENDS. COORDINATE PROPOSED SCHEDULE FOR REMOVAL OF DUCT WITH USERS AND OWNER'S REPRESENTATIVE.



**1 SECOND FLOOR CHPS - MECHANICAL DUCTWORK - DEMOLITION**  
1/8" = 1'-0"



**Keymap 2nd Floor NTS**



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790

**Project Team:**  
ROSS & BARUZZINI, INC.  
314 E. 18th Street  
St. Louis, MO 63119  
Missouri Certificate of Authority Missouri Certificate of Authority #022-02

**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
**UNIVERSITY OF MISSOURI HEALTHCARE**



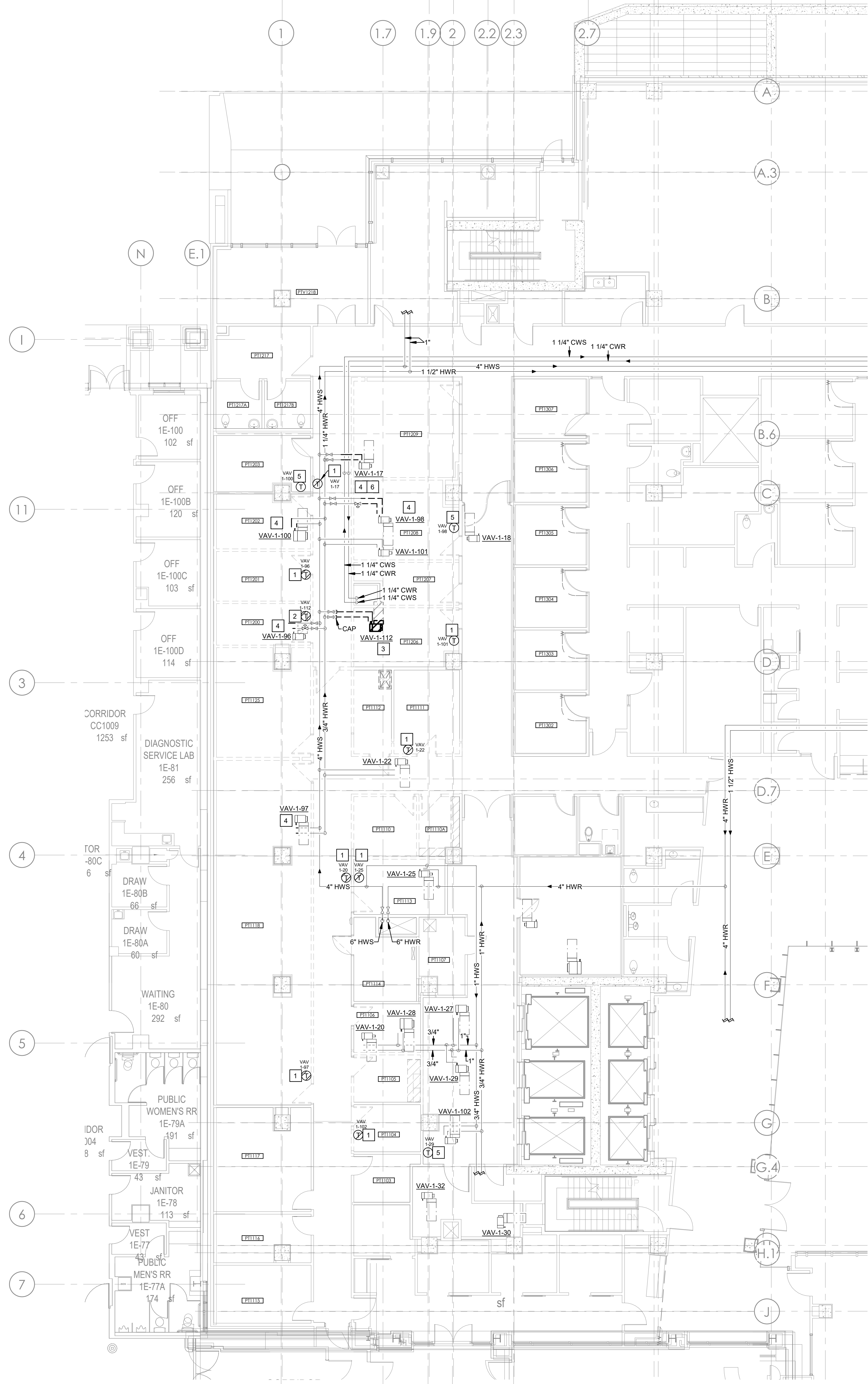
TORI JANELLE GILLESPIE  
PE-2018000203

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**MD102**  
SECOND FLOOR CHPS - MECHANICAL DUCTWORK - DEMOLITION



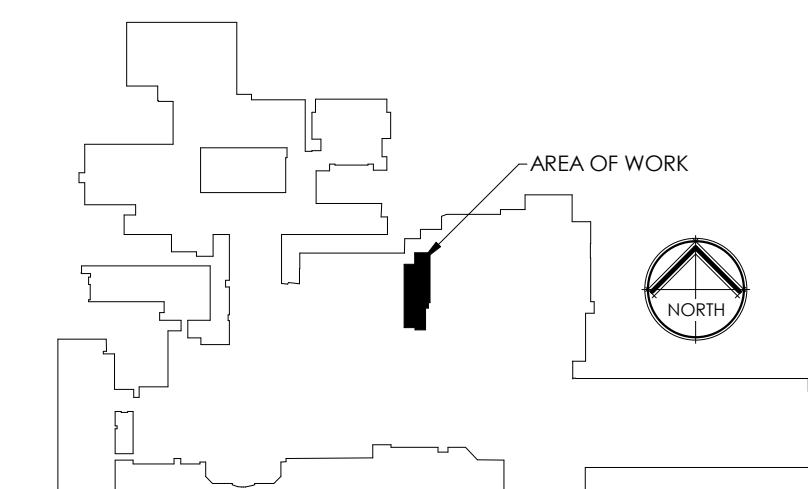
1 FIRST FLOOR CBCU - MECHANICAL PIPING - DEMOLITION  
1/8" = 1'-0"

**GENERAL NOTES**

- A. REFER TO SHEET M000 FOR GENERAL NOTES.
- B. WEEKNIGHTS ARE DEFINED AS 6 PM TO 3 AM. WEEKENDS ARE DEFINED AS 6 PM FRIDAY TO 3 AM MONDAY.

**KEYED NOTES**

1. EXISTING WALL MOUNTED DDC THERMOSTAT TO BE REMOVED BY OWNER AND RELOCATED BY CONTRACTOR. FC BUS SHALL REMAIN INTACT DURING CONSTRUCTION AND ANY EXISTING CONTROL WIRES THAT ARE TOO SHORT SHALL BE RE-PULLED, NOT SPLICED. REFER TO SHEET M201 FOR NEW WORK.
2. EXISTING WALL MOUNTED DDC THERMOSTAT TO BE REMOVED BY OWNER.
3. REMOVE EXISTING AIR TERMINAL UNIT. REFER TO KEYED NOTE 9 ON SHEET MD101 FOR MORE INFORMATION. REMOVE EXISTING 3/4" BRANCH PIPING FROM CONNECTION POINT OF REHEAT COIL TO EXISTING SHUT-OFF VALVES AND CAP. TURN OVER EXISTING ELECTRIC CONTROL VALVE TO OWNER.
4. EXISTING VAV BOX AND ASSOCIATED DDC CONTROLS TO BE RELOCATED. CLOSE EXISTING BRANCH SHUT-OFF VALVES SERVING AIR TERMINAL UNIT AND REMOVE ONLY A PORTION OF HEATING HOT WATER BRANCH PIPING FROM CONNECTION POINT OF REHEAT COIL TO FIRST FITTING TO ALLOW EXTENSION TO NEW AIR TERMINAL UNIT LOCATION. ALL PIPING ACCESSORIES AND CONTROL VALVE TO REMAIN. THE EXISTING FC BUS SHALL REMAIN INTACT DURING CONSTRUCTION AND ANY EXISTING CONTROL WIRES THAT ARE TOO SHORT SHALL BE RE-PULLED, NOT SPLICED. REFER TO SHEET M201 FOR NEW WORK.
5. EXISTING WALL MOUNTED DDC THERMOSTAT TO REMAIN.
6. DOWNTIME OF EXISTING AIR TERMINAL UNIT MUST BE MINIMIZED. UNIT SERVES AN EXISTING LOCKER ROOM LOCATED OUTSIDE OF PROJECT SCOPE AREA.



Keymap 1st Floor  
NTS



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790

Project Team:  
ROSS & BARUZZINI, INC.  
5 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #332-02

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE  
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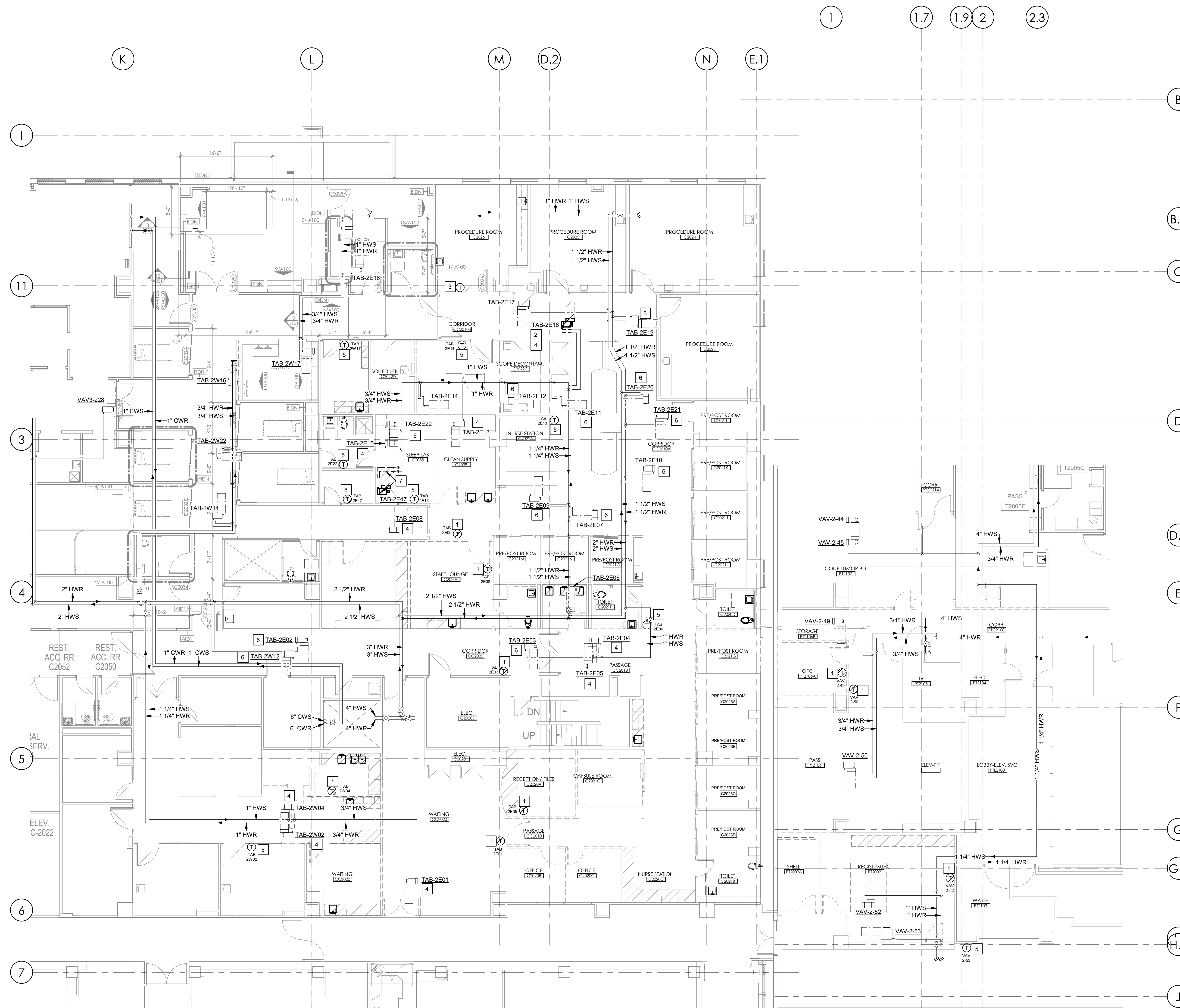
**MD201**  
FIRST FLOOR CBCU - MECHANICAL PIPING - DEMOLITION

**GENERAL NOTES**

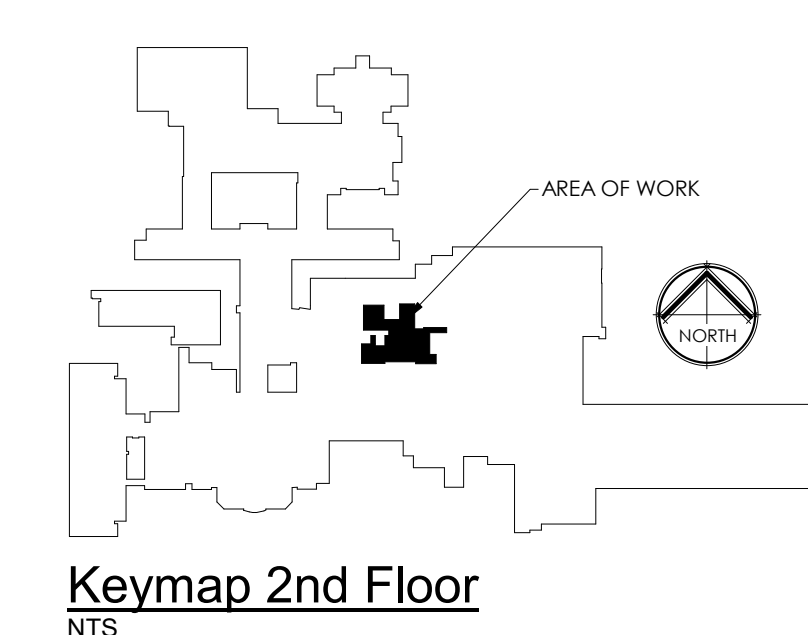
- A. REFER TO SHEET M000 FOR GENERAL NOTES.
- B. WEEKNIGHTS ARE DEFINED AS 6 PM TO 3 AM. WEEKENDS ARE DEFINED AS 6 PM FRIDAY TO 3 AM MONDAY.

**KEYED NOTES**

- 1. EXISTING WALL MOUNTED DDC THERMOSTAT TO BE REMOVED BY OWNER AND RELOCATED BY CONTRACTOR. FC BUS SHALL REMAIN INTACT DURING CONSTRUCTION AND ANY EXISTING CONTROL WIRES THAT ARE TOO SHORT SHALL BE RE-PULLED, NOT SPLICED. REFER TO SHEET M202 FOR NEW WORK.
- 2. REMOVE EXISTING VAV BOX (TAB-2E18) AND TURN OVER TO OWNER. CLOSE EXISTING BRANCH SHUT-OFF VALVES SERVING AIR TERMINAL UNIT AND REMOVE ONLY A PORTION OF THE HEATING HOT WATER BRANCH PIPING FROM CONNECTION POINT OF REHEAT COIL TO FIRST FITTING TO ALLOW EXTENSION TO NEW AIR TERMINAL LOCATION. EXISTING VAV DDC CONTROLLER TO BE SALVAGED AND BE RE-USED FOR NEW AIR TERMINAL UNIT. CONTACT OWNER'S REPRESENTATIVE PRIOR TO BEGINNING REMOVAL OF EXISTING DDC CONTROLLER. THE EXISTING FC BUS SHALL REMAIN INTACT DURING CONSTRUCTION AND ANY EXISTING CONTROL WIRES THAT ARE TOO SHORT SHALL BE RE-PULLED, NOT SPLICED. REFER TO SHEET M202 FOR NEW WORK.
- 3. EXISTING DDC THERMOSTAT SERVING PROCEDURE ROOM C2028 TO REMAIN AND BE RE-USED FOR NEW AIR TERMINAL UNIT. REFER TO SHEET M202 FOR NEW WORK.
- 4. REMOVE EXISTING AIR TERMINAL UNIT PNEUMATIC CONTROL VALVE AND EP TRANSDUCER AND REPLACE WITH NEW ELECTRIC CONTROL VALVE. REFER TO SHEET M202 FOR NEW WORK.
- 5. EXISTING WALL MOUNTED DDC THERMOSTAT TO REMAIN.
- 6. ALTERNATE #1: REMOVE EXISTING AIR TERMINAL UNIT PNEUMATIC CONTROL VALVE AND EP TRANSDUCER AND REPLACE WITH NEW ELECTRIC CONTROL VALVE. REFER TO SHEET M202 FOR NEW WORK.
- 7. REMOVE EXISTING AIR TERMINAL UNIT. REFER TO KEYED NOTE 9 ON SHEET MD102 FOR MORE INFORMATION. REMOVE EXISTING 3/4" BRANCH PIPING FROM CONNECTION POINT OF REHEAT COIL TO EXISTING SHUT-OFF VALVES AND CAP.
- 8. EXISTING WALL MOUNTED DDC THERMOSTAT TO BE REMOVED BY OWNER.



**SECOND FLOOR CHPS - MECHANICAL PIPING - DEMOLITION**  
1/8" = 1'-0"



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790

**Project Team:**  
ROSS & BARUZZINI, INC.  
5 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #022-02

**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
**UNIVERSITY OF MISSOURI HEALTHCARE**



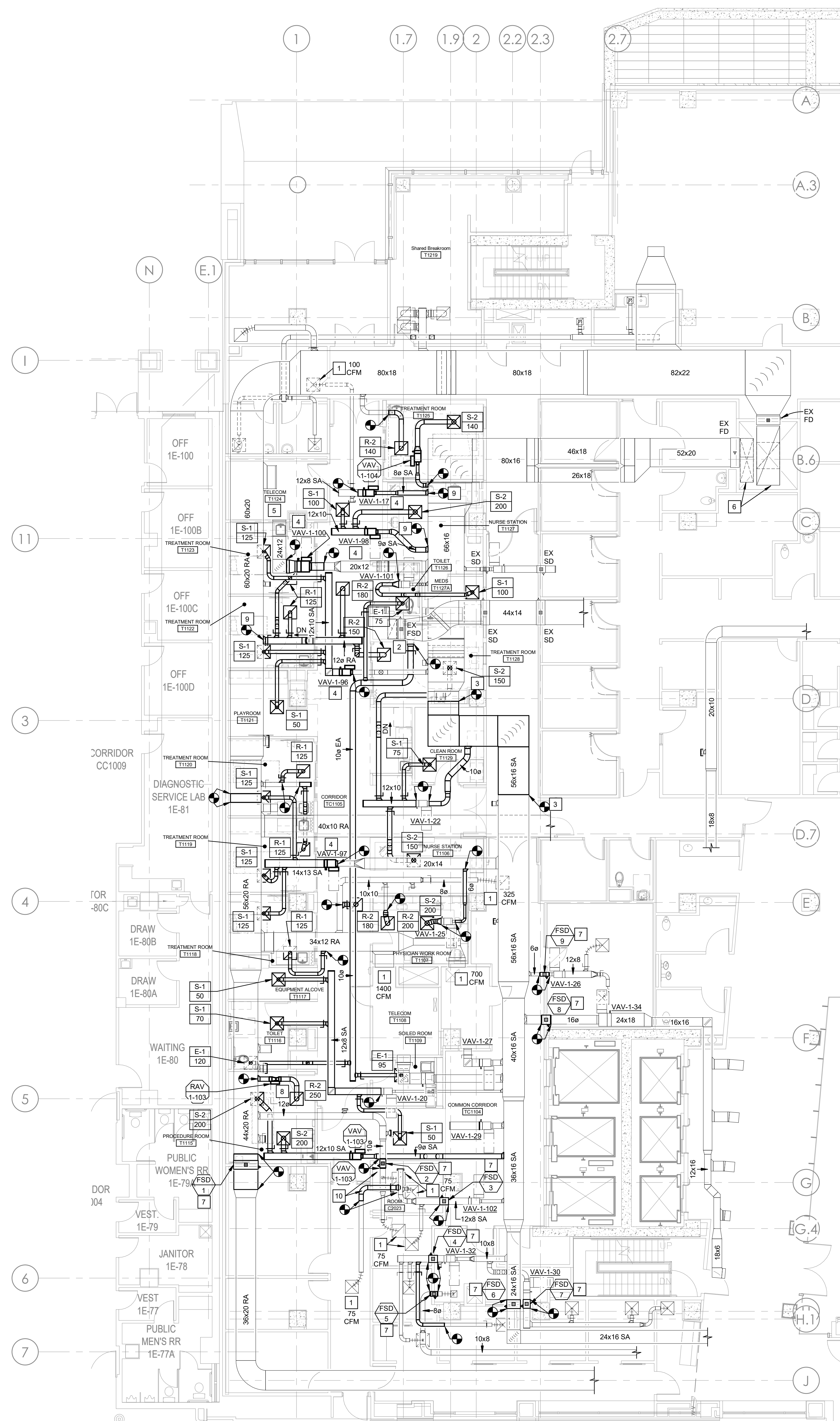
TORI JANELLE GILLESPIE  
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**MD202**  
SECOND FLOOR CHPS - MECHANICAL PIPING - DEMOLITION

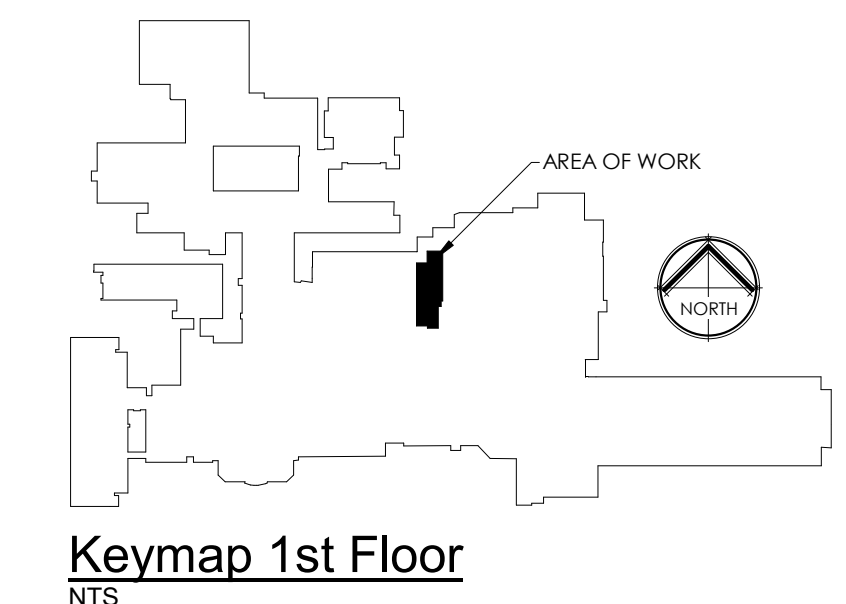


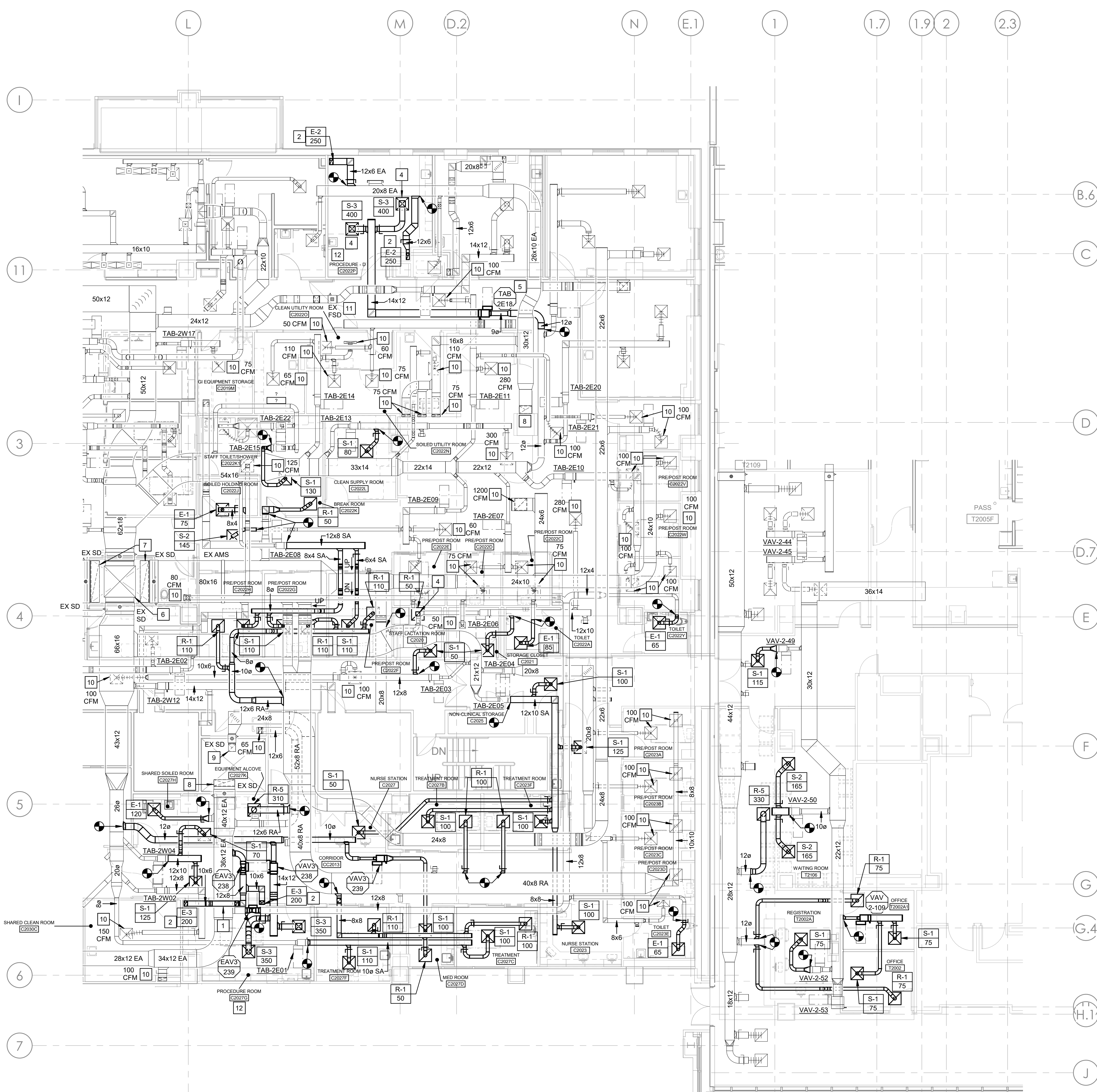
1 FIRST FLOOR CBCU - MECHANICAL DUCTWORK - NEW WORK  
1/8" = 1'-0"

- ### GENERAL NOTES
- A. REFER TO SHEET M000 FOR GENERAL NOTES.
  - B. CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS OF NEW FC BUS ROUTING PER SPEC SECTION 230900.
  - C. NO MECHANICAL DUCTWORK EXCEPT USED FOR STAIRWELL PRESSURIZATION SHALL PENETRATE THROUGH FIRE RESISTANCE RATED EXIT ENCLOSURES (STAIRWELLS AND EXIT PASSAGEWAYS).
  - D. WEEKNIGHTS ARE DEFINED AS 6 PM TO 3 AM. WEEKENDS ARE DEFINED AS 6 PM FRIDAY TO 3 AM MONDAY.

- ### KEYED NOTES
1. REBALANCE EXISTING AIR DEVICE TO CFM NOTED ON PLAN.
  2. EXISTING EXHAUST RISER FROM EXISTING EF-3, LOCATED ON THIRD FLOOR ROOF.
  3. CONNECT NEW 56"x16" SUPPLY DUCTWORK TO EXISTING 56"x16" SUPPLY MAIN. ROUTE DUCTWORK AS SHOWN ON PLANS TO ACCOMMODATE NEW RATED WALL. COORDINATE RELOCATION OF ANY HANGERS OR ANCHORS AS NEEDED FOR INSTALLATION OF NEW SUPPLY DUCT. COORDINATE ANY REQUIRED SHUTDOWN OF EXISTING AHU-1 WITH OWNER'S REPRESENTATIVE.
  4. RELOCATED EXISTING AIR TERMINAL UNIT. REWIRE EXISTING VAV CONTROLLER. REFER TO VAV BOX CONTROL DIAGRAM WITH REHEAT DETAIL ON SHEET M701. EXISTING FC BUS SHOULD REMAIN INTACT DURING CONSTRUCTION AND ANY EXISTING CONTROL WIRES THAT ARE TOO SHORT SHALL BE REPULED, NOT SPLICED.
  5. CONTRACTOR TO PROVIDE SPOT COOLER FOR EXISTING TELECOM WHILE EXISTING VAV 1-100 IS BEING RELOCATED.
  6. EXISTING SUPPLY AND RETURN RISERS FROM EXISTING VARIABLE VOLUME AIR HANDLING UNIT AHU-1 WITH DDC CONTROLS LOCATED IN GROUND FLOOR MECHANICAL ROOM PT0017. UNIT CONSISTS OF THE FOLLOWING COMPONENTS: MIXING / ECONOMIZER SECTION, AIR BLENDER, MERV 8 PRE-FILTER, HOT WATER PREHEAT COIL, PRIMARY HUMIDIFIER, CHILLED WATER COOLING COIL, SUPPLY FAN, DIFFUSER SECTION, SILENCER, MERV 14 FINAL FILTER. UNIT ALSO SERVES AREAS ON SECOND FLOOR ABOVE.
  7. INSTALL A 3/4" WIDE ENGRAVED PHENOLIC PLASTIC ADHESIVE LABEL ON CEILING GRID TO IDENTIFY LOCATION OF SMOKE DAMPER. LABEL SHALL HAVE A RED BACKGROUND WITH WHITE 1/2" HIGH LETTERS.
  8. SEAL ALL NEW AND EXISTING DUCT PENETRATIONS OF PROCEDURE ROOM WALLS AIRTIGHT TO FACILITATE MAINTAINING POSITIVE PRESSURE RELATIONSHIP TO CORRIDOR.
  9. MODIFY EXISTING DUCT OPENING AS REQUIRED FOR INSTALLATION OF NEW DUCT SIZE NOTED ON PLANS.
  10. INSTALLATION OF NEW DUCTWORK IN THIS AREA IS OUTSIDE OF PROJECT SCOPE AREA. WORK MAY BE REQUIRED TO BE PERFORMED ON WEEKNIGHTS OR WEEKENDS. COORDINATE PROPOSED SCHEDULE WITH OWNER'S REPRESENTATIVE.

PRIOR TO THE DEMOLITION OF EXISTING AHU-1 SUPPLY MAIN, INSTALLATION OF NEW SUPPLY MAIN, REMOVAL OF EXISTING COMBINATION FIRE/SMOKE DAMPER IN RETURN MAIN, AND INSTALLATION OF NEW AND COMBINATION FIRE/SMOKE DAMPER IN RETURN MAIN, FIELD MEASURE AND FABRICATE ALL REQUIRED NEW DUCT FITTINGS TO MINIMIZE AHU-1 DOWNTIME. EXISTING AHU-1 SERVES AREAS OUTSIDE OF PROJECT SCOPE ON FIRST FLOOR AND AREAS ABOVE ON SECOND FLOOR. WORK WILL BE REQUIRED TO BE EXECUTED AFTER HOURS OR WEEKENDS. AFTER HOURS ARE DEFINED AS 6 PM TO 3 AM. WEEKENDS ARE DEFINED AS 6 PM FRIDAY TO 3 AM MONDAY. AHU-1 SHALL BE FUNCTIONAL AT THE END OF EACH DAILY SHIFT OR WEEKEND. CONTRACTOR SHALL PLAN WORK ACCORDINGLY. CONTRACTOR'S SCHEDULE TO BE COORDINATED AND APPROVED BY OWNER'S REPRESENTATIVE.





1 SECOND FLOOR CHPS - MECHANICAL DUCTWORK - NEW WORK  
1/8" = 1'-0"

**GENERAL NOTES**

- A. REFER TO SHEET M000 FOR GENERAL NOTES.
- B. CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS OF NEW FC BUS ROUTING PER SPEC SECTION 230900.
- C. NO MECHANICAL DUCTWORK EXCEPT USED FOR STAIRWELL PRESSURIZATION SHALL PENETRATE THROUGH FIRE RESISTANCE RATED EXIT ENCLOSURES (STAIRWELLS AND EXIT PASSAGEWAYS).
- D. WEEKNIGHTS ARE DEFINED AS 8 PM TO 3 AM. WEEKENDS ARE DEFINED AS 6 PM FRIDAY TO 3 AM MONDAY.

**KEYED NOTES**

- 1. ROUTE NEW EXHAUST BRANCH DUCTWORK UP IN STRUCTURAL CONCRETE PAN SPACE IN THIS AREA.
- 2. NEW EXHAUST BRANCH DUCTWORK DOWN IN CHASE TO LOW WALL AIR GRILLE. BOTTOM OF GRILLE 8" A.F.F. SEE DETAIL 4 ON SHEET M500 FOR CONSTRUCTION REQUIREMENTS.
- 3. MODIFY EXISTING OPENING IN SUPPLY AIR MAIN FOR NEW DUCT CONNECTION.
- 4. PROVIDE AIR PLENUM BOX ON TOP OF AIR DEVICE PER DETAIL 5 ON SHEET M500.
- 5. INSTALL NEW VAV BOX (TAB-2E18) IN SAME LOCATION EXISTING WAS REMOVED.
- 6. EXISTING SUPPLY RISER FROM EXISTING VARIABLE VOLUME AIR HANDLING UNIT AHU-3 WITH DDC CONTROLS LOCATED IN GROUND FLOOR MECHANICAL ROOM C013. UNIT CONSISTS OF THE FOLLOWING COMPONENTS: RETURN FAN, MIXING / ECONOMIZER SECTION, MERV 8 PRE-FILTER, HOT WATER PREHEAT COIL, PRIMARY HUMIDIFIER, SUPPLY FAN, CHILLED WATER COOLING COIL, MERV 14 FINAL FILTER.
- 7. EXISTING RETURN RISERS FROM EXISTING AHU-3. LOCATED IN GROUND FLOOR MECHANICAL ROOM C013.
- 8. EXISTING EXHAUST RISER FROM EXISTING EF-2. LOCATED IN GROUND FLOOR MECHANICAL ROOM C013. EXHAUST MAIN INCLUDES AN AIR CONTROL VALVE ON FIRST FLOOR. REBALANCE EXISTING AIR CONTROL VALVE EAV-237 TO 2100 CFM.
- 9. EXISTING EXHAUST RISER FROM EXISTING EF-12. LOCATED ON ROOF.
- 10. REBALANCE AIR DEVICE TO CFM NOTED ON PLANS.
- 11. INSTALL A 3/4" WIDE ENGRAVED PHENOLIC PLASTIC ADHESIVE LABEL ON CEILING GRID TO IDENTIFY LOCATION OF SMOKE DAMPER. LABEL SHALL HAVE A RED BACKGROUND WITH WHITE 1/2" HIGH LETTERS.
- 12. SEAL ALL NEW AND EXISTING DUCT PENETRATIONS OF PROCEDURE ROOM WALLS AIRTIGHT TO FACILITATE MAINTAINING POSITIVE PRESSURE RELATIONSHIP TO CORRIDOR.



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-2011037290

Project Team:  
ROSS & BARUZZINI, INC.  
8 South Old Orchard | St. Louis, MO 63119  
314.818.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #0331-01

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



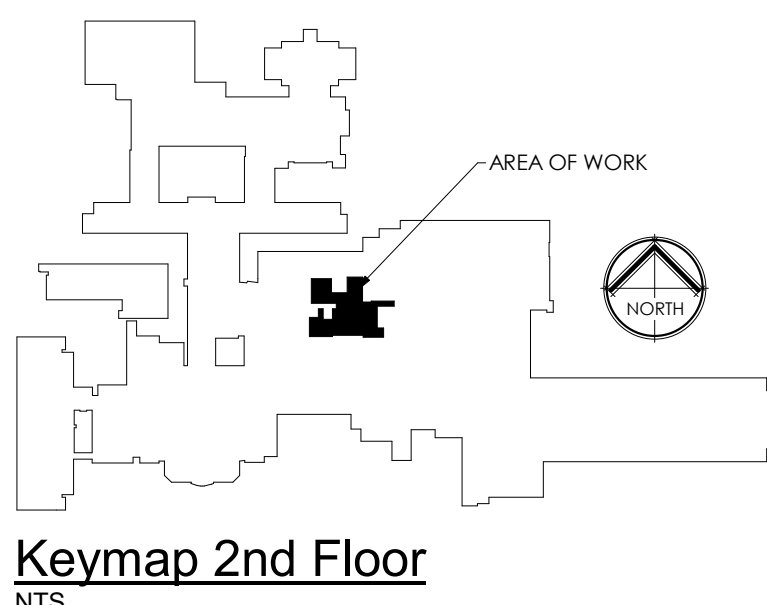
TORI JANELLE GILLESPIE  
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**M102**  
SECOND FLOOR CHPS - MECHANICAL DUCTWORK - NEW WORK



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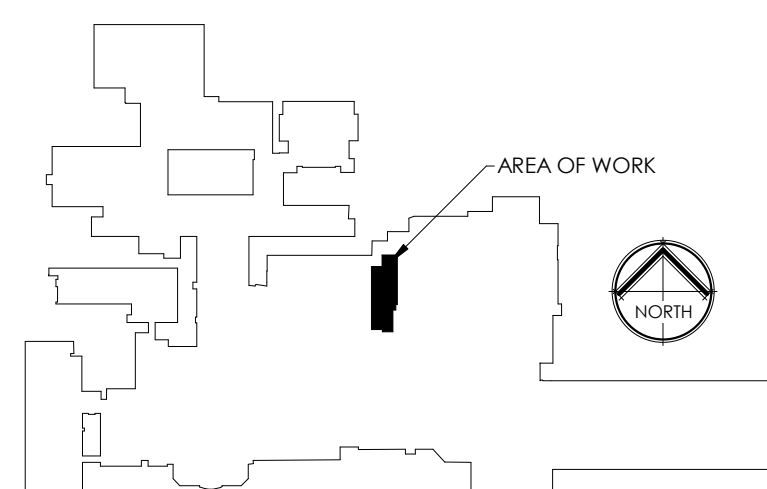
1 FIRST FLOOR CBCU - MECHANICAL PIPING - NEW WORK  
1/8" = 1'-0"

**GENERAL NOTES**

- A. REFER TO SHEET M000 FOR GENERAL NOTES.
- B. NO MECHANICAL PIPING EXCEPT USED FOR STAIRWELL PRESSURIZATION SHALL PENETRATE THROUGH FIRE RESISTANCE RATED EXIT ENCLOSURES (STAIRWELLS AND EXIT PASSAGEWAYS).
- C. REFER TO AIR TERMINAL UNIT SCHEDULE ON SHEET M000 FOR AIR INLET SIZE TO AIR TERMINAL UNITS.
- D. WEEKNIGHTS ARE DEFINED AS 6 PM TO 3 AM. WEEKENDS ARE DEFINED AS 6 PM FRIDAY TO 3 AM MONDAY.

**KEYED NOTES**

1. NEW LOCATION OF OWNER PROVIDED EXISTING DDC THERMOSTAT. CONNECT TO EXISTING ASSOCIATED VAV BOX SHOWN ON PLANS. IF EXISTING CONTROL WIRING IS NOT LONG ENOUGH, PROVIDE NEW. SPLICING OF CONTROL WIRING IS PROHIBITED. PATCH WALL TO MATCH EXISTING FINISH. INSTALL AN ADHESIVE LABEL ON THERMOSTAT WITH AIR TERMINAL UNIT LOCATION FROM THERMOSTAT.
2. INSTALL NEW OWNER FURNISHED WALL MOUNTED DDC THERMOSTAT ON NEW WALL. INSTALL AN ADHESIVE LABEL ON THERMOSTAT WITH CORRESPONDING AIR TERMINAL UNIT TAG AND AIR TERMINAL UNIT LOCATION FROM THERMOSTAT. LETTERS SHALL BE MINIMUM 1/8" HIGH. COORDINATE LABEL TYPE AND LETTERING HEIGHT WITH OWNER'S REPRESENTATIVE.
3. CLOSE EXISTING SHUT-OFF VALVES PRIOR TO INSTALLATION OF NEW 3/4" BRANCH PIPING PER KEYED NOTE 4 ON THIS SHEET. RE-OPEN EXISTING SHUT-OFF VALVES AFTER NEW 3/4" BRANCH PIPING PER KEYED NOTE 4 HAS BEEN LEAK TESTED. UTILIZE EXISTING VENTS IN HEATING HOT WATER PIPING AT EXISTING VAV'S DOWNSTREAM OF EXISTING VALVES AND ANY EXISTING VENT AT HIGH POINT IN SYSTEM TO VENT AIR FROM PIPING. PRIOR TO CLOSING MAIN SHUT-OFF VALVES IN EXISTING HEATING HOT WATER SYSTEM, COORDINATE TIME FRAME WITH OWNER'S REPRESENTATIVE. EXISTING SYSTEM SERVES AREAS OUTSIDE OF PROJECT SCORE ON FIRST FLOOR.
4. CONNECT NEW 3/4" HWS AND HWR BRANCH PIPING TO EXISTING NEW HWS AND HWR TO SERVE NEW AIR TERMINAL UNIT. REFER TO KEYED NOTE 3 ON THIS SHEET.
5. INSTALL RECESSED WALL MOUNTED POSITIVE PRESSURE MONITOR DIGITAL INTERFACE PANEL ON EXISTING CORRIDOR WALL PER MANUFACTURERS INSTALLATION INSTRUCTIONS. PROVIDE LABEL FOR ROOM SERVED. COORDINATE LETTERING STYLE AND HEIGHT WITH OWNER. ROOM PRESSURE CONTROLLER SHALL BE FLUSH MOUNT TYPE TRIA-TEK MODEL PMS-1655 OR APPROVED EQUAL. PATCH WALL TO MATCH EXISTING FINISH. DIFFERENTIAL PRESSURE BETWEEN PROCEDURE ROOM AND CORRIDOR SHALL BE A MINIMUM OF +0.02 INCHES OF WATER AND ALARM AT 0.01 INCHES OF WATER.
6. INSTALL ROOM PRESSURE SENSOR FLOW TUBE AND COVER PLATES ABOVE DOOR PER MANUFACTURERS INSTALLATION INSTRUCTIONS. SEAL AROUND ALL WALL PENETRATIONS WITH GASKET AND CAULK.
7. CONNECT NEW 3/4" HWS AND HWR BRANCH PIPING TO EXISTING DOWNSTREAM OF EXISTING ELECTRIC CONTROL VALVE AND PIPE ACCESSORIES AND EXTEND TO THE CONNECTION POINT OF NEW LOCATION OF EXISTING VAV BOX AS SHOWN. REFER TO KEYED NOTE 4 ON SHEET M201.
8. EXISTING WALL MOUNTED DDC THERMOSTAT TO REMAIN.
9. INSTALL A 3/4" WIDE ENGRAVED PHENOLIC PLASTIC ADHESIVE LABEL ON THE LAY-IN CEILING GRID TO IDENTIFY AIR TERMINAL UNIT LOCATION AND CEILING TILE TO BE USED TO ACCESS AIR TERMINAL UNIT. LABEL SHALL HAVE A WHITE BACKGROUND WITH BLACK 1/2" HIGH LETTERS. ENGAGE OWNER'S REPRESENTATIVE FOR VERIFICATION OF CEILING TILE TO BE USED FOR ACCESS PRIOR TO INSTALLING LABEL.
10. EXTEND EXISTING BRANCH PIPING TO NEW AIR TERMINAL UNIT LOCATION AS QUICK AS POSSIBLE. EXISTING UNIT SERVES AN EXISTING LOCKER ROOM LOCATED OUTSIDE OF PROJECT SCORE AREA. WORK MAY BE REQUIRED TO BE PERFORMED ON WEEKNIGHTS OR WEEKENDS. COORDINATE PROPOSED SCHEDULE WITH OWNER'S REPRESENTATIVE.
11. SEAL ALL NEW AND EXISTING PIPE PENETRATIONS OF PROCEDURE ROOM WALLS AIRTIGHT TO FACILITATE MAINTAINING POSITIVE PRESSURE RELATIONSHIP TO CORRIDOR.



Keymap 1st Floor  
NTS



bcDESIGN GROUP  
12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102720

Project Team:  
ROSS & BARUZZINI, INC.  
8 South Old Orchard | St. Louis, MO 63119  
314.818.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #022-02

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE  
PE-2018000203

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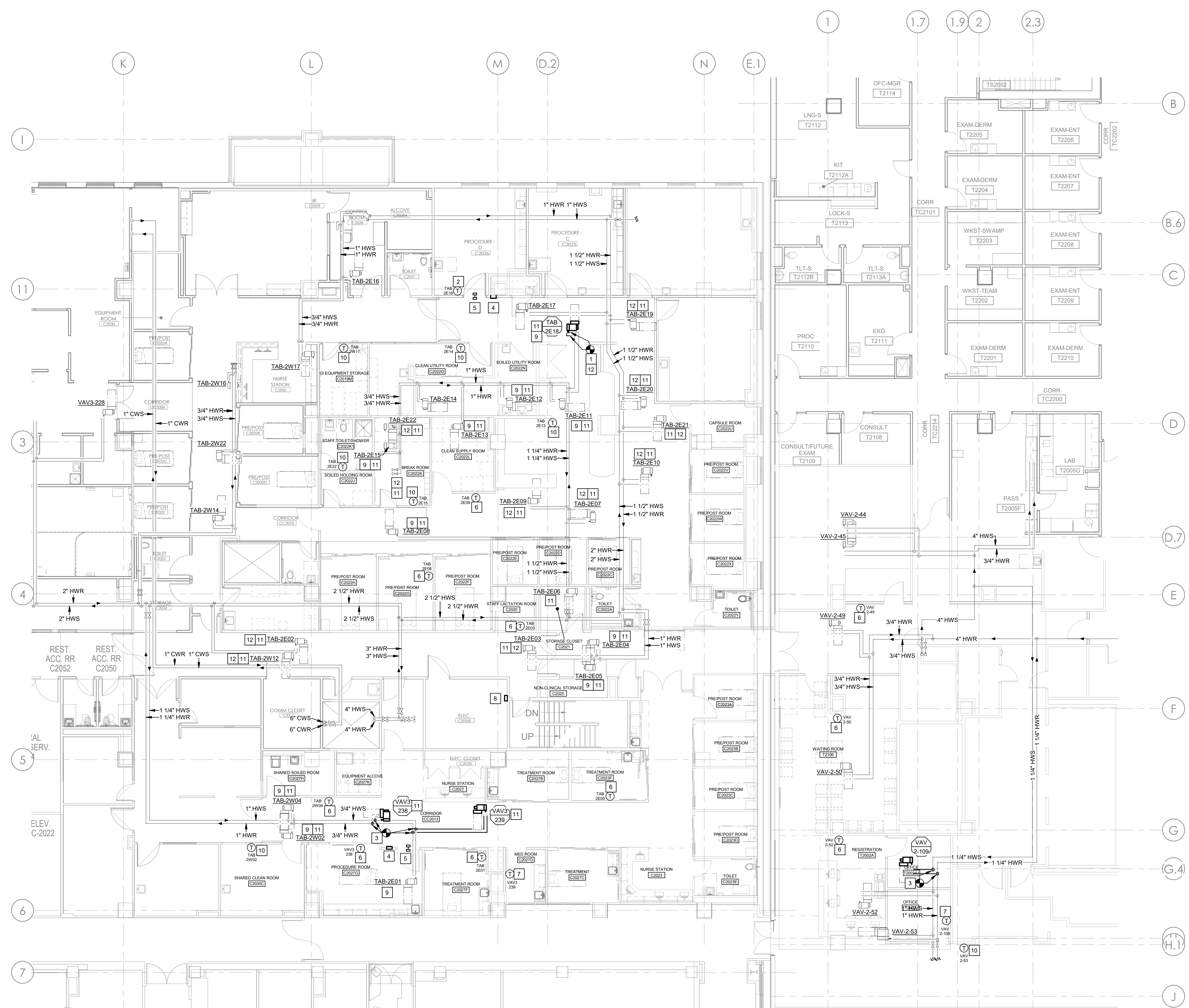
**M201**  
FIRST FLOOR CBCU - MECHANICAL PIPING - NEW WORK

**GENERAL NOTES**

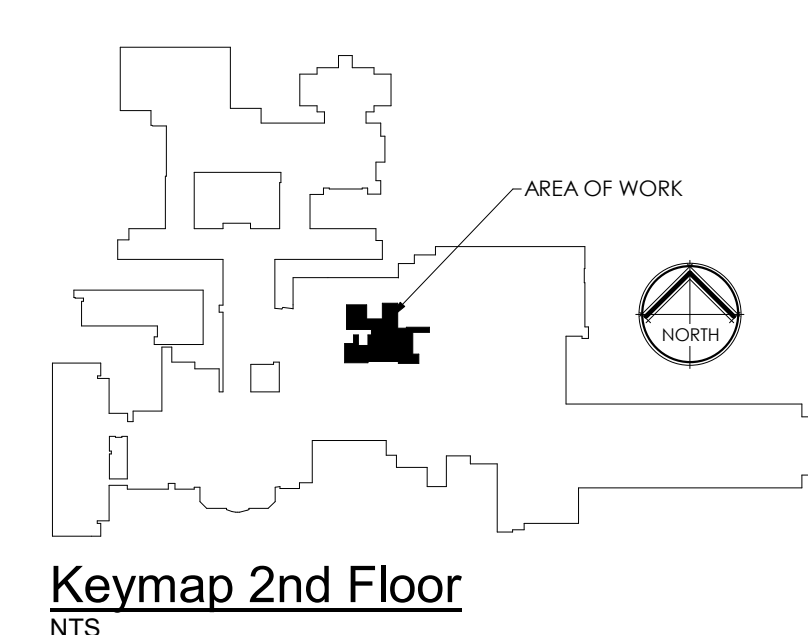
- A. REFER TO SHEET M000 FOR GENERAL NOTES.
- B. NO MECHANICAL PIPING EXCEPT USED FOR STAIRWELL PRESSURIZATION SHALL PENETRATE THROUGH FIRE RESISTANCE RATED EXIT ENCLOSURES (STAIRWELLS AND EXIT PASSAGEWAYS).
- C. REFER TO AIR TERMINAL UNIT SCHEDULE ON SHEET M000 TO AIR INLET SIZE TO AIR TERMINAL UNITS.
- D. WEEKENDS ARE DEFINED AS 6 PM TO 3AM. WEEKENDS ARE DEFINED AS 6 PM FRIDAY TO 3 AM MONDAY.

**KEYED NOTES**

- 1. CONNECT NEW 3/4" HWS AND HWR BRANCH PIPING TO EXISTING DOWNSTREAM OF EXISTING ELECTRIC CONTROL VALVE AND PIE ACCESSORIES AND EXTEND TO THE CONNECTION POINT OF NEW VAV BOX (TAB-2E18) AS SHOWN. REFER TO KEYED NOTE 2 ON SHEET M020.
- 2. EXISTING DDC THERMOSTAT SERVING PROCEDURE ROOM C2026 TO CONNECT TO NEW VAV BOX (TAB-2E18). IF EXISTING CONTROL WIRING IS NOT LONG ENOUGH, PROVIDE NEW SPLICING OF CONTROL WIRING IS PROHIBITED. INSTALL AN ADHESIVE LABEL ON THERMOSTAT WITH AIR TERMINAL UNIT LOCATION FROM THERMOSTAT.
- 3. CONNECT NEW HWS AND HWR BRANCH PIPING TO EXISTING.
- 4. INSTALL RECESSED WALL MOUNTED POSITIVE PRESSURE MONITOR DIGITAL INTERFACE PANEL ON EXISTING CORRIDOR WALL PER MANUFACTURERS INSTALLATION INSTRUCTIONS. PROVIDE LABEL FOR ROOM SERVED. COORDINATE LETTERING STYLE AND HEIGHT WITH OWNER. ROOM PRESSURE CONTROLLER SHALL BE FLUSH MOUNT TYPE TRN-TSK MODEL FMS-1655 OR APPROVED EQUAL. PATCH WALL TO MATCH EXISTING FINISH. DIFFERENTIAL PRESSURE BETWEEN PROCEDURE ROOM AND CORRIDOR SHALL BE A MINIMUM OF +0.02 INCHES OF WATER AND ALARM AT +0.01 INCHES OF WATER.
- 5. INSTALL ROOM PRESSURE SENSOR FLOW TUBE AND COVER PLATES ABOVE DOOR PER MANUFACTURERS INSTALLATION INSTRUCTIONS. SEAL AROUND ALL WALL PENETRATIONS WITH GASKET AND CAULK.
- 6. NEW LOCATION OF OWNER PROVIDED EXISTING DDC THERMOSTAT. CONNECT TO EXISTING ASSOCIATED VAV BOX SHOWN ON PLANS. IF EXISTING CONTROL WIRING IS NOT LONG ENOUGH, PROVIDE NEW SPLICING OF CONTROL WIRING IS PROHIBITED. PATCH WALL TO MATCH EXISTING FINISH. INSTALL AN ADHESIVE LABEL ON THERMOSTAT WITH AIR TERMINAL UNIT LOCATION FROM THERMOSTAT.
- 7. INSTALL NEW OWNER FURNISHED WALL MOUNTED DDC THERMOSTAT ON NEW WALL. INSTALL AN ADHESIVE LABEL ON THERMOSTAT WITH CORRESPONDING AIR TERMINAL UNIT TAG AND AIR TERMINAL UNIT LOCATION FROM THERMOSTAT. LETTERS SHALL BE MINIMUM 1/8" HIGH. COORDINATE LABEL TYPE AND LETTERING HEIGHT WITH OWNER'S REPRESENTATIVE.
- 8. NEW VAV DDC POWER SUPPLY UNIT ON WALL. REFER TO ELECTRICAL DRAWINGS AND DETAIL "C" ON SHEET M700. COORDINATE LOCATION WITH OWNER'S REPRESENTATIVE PRIOR TO INSTALLING.
- 9. INSTALL NEW PRESSURE INDEPENDENT 2-WAY ELECTRIC CONTROL VALVE IN EXISTING AIR TERMINAL UNIT BRANCH PIPING SERVING EXISTING AIR TERMINAL UNIT. REFER TO VAV CONTROL DIAGRAM WITH REHEAT DETAIL 1 ON SHEET M701 AND SPEC SECTION 230900.
- 10. EXISTING WALL MOUNTED DDC THERMOSTAT TO REMAIN.
- 11. INSTALL A 3/4" WIDE ENGRAVED PHENOLIC PLASTIC ADHESIVE LABEL ON THE LAY-IN CEILING GRID TO IDENTIFY AIR TERMINAL UNIT LOCATION AND CEILING TILE TO BE USED TO ACCESS AIR TERMINAL UNIT. LABEL SHALL HAVE A WHITE BACKGROUND WITH BLACK 1/2" HIGH LETTERS. ENGAGE OWNER'S REPRESENTATIVE FOR VERIFICATION OF CEILING TILE TO BE USED FOR ACCESS PRIOR TO INSTALLING LABEL.
- 12. ALTERNATE #1: INSTALL NEW PRESSURE INDEPENDENT 2-WAY ELECTRIC CONTROL VALVE IN EXISTING AIR TERMINAL UNIT BRANCH PIPING SERVING EXISTING AIR TERMINAL UNIT. REFER TO VAV CONTROL DIAGRAM WITH REHEAT DETAIL 1 ON SHEET M701 AND SPEC SECTION 230900.
- 13. SEAL ALL NEW AND EXISTING PIPE PENETRATIONS OF PROCEDURE ROOM WALLS AIRTIGHT TO FACILITATE MAINTAINING POSITIVE PRESSURE RELATIONSHIP TO CORRIDOR.



**SECOND FLOOR CHPS - MECHANICAL PIPING - NEW WORK**  
1/8" = 1'-0"



**Keymap 2nd Floor**  
NTS



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-2011007290

**Project Team:**  
ROSS & BARUZZINI, INC.  
5 South Old Orchard | St. Louis, MO 63119  
314.818.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #0321-08

**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
**UNIVERSITY OF MISSOURI HEALTHCARE**

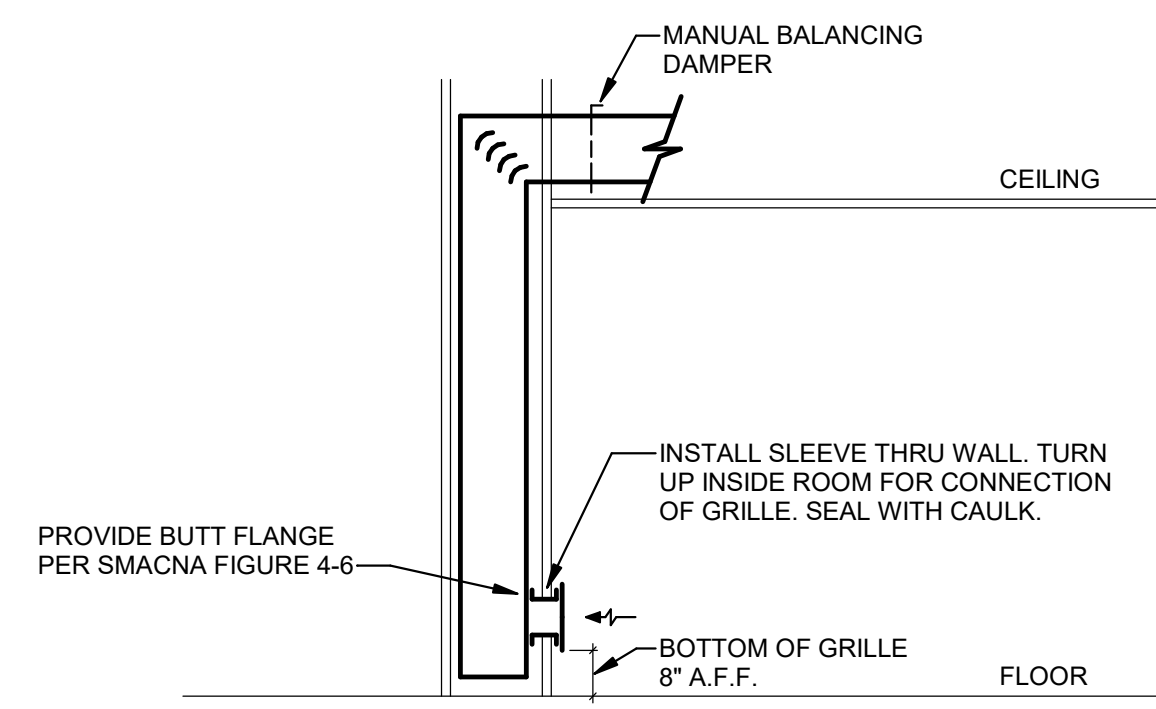


TORI JANELLE GILLESPIE  
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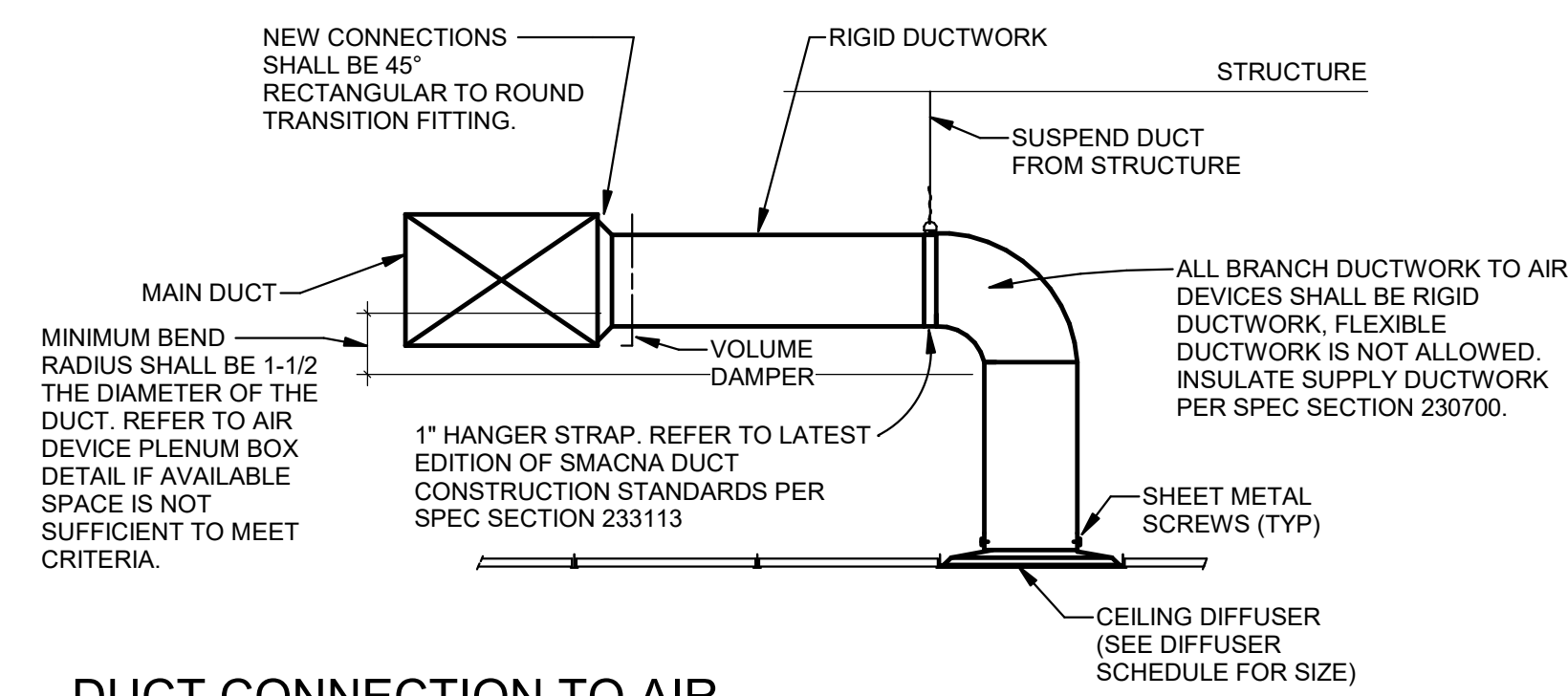
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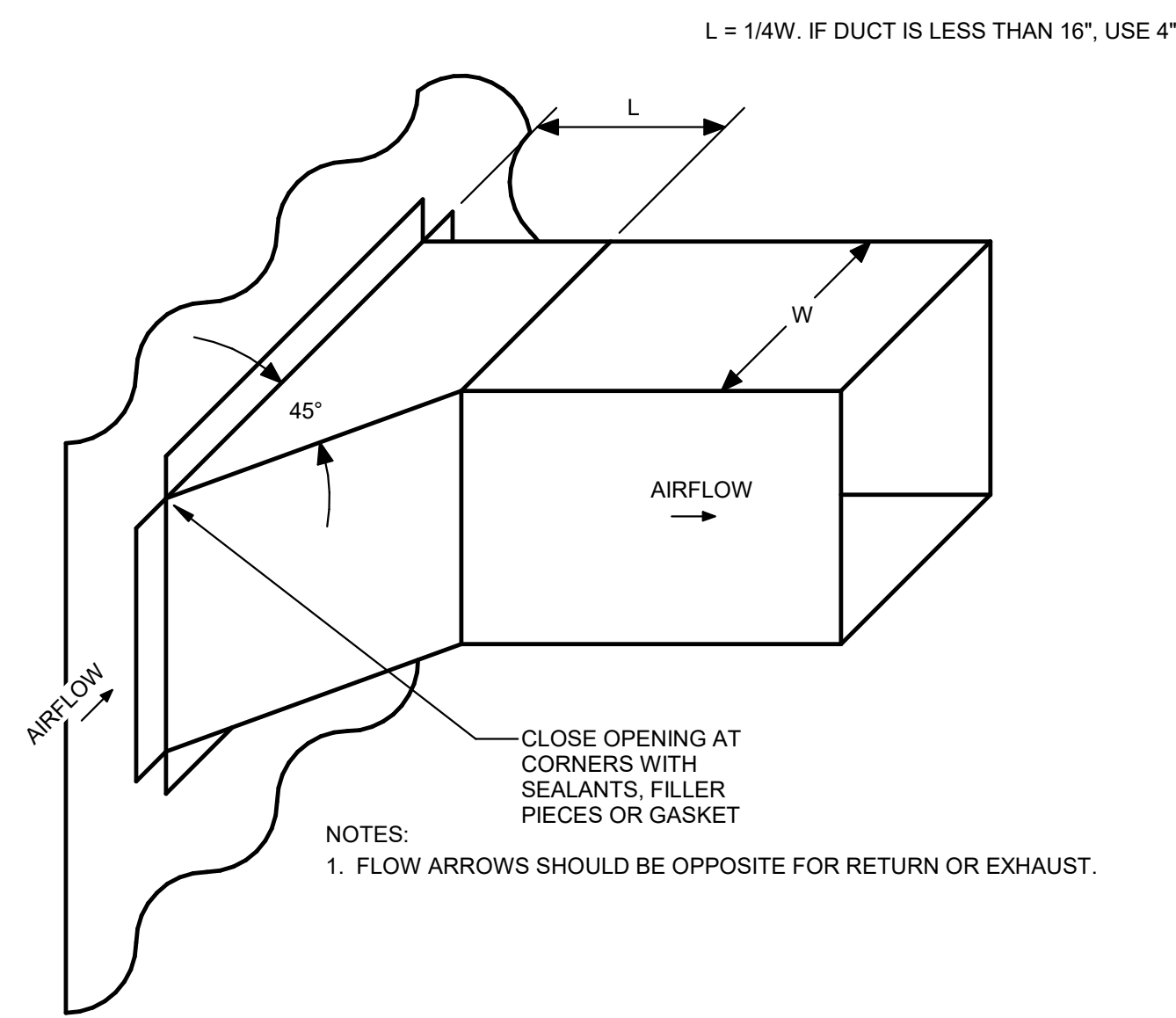
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SECOND FLOOR CHPS - MECHANICAL PIPING - NEW WORK



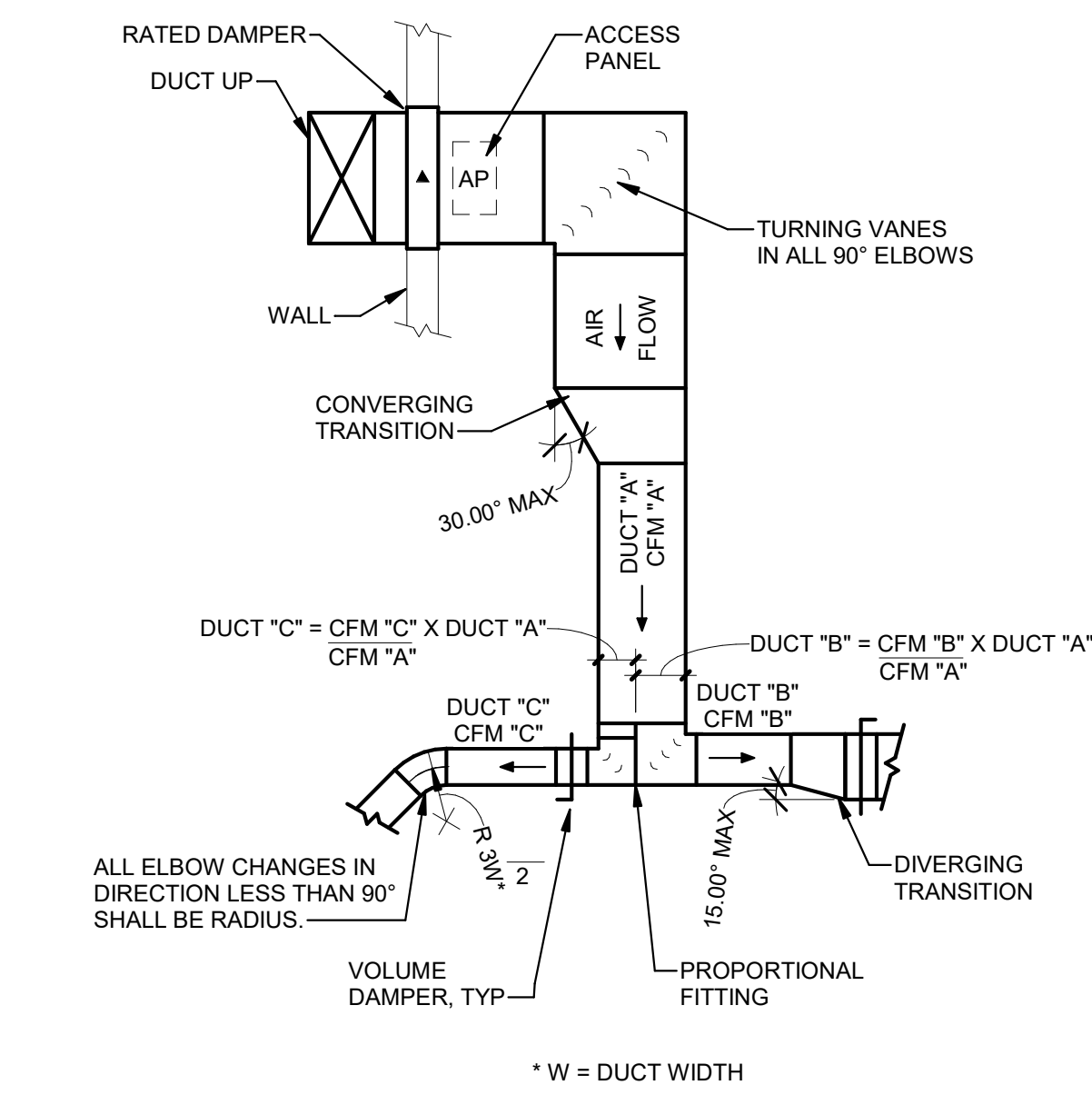
4 LOW WALL GRILLE DETAIL  
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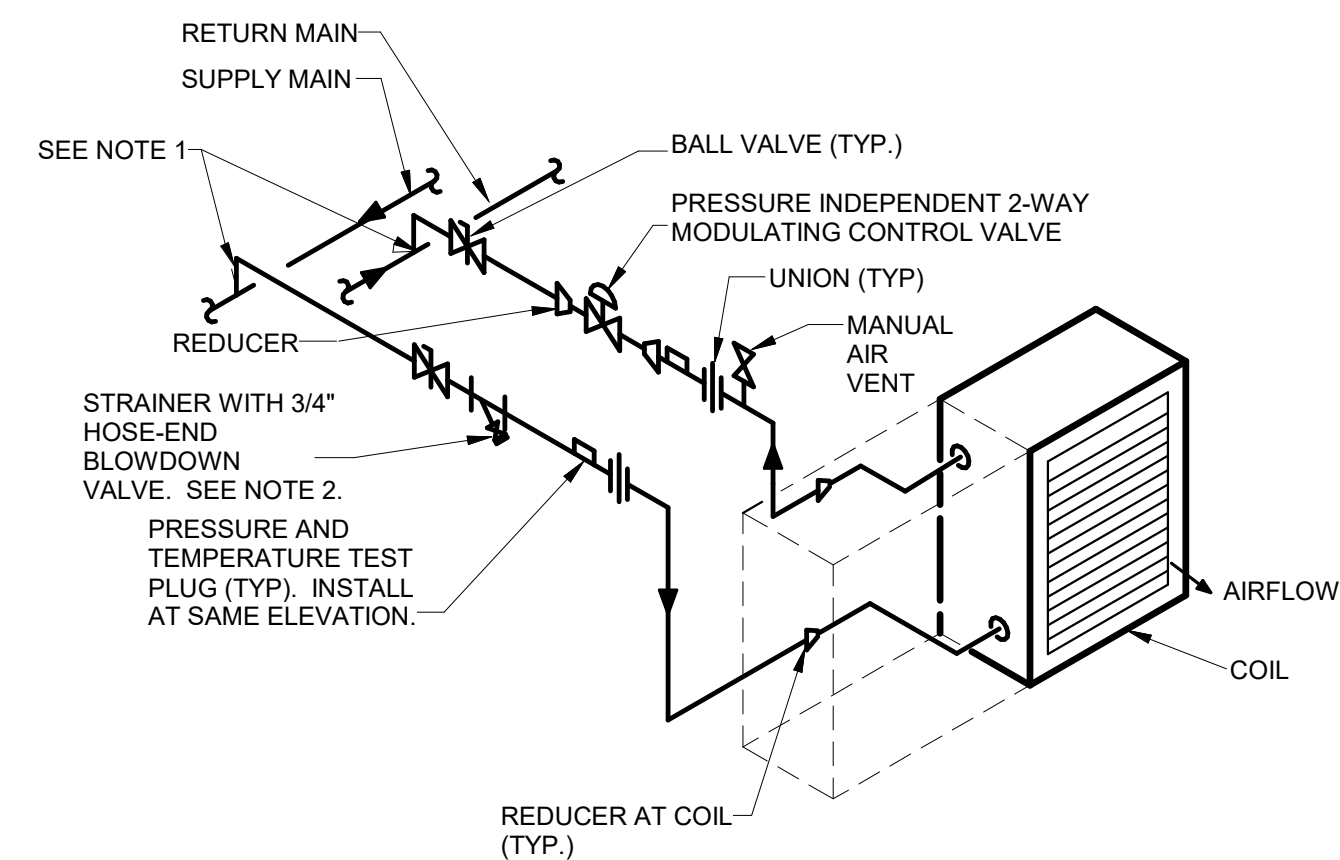
3 DUCT CONNECTION TO AIR OUTLET/INLET  
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2 45 DEGREE BRANCH TAKE-OFF DETAIL  
NTS

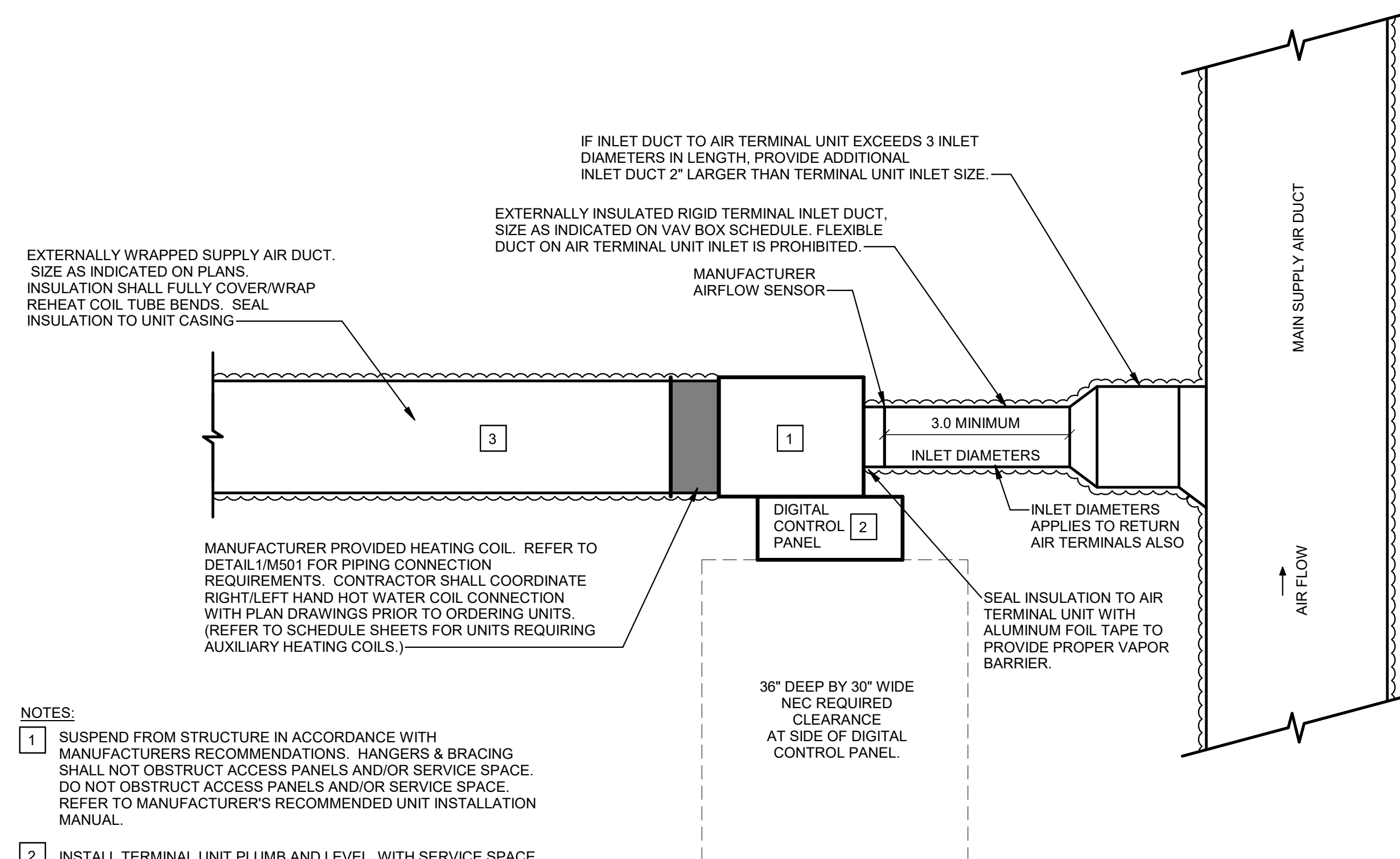


1 TYPICAL DUCTWORK DETAIL  
1/4" = 1'-0"



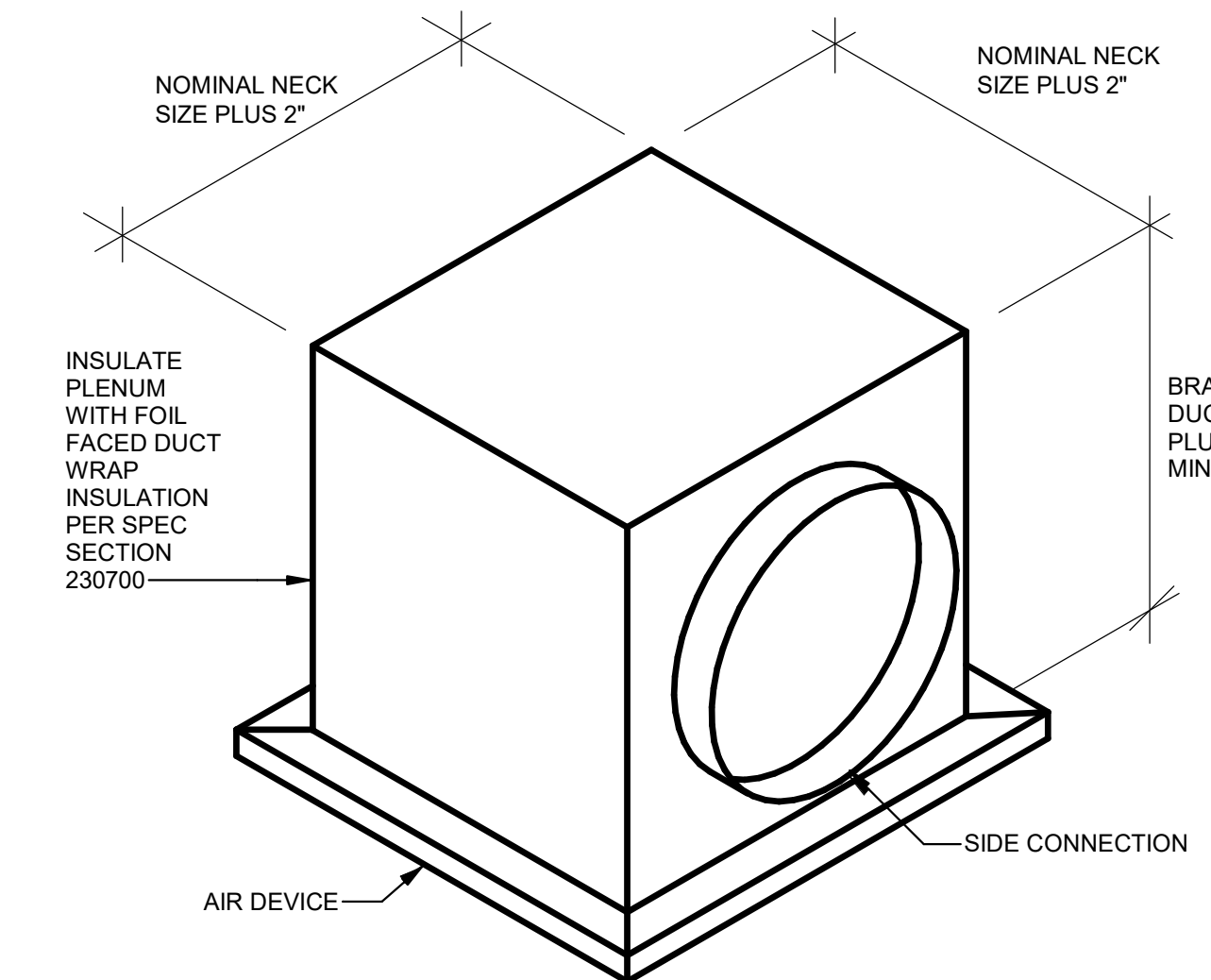
- NOTES:  
1. BRANCH PIPES SHALL TAP THE TOP OF THE MAINS.  
2. STRAINER/DRAIN VALVE SHALL BE LOWER THAN COIL CONNECTION. IF FIELD CONDITIONS DO NOT ALLOW PROVIDE ADDITIONAL DRAIN VALVE AT LOW POINT TO FACILITATE DRAINING SYSTEM.

7 2-WAY TERMINAL UNIT COIL DETAIL  
NTS

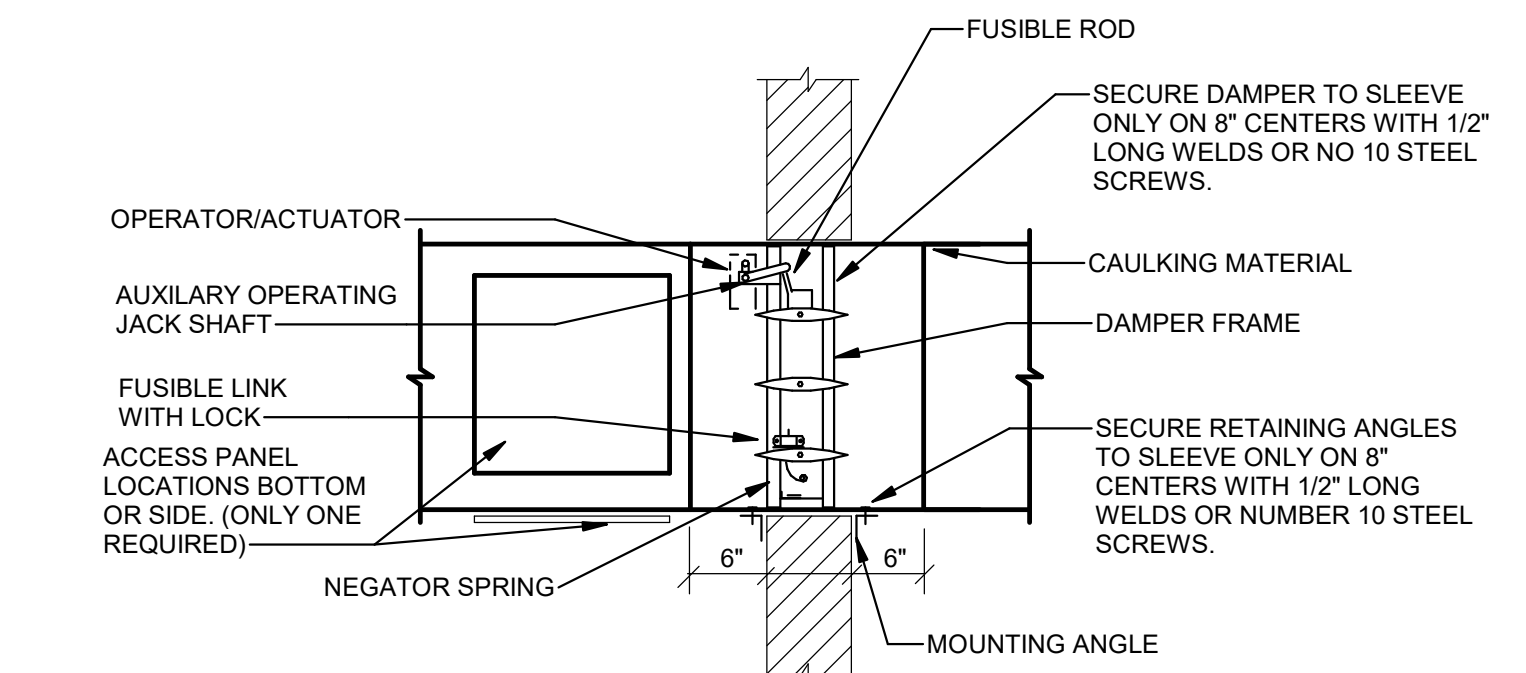


- NOTES:  
1. SUSPEND FROM STRUCTURE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. HANGERS & BRACING SHALL NOT OBSTRUCT ACCESS PANELS AND/OR SERVICE SPACE. DO NOT OBSTRUCT ACCESS PANELS AND/OR SERVICE SPACE. REFER TO MANUFACTURER'S RECOMMENDED UNIT INSTALLATION MANUAL.  
2. INSTALL TERMINAL UNIT PLUMB AND LEVEL WITH SERVICE SPACE FOR CONTROLS. SERVICE AREA MUST BE MAINTAINED CLEAR OF ALL OBSTRUCTIONS. CONTRACTOR SHALL COORDINATE SERVICE AREA WITH ALL DISCIPLINES AND CONSTRUCTION CONDITIONS. DO NOT INSTALL AIR TERMINAL UNIT WITH ACCESS AREA BLOCKED AND/OR OBSTRUCTED.  
3. WHERE POSSIBLE, PROVIDE 3'-0" OF DUCTWORK DOWNSTREAM OF VAV BOX PRIOR TO FIRST TAP.  
4. LOCATE AIR TERMINAL UNIT TO PROVIDE OPEN ACCESS TO BOTTOM OF ACCESS DOORS.  
5. WORKING SPACE SHALL BE UNOBSTRUCTED FROM CONTROL PANEL TO CEILING LINE TO ALLOW CLEAR MAINTENANCE ACCESS.  
6. ON ANY BOX WITH MANUFACTURER PROVIDED REDUCER AT INLET (E.G. ODD NUMBERED SIZES), RELOCATE REDUCER AT LEAST 3 DIAMETERS UPSTREAM, PROVIDE UNIT OPENING SIZE DUCT FOR LAST THREE DIAMETERS.

6 AIR TERMINAL UNIT WITH HOT WATER REHEAT INSTALLATION  
NTS



5 AIR DEVICE PLENUM BOX CONNECTION DETAIL  
NTS



- NOTE:  
1. INSTALLATION APPLIES TO HORIZONTAL (WALL) OR VERTICAL (FLOOR) POSITION. REFER TO APPROVED DAMPER MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR MANUFACTURER'S APPROVED UL INSTALLATION ASSEMBLY.  
2. ACCESS PANEL SHALL BE 18"x18" WHENEVER POSSIBLE.  
3. IF 18"x18" ACCESS PANEL IS NOT POSSIBLE, PROVIDE 18" LONG FLANGED, REMOVABLE SEGMENT OF DUCT AT CONNECTION TO DAMPER WITH A 6"x6" ACCESS PANEL FOR VISUAL INSPECTION OF DAMPER.

8 COMBINATION FIRE/SMOKE DAMPER DETAIL  
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bcdesigngroup

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

913.232.2123

MO Certificate of Authority Number  
A-201102790

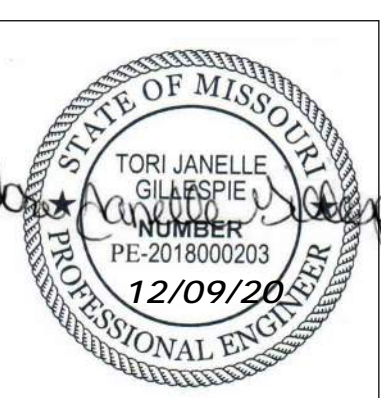
Project Team:

ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119

314.818.8383

Missouri Certificate of Authority Missouri Certificate of Authority #0331-02

Project Title:  
MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU  
UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE  
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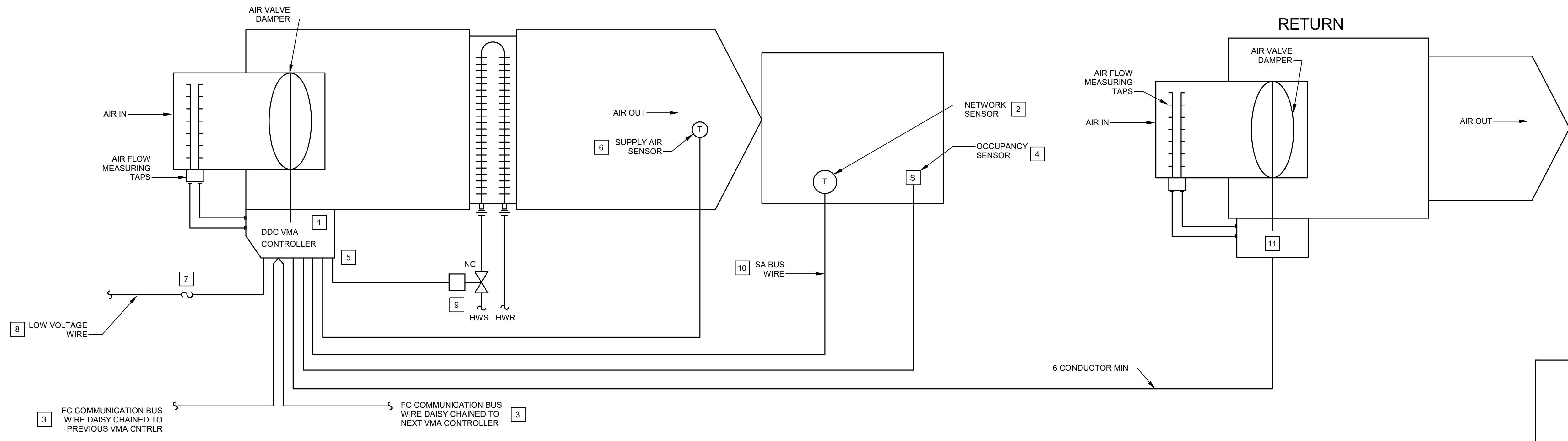
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MECHANICAL DETAILS

BID DOCUMENT PACKAGE







**A VAV BOX CONTROL DIAGRAM WITH REHEAT AND RETURN**  
NO SCALE

**NOTES:**

1. VMA TERMINAL INCLUDES CONSTANT VOLUME (CV) UNITS & VARIABLE AIR VOLUME (VAV) UNITS.
2. CAPS FOR VAV DP TEST PORTS MUST BE 1/4" BRASS PLUGS.

**KEYED NOTES:**

1. CONTROLLER WILL BE JCI MODEL MS-VMA-16XX SERIES.
2. NETWORK THERMOSTAT/ SENSOR WILL BE FURNISHED BY OWNER & INSTALLED BY CONTRACTOR. NETWORK SENSOR WILL BE JCI NS SERIES.
3. FC COMMUNICATION BUS WIRE SHALL BE 22 AWG, PLENUM RATED, TWISTED SHIELDED, 3 CONDUCTOR, WITH BLUE OUTER CASING, DESCRIBED AS 22-03 OAS STR PLNM NEON BLU JK DISTRIBUTED BY WINDY CITY WIRE CONSTRUCTED BY CABLE-TEK, OR APPROVED EQUIVALENT.
4. INSTALLATION OF OCC SENSOR IS WORK OF DIVISION 26, SEE E-SERIES SHEETS FOR FINAL LOCATIONS. A CONTROL CIRCUIT SHALL BE CONNECTED TO ALL OCC SENSORS AS WORK OF DIVISION 23. A CONTROL SIGNAL SHALL BE RELAYED TO THE VAV TERMINAL UNIT THAT SERVES THAT SPACE. IN LOCATIONS WHERE MULTIPLE OCC SENSORS ARE PRESENT, ALL SENSORS SHALL BE MONITORED AND TRANSMIT A SIGNAL TO THE VAV TERMINAL UNIT WITHIN THAT SPACE. ALL SENSORS SHALL BE WIRED IN PARALLEL.
5. CONTROLLER MUST HAVE A MINIMUM OF 18 INCHES OF ACCESSIBLE CLEARANCE.
6. VAV SUPPLY TEMP SENSOR 1000 OHM PLATINUM RTD LOCATED APPROX. 8 FT. FROM VAV BOX DISCHARGE. PROVIDED, INSTALLED, & WIRED TO CONTROLLER BY CONTRACTOR.
7. FUSE LOCATED WITHIN 2 FEET OF VMA CONTROLLER.
8. LOW VOLTAGE WIRE BY DIVISION 23. SEE ELECTRICAL DRAWINGS FOR SOURCE.
9. VALVE WITH PROPORTIONAL 0-10 VOLT ACTUATOR OR EQUIVALENT.
10. SA BUS WIRE SHALL BE 22 AWG, PLENUM RATED, TWISTED SHIELDED, 4 CONDUCTOR.
11. ELECTRIC ACTUATOR / DIFFERENTIAL PRESSURE TRANSMITTER - JOHNSON CONTROLS MODEL M9106-GGA-2 / DPT-2015-0 OR EQUIVALENT PROVIDED BY CONTRACTOR.

**VAV TERMINAL UNIT WITH TRACKING RETURN VAV TERMINAL SEQUENCE OF OPERATION**

DUAL MAXIMUM CONTROL SHALL BE USED AS FOLLOWS:

VAV TERMINAL SHALL BE UNDER THE CONTROL OF THE EMCS. REFER TO VAV DETAIL ABOVE FOR SPECIFIC RESPONSIBILITIES OF OWNER AND CONTRACTOR REGARDING THE INSTALLATION OF CONTROLS FOR THESE UNITS. VAV TERMINAL UNITS SHALL UTILIZE DDC MICROPROCESSOR BASES LOGIC TO ACHIEVE ALL CONTROL FUNCTIONS. DURING COOLING MODE (SPACE TEMPERATURE ABOVE SETPOINT) EACH VAV UNIT CONTROLLER SHALL MODULATE ITS AIR DAMPER BETWEEN ITS MINIMUM AND MAXIMUM POSITION TO MAINTAIN THE SPACE TEMPERATURE SETPOINT (72 DEG F, ADJUSTABLE).

DURING HEATING MODE (SPACE TEMPERATURE BELOW SETPOINT) THE VAV UNIT CONTROLLER SHALL MODULATE THE HEATING CONTROL VALVE BETWEEN CLOSED AND 100% OPEN WITH THE DAMPER AT MINIMUM POSITION AND A MAXIMUM DISCHARGE TEMPERATURE OF 87F DEG F. IF THE SPACE REMAINS BELOW SETPOINT, THE DAMPER SHALL MODULATE BETWEEN THE MINIMUM AND THE MAXIMUM HEATING AIRFLOW WHILE MAINTAINING 67 DEG F DISCHARGE AIR TEMPERATURE.

EMCS CONNECTION TO OCCUPANCY SENSORS: INSTALLATION OF OCCUPANCY SENSORS IS WORK OF DIVISION 26, SEE E-SERIES SHEETS FOR FINAL LOCATIONS. A CONTROL CIRCUIT SHALL BE CONNECTED TO ALL OCCUPANCY SENSORS AS WORK OF DIVISION 23. A CONTROL SIGNAL SHALL BE RELAYED TO THE VAV TERMINAL UNIT THAT SERVES THAT SPACE. IN LOCATIONS WHERE MULTIPLE OCCUPANCY SENSORS ARE PRESENT, ALL SENSORS SHALL BE MONITORED AND TRANSMIT A SIGNAL TO THE VAV TERMINAL UNIT WITHIN THAT SPACE. ALL SENSORS SHALL BE WIRED IN PARALLEL.

WHEN THE OCCUPANCY SENSOR INDICATES THAT PEOPLE ARE PRESENT IN A ZONE, THE AIR TERMINAL UNIT SHALL MODULATE ITS DAMPER BETWEEN THE DESIGN MAXIMUM AND MINIMUM AIRFLOWS AS SCHEDULED. WHEN THE OCCUPANCY SENSOR INDICATES THAT NO PEOPLE ARE PRESENT IN THE ZONE, THE AIR TERMINAL UNIT DAMPER SHALL CLOSE TO ITS SCHEDULED MINIMUM AIRFLOW.

IF ALL OCCUPANCY SENSORS ASSOCIATED WITH THE VAV TERMINAL UNIT INDICATE THE ZONE IS UNOCCUPIED, POSITION AIR DAMPER TO ITS SCHEDULED MINIMUM AIRFLOW AND RESET SPACE TEMPERATURE SETPOINT TO 65 DEG F (ADJUSTABLE) WINTER TO MINIMIZE REHEAT AND 77 DEG F (ADJUSTABLE) SUMMER.

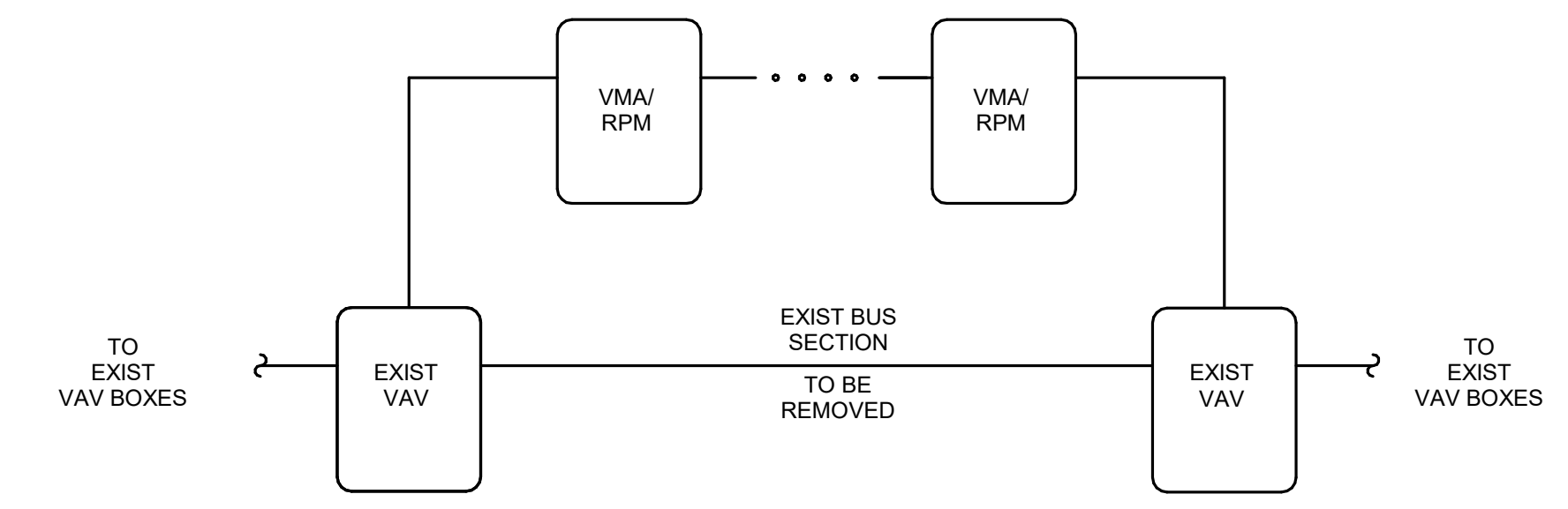
TRACKING RETURN AIR VAV  
THE ASSOCIATED RETURN AIR VAV SHALL MODULATE ITS AIRFLOW RELATIVE TO SUPPLY AIRFLOW TO MAINTAIN SCHEDULED AIRFLOW OFFSET.

**TEMPERATURE CONTROLS GENERAL NOTES**

THE CONTRACTOR SHALL SUBMIT ENGINEERED CONTROL DRAWINGS, WIRING DIAGRAMS, EQUIPMENT SCHEDULES, ETC., AS REQUIRED FOR A COMPLETE CONTROL SYSTEM. THE CONTRACTOR WILL BE EXPECTED TO WORK OUT THE DETAILS OF NORMALLY OPEN/NORMALLY CLOSED CONNECTIONS, EXACT EQUIPMENT REQUIREMENTS, ETC., TO PROVIDE A WORKING CONTROL SYSTEM.

CONTRACTOR SHALL PROVIDE AS-BUILT DIAGRAM OF NETWORK BUS ROUTING PER SPEC SECTION 23 0900.

THE UNIVERSITY OF MISSOURI - COLUMBIA UTILIZES JOHNSON CONTROLS EQUIPMENT FOR THEIR CAMPUS ENERGY MANAGEMENT CONTROL SYSTEM (EMCS). NEW DDC CONTROL SYSTEM SHALL FULLY INTERFACE WITH THE CAMPUS JOHNSON CONTROLS METASYS SYSTEM.



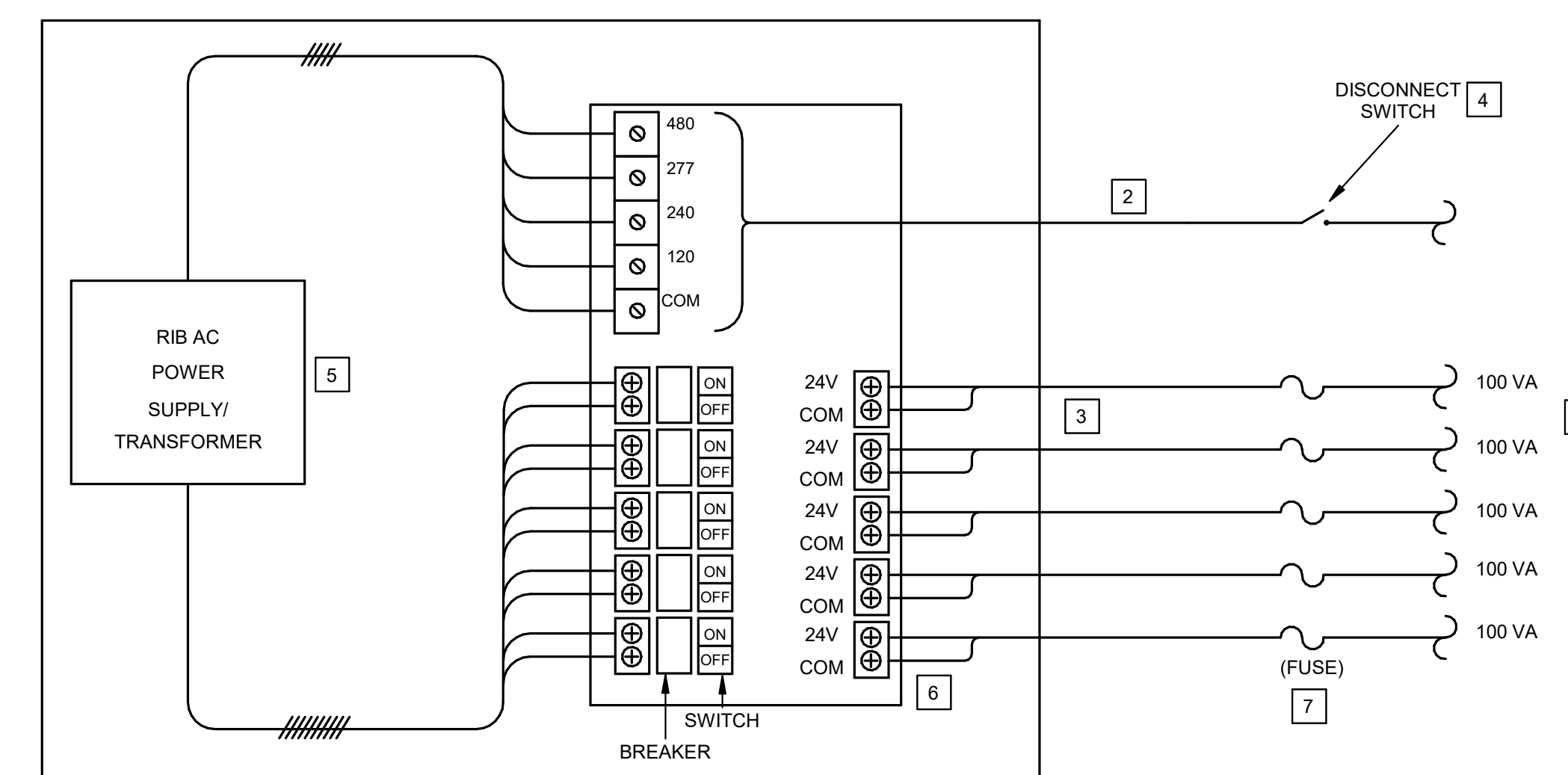
**TYP FLOOR**

**NOTES:**

1. FC BUS TO BE CONTINUOUS DAISY CHAIN WITHOUT SPLICES. CONNECTIONS CAN ONLY BE MADE AT CONTROLLERS. SEE PLANS FOR QUANTITY AND LOCATIONS OF VMA CONTROLLERS.
2. BREAK BUS BETWEEN TWO EXISTING CONNECTED VAV CONTROLLERS AND REROUTE AS SHOWN. BUS CAN BE REROUTED IN MULTIPLE LOCATIONS TO KEEP OVERALL BUS LENGTH SHORT. COORDINATE FC BUS ROUTING AND OUTAGES WITH OWNERS REP.
3. FC COMMUNICATION BUS WIRE SHALL BE 22 AWG, PLENUM RATED, TWISTED SHIELDED, 3 CONDUCTOR, WITH BLUE OUTER CASING, DESCRIBED AS 22-03 OAS STR PLNM NEON BLU JK DISTRIBUTED BY WINDY CITY WIRE, CONSTRUCTED BY CABLE-TEK, OR APPROVED EQUIVALENT.

**B FC BUS SCHEMATIC DIAGRAM**  
NO SCALE

**PSH500A ENCLOSED AC POWER SUPPLY**



**C 500VA POWER SUPPLY DIAGRAM**  
NO SCALE

**NOTES:**

1. SECONDARY LINE CAN BE RAN IN SAME CONDUIT AS FC BUS
2. ENCLOSED POWER SUPPLY MUST BE LOCATED IN ELECTRICAL ROOM, MECHANICAL ROOM, OR JANITOR'S CLOSET AND BE ACCESSIBLE. ANY OTHER LOACAION MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE

**KEYED NOTES:**

1. EACH SECONDARY OUTPUT LINE CAN POWER 3-5 VAV CONTROLLERS MAXIMUM (100 VA)
2. PRIMARY LINE INFO: 480/277/240/120 Vac, #12 AWG MINIMUM
3. SECONDARY LINE INFO: 24 Vac, #12-26 AWG, 100 VA, MAX LENGTH 175 FEET USING #14 AWG
4. DISCONNECT SWITCH REQUIRED, EXTERNALLY MOUNTED WITHIN 12 INCHES OF RIB POWER SUPPLY
5. 500VA POWER SUPPLY - INCLUDED IN RIB MODEL# PSH500A OR APPROVED EQUIVALENT
6. ALL SECONDARY LINES MUST BE LABELED IN ENCLOSURE AS TO WHICH VAV'S THEY POWER PRIOR TO ENERGIZING POWER SUPPLY
7. A SEPARATE 3 AMP FUSE IS REQUIRED WITHIN 3 FEET OF EACH VAV



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

913.232.2123  
MO Certificate of Authority Number  
A-2011007290

Project Team:

ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
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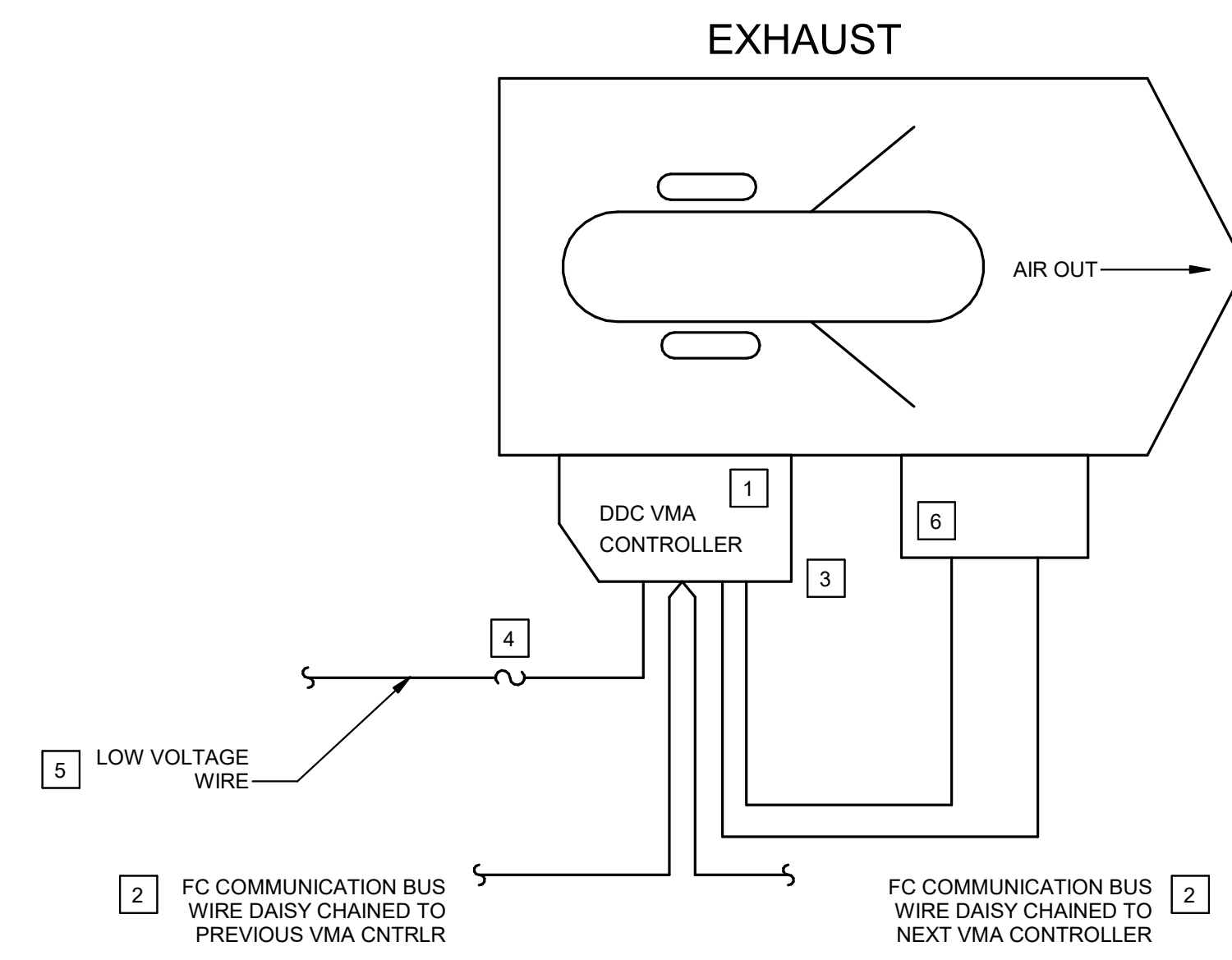
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**M700**

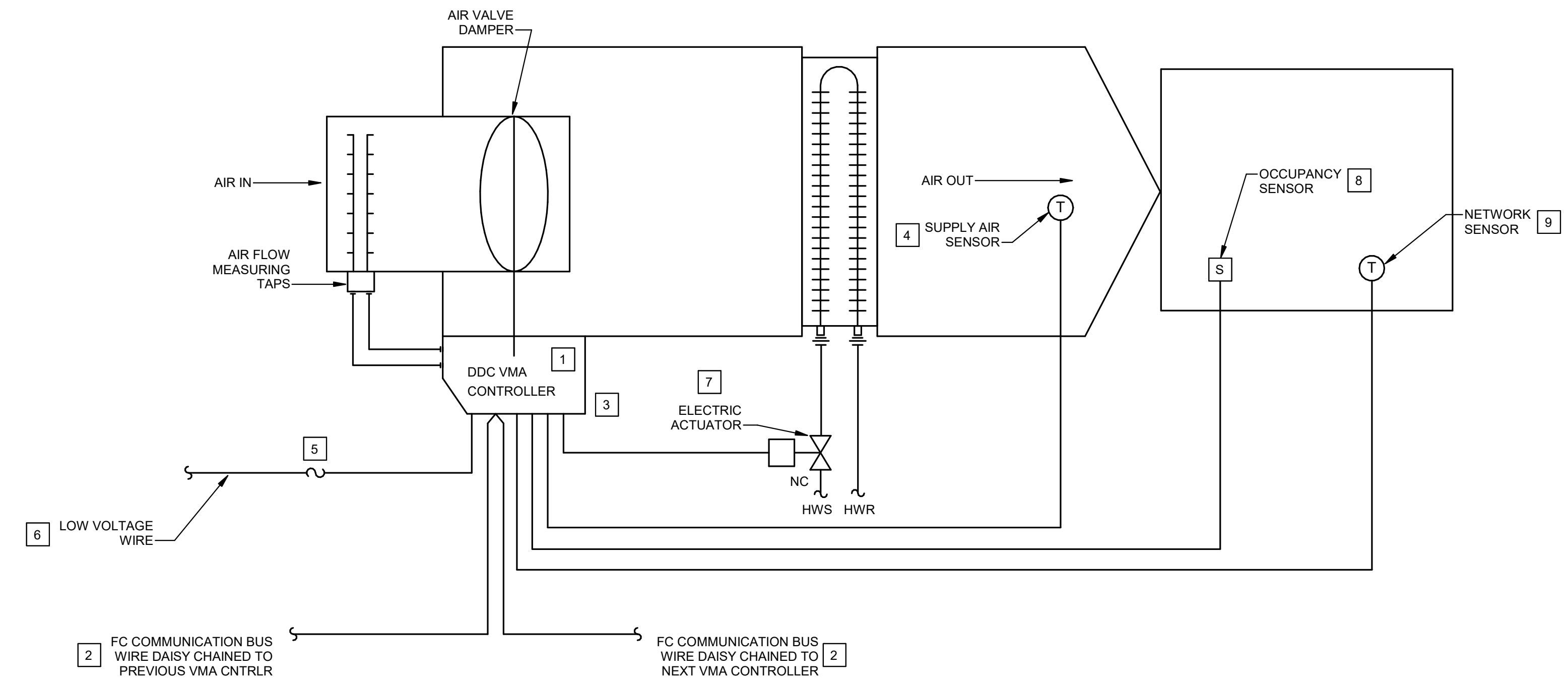
TEMPERATURE CONTROLS



**B EXHAUST VALVE CONTROL DIAGRAM**  
NO SCALE

**KEYED NOTES:**

- 1 CONTROLLER WILL BE FURNISHED BY OWNER. CONTROLLER WILL BE JCI MODEL MS-VMA-16XX SERIES. PROGRAMMING WILL BE DONE BY OWNER.
- 2 FC COMMUNICATION BUS WIRE SHALL BE 22 AWG, PLENUM RATED, TWISTED SHIELDED, 3 CONDUCTOR, WITH BLUE OUTER CASING, DESCRIBED AS 22-03 OAS STR PLNM NEON BLU JK DISTRIBUTED BY WINDY CITY WIRE CONSTRUCTED BY CABLE-TEK, OR APPROVED EQUIVALENT.
- 3 CONTROLLER MUST HAVE A MINIMUM OF 18 INCHES OF ACCESSIBLE CLEARANCE.
- 4 FUSE LOCATED WITHIN 2 FEET OF VMA CONTROLLER.
- 5 LOW VOLTAGE WIRE BY DIVISION 23. SEE ELECTRICAL DRAWINGS FOR SOURCE.
- 6 ELECTRIC ACTUATOR AND FLOW MEASUREMENT DEVICE PROVIDED WITH FLOW CONTROL VALVE.



**A VAV BOX CONTROL DIAGRAM WITH REHEAT**  
NO SCALE

**NOTES:**

1. VMA TERMINAL INCLUDES CONSTANT VOLUME (CV) UNITS & VARIABLE AIR VOLUME (VAV) UNITS.
2. CAPS FOR VAV DP TEST PORTS MUST BE 1/4" BRASS PLUGS.

**KEYED NOTES:**

- 1 CONTROLLER WILL BE JCI MODEL MS-VMA-16XX SERIES.
- 2 FC COMMUNICATION BUS WIRE SHALL BE 22 AWG, PLENUM RATED, TWISTED SHIELDED, 3 CONDUCTOR, WITH BLUE OUTER CASING, DESCRIBED AS 22-03 OAS STR PLNM NEON BLU JK DISTRIBUTED BY WINDY CITY WIRE CONSTRUCTED BY CABLE-TEK, OR APPROVED EQUIVALENT.
- 3 CONTROLLER MUST HAVE A MINIMUM OF 18 INCHES OF ACCESSIBLE CLEARANCE.
- 4 VAV SUPPLY TEMP SENSOR 1000 OHM PLATINUM RTD LOCATED APPROX. 8 FT. FROM VAV BOX DISCHARGE. PROVIDED, INSTALLED, & WIRED TO CONTROLLER BY CONTRACTOR.
- 5 FUSE LOCATED WITHIN 2 FT. OF VMA CONTROLLER.
- 6 LOW VOLTAGE WIRE BY DIVISION 23. SEE ELECTRICAL DRAWINGS FOR SOURCE.
- 7 VALVE WITH PROPORTIONAL 0-10 VOLT ACTUATOR OR EQUIVALENT.
- 8 INSTALLATION OF OCC SENSOR IS WORK OF DIVISION 26. SEE E-SERIES SHEETS FOR FINAL LOCATIONS. A CONTROL CIRCUIT SHALL BE CONNECTED TO ALL OCC SENSORS AS WORK OF DIVISION 23. A CONTROL SIGNAL SHALL BE RELAYED TO THE VAV TERMINAL UNIT THAT SERVES THAT SPACE. IN LOCATIONS WHERE MULTIPLE OCC SENSORS ARE PRESENT, ALL SENSORS SHALL BE MONITORED AND TRANSMIT A SIGNAL TO THE VAV TERMINAL UNIT WITHIN THAT SPACE. ALL SENSORS SHALL BE WIRED IN PARALLEL.
- 9 NETWORK THERMOSTAT/ SENSOR WILL BE FURNISHED BY OWNER & INSTALLED BY CONTRACTOR. NETWORK SENSOR WILL BE JCI NS SERIES.

**VAV TERMINAL UNIT SEQUENCE OF OPERATION**

DUAL MAXIMUM CONTROL SHALL BE USED AS FOLLOWS:

VAV TERMINAL SHALL BE UNDER THE CONTROL OF THE EMCS. REFER TO VAV DETAIL ABOVE FOR SPECIFIC RESPONSIBILITIES OF OWNER AND CONTRACTOR REGARDING THE INSTALLATION OF CONTROLS FOR THESE UNITS. VAV TERMINAL UNITS SHALL UTILIZE DDC MICROPROCESSOR BASES LOGIC TO ACHIEVE ALL CONTROL FUNCTIONS. DURING COOLING MODE (SPACE TEMPERATURE ABOVE SETPOINT) EACH VAV UNIT CONTROLLER SHALL MODULATE ITS AIR DAMPER BETWEEN ITS MINIMUM AND MAXIMUM POSITION TO MAINTAIN THE SPACE TEMPERATURE SETPOINT (72 DEG F, ADJUSTABLE).

DURING HEATING MODE, (SPACE TEMPERATURE BELOW SETPOINT) THE VAV UNIT CONTROLLER SHALL MODULATE THE HEATING CONTROL VALVE BETWEEN CLOSED AND 100% OPEN WITH THE DAMPER AT MINIMUM POSITION AND A MAXIMUM DISCHARGE TEMPERATURE OF 87F DEG F. IF THE SPACE REMAINS BELOW SETPOINT, THE DAMPER SHALL MODULATE BETWEEN THE MINIMUM AND THE MAXIMUM HEATING AIRFLOW WHILE MAINTAINING 87 DEG F DISCHARGE AIR TEMPERATURE.

EMCS CONNECTION TO OCCUPANCY SENSORS: INSTALLATION OF OCCUPANCY SENSORS IS WORK OF DIVISION 26. SEE E-SERIES SHEETS FOR FINAL LOCATIONS. A CONTROL CIRCUIT SHALL BE CONNECTED TO ALL OCCUPANCY SENSORS AS WORK OF DIVISION 23. A CONTROL SIGNAL SHALL BE RELAYED TO THE VAV TERMINAL UNIT THAT SERVES THAT SPACE. IN LOCATIONS WHERE MULTIPLE OCCUPANCY SENSORS ARE PRESENT, ALL SENSORS SHALL BE MONITORED AND TRANSMIT A SIGNAL TO THE VAV TERMINAL UNIT WITHIN THAT SPACE. ALL SENSORS SHALL BE WIRED IN PARALLEL.

WHEN THE OCCUPANCY SENSOR INDICATES THAT PEOPLE ARE PRESENT IN A ZONE, THE AIR TERMINAL UNIT SHALL MODULATE ITS DAMPER BETWEEN THE DESIGN MAXIMUM AND MINIMUM AIRFLOWS AS SCHEDULED. WHEN THE OCCUPANCY SENSOR INDICATES THAT NO PEOPLE ARE PRESENT IN THE ZONE, THE AIR TERMINAL UNIT DAMPER SHALL CLOSE TO ITS SCHEDULED MINIMUM AIRFLOW.

IF ALL OCCUPANCY SENSORS ASSOCIATED WITH THE VAV TERMINAL UNIT INDICATE THE ZONE IS UNOCCUPIED, POSITION AIR DAMPER TO ITS SCHEDULED MINIMUM AIRFLOW AND RESET SPACE TEMPERATURE SETPOINT TO 65 DEG F (ADJUSTABLE) WINTER TO MINIMIZE REHEAT AND 77 DEG F (ADJUSTABLE) SUMMER.



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

913.232.2123

MO Certificate of Authority Number  
A-201102790

Project Team:

ROSS & BARUZZINI, INC.  
8 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
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TORI JANELLE GILLESPIE  
PE-2018000203

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**M701**  
TEMPERATURE CONTROLS

### FIRE PROTECTION SYMBOLS & ABBREVIATIONS

NOT ALL SYMBOLS ARE USED FOR THIS PROJECT

	AIR VENT (AUTOMATIC)
	DOUBLE CHECK VALVE ASSEMBLY
	DRY PIPE VALVE
	ELECTRONIC SUPERVISING INDICATING VALVE
	FIRE DEPARTMENT VALVE (FDV)
	FLOW SWITCH
	PREACTION VALVE
	PRESSURE RELIEF VALVE
	SOLENOID VALVE
	DRAIN LINE
	DRY PIPE
	FIRE MAIN (BULK)
	SPRINKLER MAIN BRANCH PIPING
	DRIP CONNECTION
	FIRE DEPARTMENT CONNECTION-FREE STANDING
	FIRE DEPARTMENT CONNECTION-WALL MOUNT
	FLUSH TYPE FIRE DEPARTMENT INLET CONNECTION
	FIRE PUMP TEST HEADER-WALL MOUNT
	FIRE PUMP TEST HEADER-FREE STANDING
	EXISTING SPRINKLER HEAD
	EXISTING SPRINKLER HEAD TO BE REMOVED
	SPRINKLER HEAD (SEE SCHEDULE FOR TYPE)
	SIDEWALL SPRINKLER HEAD (SEE SCHEDULE FOR TYPE)
	AIR COMPRESSOR
	DOUBLE CHECK VALVE
	DRY PIPE VALVE
	DRY STAND PIPING
	DRY STAND PIPE VALVE
	FIRE DEPARTMENT CONNECTION
	FIRE DEPARTMENT VALVE
	FIRE EXTINGUISHER CABINET
	FIRE HOSE CABINET
	FIRE PUMP
	FIRE PUMP CONTROLLER
	FIRE PUMP TEST HEADER
	JOCKEY PUMP
	JOCKEY PUMP CONTROLLER
	AUTOMATIC SPRINKLER
	NO AUTOMATIC SPRINKLERS
	POST INDICATOR VALVE
	TAMPER SWITCH

### PLUMBING SYMBOLS & ABBREVIATIONS

NOT ALL SYMBOLS ARE USED FOR THIS PROJECT

	TRAPPED CONNECTION
	STRAINER
	BALANCING VALVE
	CLEANOUT (CO)
	OS & Y GATE VALVE
	TEMPERATURE GAUGE
	THERMOSTATIC MIXING VALVE
	REDUCED PRESSURE BACKFLOW PREVENTER
	HOSE BIBB/WALL HYDRANT
	ACID VENT
	ACID WASTE
	DRAIN PIPING
	DEIONIZED WATER PIPING
	REVERSE OSMOSIS PIPING (RO)
	DOMESTIC COLD WATER PIPING (CW)
	DOMESTIC HOT WATER PIPING (HW)
	DOMESTIC HOT WATER RETURN PIPING (HWR)
	NON-POTABLE WATER PIPING
	PUMP DISCHARGE PIPING
	SANITARY PIPING
	SUBSOIL DRAINAGE PIPING
	STORM PIPING
	OVERFLOW STORM PIPING
	TEMPERED WATER
	VENT PIPING
	EXISTING FIXTURE TO BE REMOVED
	EXISTING FIXTURE
	NEW FIXTURE
	FLEXIBLE CONNECTION
	FLOOR DRAIN/FLOOR SINK (FD/FS)
	CIRCULATION PUMP

### COMMON PFP SYMBOLS & ABBREVIATIONS

NOT ALL SYMBOLS ARE USED FOR THIS PROJECT

	DIRECTION OF FLOW
	BRANCH CONNECTION, BOTTOM
	BRANCH CONNECTION, TOP
	ELBOW, TURNED DOWN
	ELBOW TURNED UP
	SHUTOFF VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE
	UNION
	PIPING CAP
	EXISTING PIPING TO BE REMOVED
	MATCH LINE
	CONNECTION TO EXISTING
	DETAIL DESIGNATION
	RISER DESIGNATION
	KEYED NOTE
	REVISION NOTE
	ABOVE FINISH FLOOR
	AUTHORITIES HAVING JURISDICTION
	ACCESS PANEL
	BOTTOM OF PIPE
	DIAMETER
	DOWN
	EXISTING
	FINISHED FLOOR ELEVATION
	GALLONS PER HOUR
	GALLONS PER MINUTE
	HORSEPOWER
	INVERT ELEVATION
	NORMALLY CLOSED
	NOT TO SCALE
	POUNDS PER SQUARE INCH
	REVOLUTIONS PER MINUTE
	ROUGH-IN
	SHUTOFF VALVE
	TOTAL DYNAMIC HEAD
	VERIFY IN FIELD

### PROCESS PIPING SYMBOLS & ABBREVIATIONS

NOT ALL SYMBOLS ARE USED FOR THIS PROJECT

	ARGON PIPING
	COMPRESSED AIR PIPING (NON-MEDICAL)
	COMPRESSED AIR INTAKE PIPING (NON-MEDICAL)
	CARBON DIOXIDE PIPING
	DENTAL AIR PIPING
	DENTAL AIR INTAKE PIPING
	DENTAL VACUUM PIPING
	DENTAL VACUUM EXHAUST PIPING
	NATURAL GAS PIPING
	LAB COLD WATER
	LAB HOT WATER
	LAB GAS PIPING
	LAB VACUUM PIPING
	MEDICAL AIR PIPING
	MEDICAL AIR INTAKE PIPING
	MEDICAL VACUUM PIPING
	MEDICAL VACUUM EXHAUST PIPING
	WASTE ANESTHETIC GAS DISPOSAL PIPING
	OXYGEN PIPING
	NITROGEN PIPING
	NITROUS OXIDE PIPING
	EXISTING GAS OUTLET
	NEW GAS OUTLET
	EXISTING ZONE VALVE DESIGNATION
	NEW ZONE VALVE DESIGNATION
	EXISTING AREA ALARM DESIGNATION
	NEW AREA ALARM DESIGNATION
	EXISTING MEDICAL GAS MASTER ALARM DESIGNATION
	NEW MEDICAL GAS MASTER ALARM DESIGNATION
	AREA ALARM
	EMERGENCY SHUT-OFF VALVE
	ZONE VALVE

### PLUMBING ABBREVIATIONS

NOT ALL SYMBOLS ARE USED FOR THIS PROJECT

ADA	AMERICANS WITH DISABILITIES ACT
AP	ACCESS PANEL
BP	BOOSTER PUMP
BT	BATHTUB
BTC	BRANCH TO CONNECTION
BV	BALANCE VALVE
CI	CAST IRON
CO	CLEANOUT
CSS	CLINICAL SERVICE SINK
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DS	DOWNSPOUT
DW	DISHWASHER
DWH	DOMESTIC WATER HEATER
EEW	EMERGENCY EYE WASH
ESEW	EMERGENCY SHOWER & EYE WASH
ESH	EMERGENCY SHOWER
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEAN OUT
GCO	GRADE CLEANOUT
GD	GARBAGE DISPOSAL
HB	HOSE BIBB
HWRP	HOT WATER RETURN PUMP
HWST	HOT WATER STORAGE TANK
IM	ICE MAKER
IW	INDIRECT WASTE
LA	LAVATORY
MB	MOP BASIN
NC	NOT IN CONTRACT
OB	OUTLET BOX
RD	ROOF DRAIN
RPZ	REDUCED PRESSURE BACKFLOW PREVENTER
S	SANITARY
S/S	STAINLESS STEEL
SH	SHOWER
SK	SINK
SP	SUMP PUMP
SS	SANITARY STACK
SSK	SHOP SINK
SW	SOFT WATER
TMV	THERMOSTATIC MIXING VALVE
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VS	VENT STACK
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WD	WASHER DRAIN
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WM	WATER METER
WS	WASTE STACK
WSV	WASTE STACK VENT
YCO	YARD CLEANOUT

### PLUMBING AND FIRE PROTECTION GENERAL NOTES

- DUE TO THE LIMITED SPACE AVAILABLE FOR THE INSTALLATION OF ALL THE PLUMBING WORK, COORDINATION BETWEEN ALL OTHER TRADES IS OF UTMOST IMPORTANCE.
- THIS CONTRACTOR SHALL VISIT THE PROJECT SITE AND VERIFY LOCATIONS, ELEVATIONS AND SIZES OF ALL UTILITIES AT SITE PRIOR TO PROCEEDING WITH WORK. EXISTING SYSTEMS AND STRUCTURE SHALL BE INVESTIGATED FOR BEST POSSIBLE ROUTING OF COLD WATER, HOT WATER, SANITARY WASTE AND VENT, STORM AND MEDICAL LABORATORY GAS PIPING.
- THESE PLANS ARE DIAGRAMMATIC IN NATURE SINCE THE ONLY AVAILABLE INFORMATION HAS BEEN OBTAINED FROM EXISTING PLANS, SPECIFICATIONS, AND FIELD SURVEYS. THE EXACT LOCATION OF PIPING, FIXTURES AND EQUIPMENT MAY DEVIATE FROM THE LOCATION INDICATED ON THESE DRAWINGS. EXTREME ACCURACY IS NOT GUARANTEED. THIS CONTRACTOR SHALL BE PREPARED TO MAKE ALTERATIONS TO NEW AND/OR EXISTING SERVICES TO FIT JOB CONDITIONS. THIS CONTRACTOR SHALL FURNISH A COMPLETE CODE COMPLYING SYSTEM. THIS CONTRACTOR SHALL REPORT, IN WRITING, ANY DISCREPANCIES WHICH PREVENT THE INSTALLATION OF WORK AS SHOWN.
- IF THIS CONTRACTOR DOES NOT CLEARLY UNDERSTAND THESE PLANS OR IS NOT COMPLETELY SURE OF THEIR MEANING, THIS CONTRACTOR SHOULD OBTAIN THE ENGINEER'S WRITTEN EXPLANATION AND/OR INTERPRETATION PRIOR TO SUBMITTING BIDS. SINCE THIS CONTRACTOR WILL BE HELD RIGIDLY TO THE INTERPRETATION OF THE ENGINEER.
- IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO REPAIR THE EXISTING SURFACES TO REMAIN WHERE THEIR WORK HAS BEEN COMPLETED. REPAIR SHALL INCLUDE, BUT NOT LIMITED TO, ANY EXISTING WALL, CEILING OR FLOOR THAT IS SCHEDULED TO REMAIN. REPAIR, PAINTING, AND PATCHING SHALL BE COMPLETED BY AN APPROPRIATE CONTRACTOR QUALIFIED FOR THIS TYPE OF WORK.
- THE OWNER SHALL MAINTAIN ALL SALVAGE RIGHTS OF FIXTURES, EQUIPMENT AND MATERIALS REMOVED. HOWEVER, ALL FIXTURES, EQUIPMENT AND MATERIALS NOT CLAIMED BY THE OWNER SHALL BE REMOVED FROM THE PREMISES AND PROPERLY DISPOSED OF BY THE DEMOLITION CONTRACTOR.
- CEILING REMOVAL, STORAGE AND REPLACEMENT FOR NEW PIPING INSTALLATION SHALL BE BY THE GENERAL CONTRACTOR.
- IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING DEMOLITION OPERATIONS, THE CONTRACTOR WILL NOTIFY BUILDING OWNER OF THE HAZARDOUS MATERIAL.
- TEMPORARY CONNECTION SHALL BE PROVIDED BY RESPECTIVE PLUMBING AND FIRE PROTECTION CONTRACTORS WHEN EXTENDED INTERRUPTIONS OF SERVICES AND UTILITIES SUCH AS WATER, WASTE AND FIRE PROTECTION WHICH SERVE OTHER AREAS ARE NECESSARY.
- COORDINATE WITH MAINTENANCE PERSONNEL AS TO SOURCE OF UTILITIES AND TEMPORARILY DISCONNECT OR SHUT OFF SERVICES OR UTILITIES AT NEAREST MAIN. TEMPORARY AND ACCESSIBLE ISOLATION VALVES SHALL BE INSTALLED CLOSE TO THIS POINT OF WORK.
- IT IS ESSENTIAL THAT BUILDING OPERATIONS CONTINUE WITH MINIMAL INTERRUPTIONS. IT IS NECESSARY THAT OPERATION OF EXISTING SYSTEMS BE INTERRUPTED WITH AS LITTLE DISRUPTION AS POSSIBLE EXCEPT IN AREAS VACATED FOR CONSTRUCTION WORK WHICH WILL INTERFERE WITH OPERATION OF EXISTING FIRE SUPPRESSION AND PLUMBING SYSTEMS OR WHICH REQUIRE DOWNTIME WILL BE SCHEDULED ONLY AFTER CONSULTATION WITH AND PERMISSION GIVEN BY THE OWNER. ALLOW 10 DAYS PRIOR TO ANTICIPATED INTERRUPTION OF SYSTEMS. WORK MAY BE REQUIRED TO BE PERFORMED OUTSIDE NORMAL WORKING HOURS.
- ARCHITECTURAL DEMOLITION DRAWINGS AND SPECIFICATIONS SHALL BE READ IN CONJUNCTION WITH THESE DRAWINGS.
- ALL PIPING HANGERS AND SUPPORTS SHALL BE REMOVED ALONG WITH PIPING BEING REMOVED.
- THE CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH PROJECT'S PHASING SCHEDULE PRIOR TO COMMENCEMENT OF ANY WORK.
- WHEN PLACING NEW PLUMBING FIXTURES, CONTRACTOR SHALL VERIFY LOCATIONS OF PLUMBING VENTS, OFFSET VENTS THAT TERMINATE WITHIN 25 FEET OF HVAC UNITS OUTDOOR AIR INTAKES. CONTRACTOR SHALL FIELD VERIFY PRIOR TO BID WHERE THE INTERFERENCE'S ARE PRICE ACCORDINGLY OR MAKE ALLOWANCES IN BID.
- USE CAUTION WHEN SAW-CUTTING THROUGH EXISTING CONCRETE FLOOR OR WALL CONSTRUCTION FOR THE INSTALLATION OF PLUMBING SYSTEMS TO AVOID CUTTING REBAR AT EDGE OF OPENING. LEAVE SUFFICIENT REBAR EXPOSED TO THE NEW REINFORCING REPLACEMENT CONCRETE AND/OR OTHER STRUCTURAL ATTACHMENTS FOR NEW CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS, TRANSITIONS, OFFSETS, ETC., TO AVOID DUCTWORK, PIPING, EQUIPMENT OR STRUCTURE NEW OR EXISTING AND TO MAKE A COMPLETE AND FUNCTIONING SYSTEM.

### FIRE PROTECTION GENERAL NOTES

- THE WORK COVERED CONSISTS OF FURNISHING ALL LABOR AND MATERIALS NECESSARY TO INSTALL, COMPLETE AND READY FOR CONTINUOUS OPERATION, THE FIRE PROTECTION SYSTEMS APPARATUS AND EQUIPMENT FOR THIS PROJECT, AS SHOWN ON THE DRAWINGS, PLUS AS REQUIRED BY NFPA 13 AND THE AUTHORITY HAVING JURISDICTION.
- FURNISH AND INSTALL TAMPER SWITCHES ON ALL INDICATING VALVES AS PER NFPA 13 REQUIREMENTS.
- THE CONTRACTOR SHALL PERFORM A FLOW TEST PRIOR TO DESIGN AND SUBMITTAL OF THE HYDRAULICALLY CALCULATED SYSTEM IF THE PROVIDED TEST IS GREATER THAN 1 YEAR OLD FROM THE DATE OF CONSTRUCTION.
- THE CONTRACTOR SHALL SUBMIT ALL DRAWINGS AND CALCULATIONS TO THE UMHC AND RECEIVE APPROVAL PRIOR TO SUBMITTING DESIGN SHOP DRAWINGS.
- THE CONTRACTOR SHALL FURNISH DRAIN VALVE AND INSPECTOR'S TEST CONNECTIONS AS REQUIRED BY NFPA 13 REQUIREMENTS AND AT THE DISCRETION OF THE FIRE MARSHAL AND ENGINEER.
- UNLESS OTHERWISE NOTED, IT IS THE INTENT OF THESE DOCUMENTS THAT ALL AREAS WITHIN THE SCOPE OF WORK WILL BE PROVIDED WITH AN AUTOMATIC WET TYPE FIRE SUPPRESSION SYSTEM MEETING NFPA #13.
- ROUTING OF SPRINKLER MAINS, BRANCHES AND HEADS SHALL BE THOROUGHLY COORDINATED WITH ALL OTHER TRADES AND BUILDING STRUCTURE PRIOR TO SUBMISSION OF COORDINATED SHOP DRAWINGS. FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR COORDINATING, PREPARING, AND SUBMITTING COORDINATION DRAWINGS FOR APPROVAL/REVIEW.
- ALL OPENINGS THROUGH FIRE RATED FLOORS AND WALLS OR PARTITIONS SHALL BE FIRE STOPPED WITH UL RATED ASSEMBLIES OF EQUAL OR GREATER FIRE RATING.
- SUBMIT ACCURATE AS BUILT DRAWINGS TO THE ENGINEER AND OWNER.
- ALTHOUGH ALL PIPING MAY NOT BE INDICATED ON THE FLOOR PLANS, IT IS THE INTENT THAT THE ENTIRE EXISTING SPRINKLER SYSTEM BE DEMOLISHED BACK TO THE NEAREST FIRE/BULK/BRANCH MAIN.
- THE FIRE PROTECTION BID IS A DESIGN/BUILD CONTRACT. BEFORE SUBMITTING HIS BID THE CONTRACTOR SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS HE MAKES AS A RESULT OF HIS FAILURE TO BECOME FULLY FAMILIAR WITH EXISTING CONDITIONS.
- THE CONTRACTOR SHALL INCLUDE IN HIS BID, A FULLY CODE COMPLIANT AND COORDINATED SPRINKLER SYSTEM. HEAD LOCATIONS ARE SHOWN TO ESTABLISH TYPE, QUANTITY, AND DESIRED LOCATION. EXACT QUANTITY OF HEADS IS CONTRACTOR'S RESPONSIBILITY. PROJECT SHALL BE DESIGNED AND CONSTRUCTED PER NFPA 13 AND/OR FACTORY MUTUAL GLOBAL REQUIREMENTS.
- CEILING REMOVAL, STORAGE, AND REPLACEMENT WILL BE BY THIS CONTRACTOR.

### FIRE STOPPING NOTES

- FIRESTOPPING MATERIALS SHALL BE INSTALLED BY A CERTIFIED FIRESTOP CONTRACTOR.
- UL LISTED FIRESTOP SYSTEMS SHALL BE SUBMITTED TO MUHC FOR APPROVAL PRIOR TO INSTALLATION.
- REFER TO DIVISION 7 FOR REQUIREMENTS.

SEISMIC PERFORMANCE: SPRINKLER PIPING SHALL WITHSTAND THE EFFECTS OF EARTHQUAKE MOTIONS DETERMINED ACCORDING TO THE NFPA 13 AND ASCE/SEI 7. SEE STRUCTURAL DRAWINGS FOR BUILDING CLASSIFICATION, SEISMIC CATEGORY AND IMPORTANCE FACTOR REQUIREMENTS.



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201007290

Project Team:  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.818.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #021-02

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PE-2018000203

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**PFP000**  
PLUMBING AND FIRE PROTECTION SYMBOLS AND ABBREVIATIONS



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

913.232.2123

MO Certificate of Authority Number  
A-201002920

Project Team:

ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
Missouri Certificate of Authority Number  
A-201002920

### GENERAL SHEET NOTES

- A. SOME EXISTING PIPING SHOWN WAS LOCATED ON EXISTING AS-BUILT DRAWINGS.
- B. CONTRACTOR SHALL VERIFY EXISTING UNDERFLOOR SANITARY PIPING AND NEW PIPE ROUTES PRIOR TO CONSTRUCTION.

### KEYED NOTES

- 1. EXISTING PIPING TO BE DEMOLISHED BACK TO MAIN.

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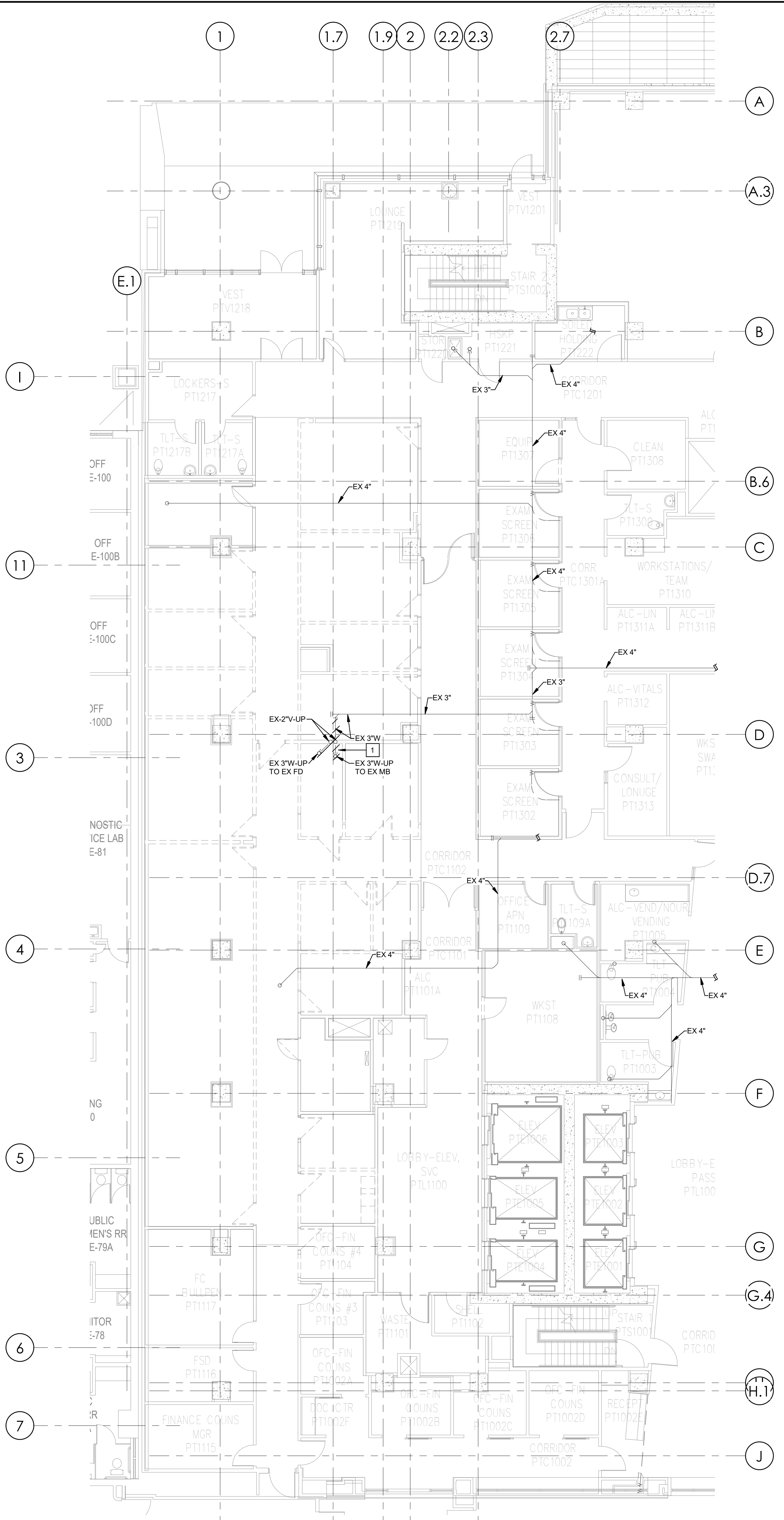
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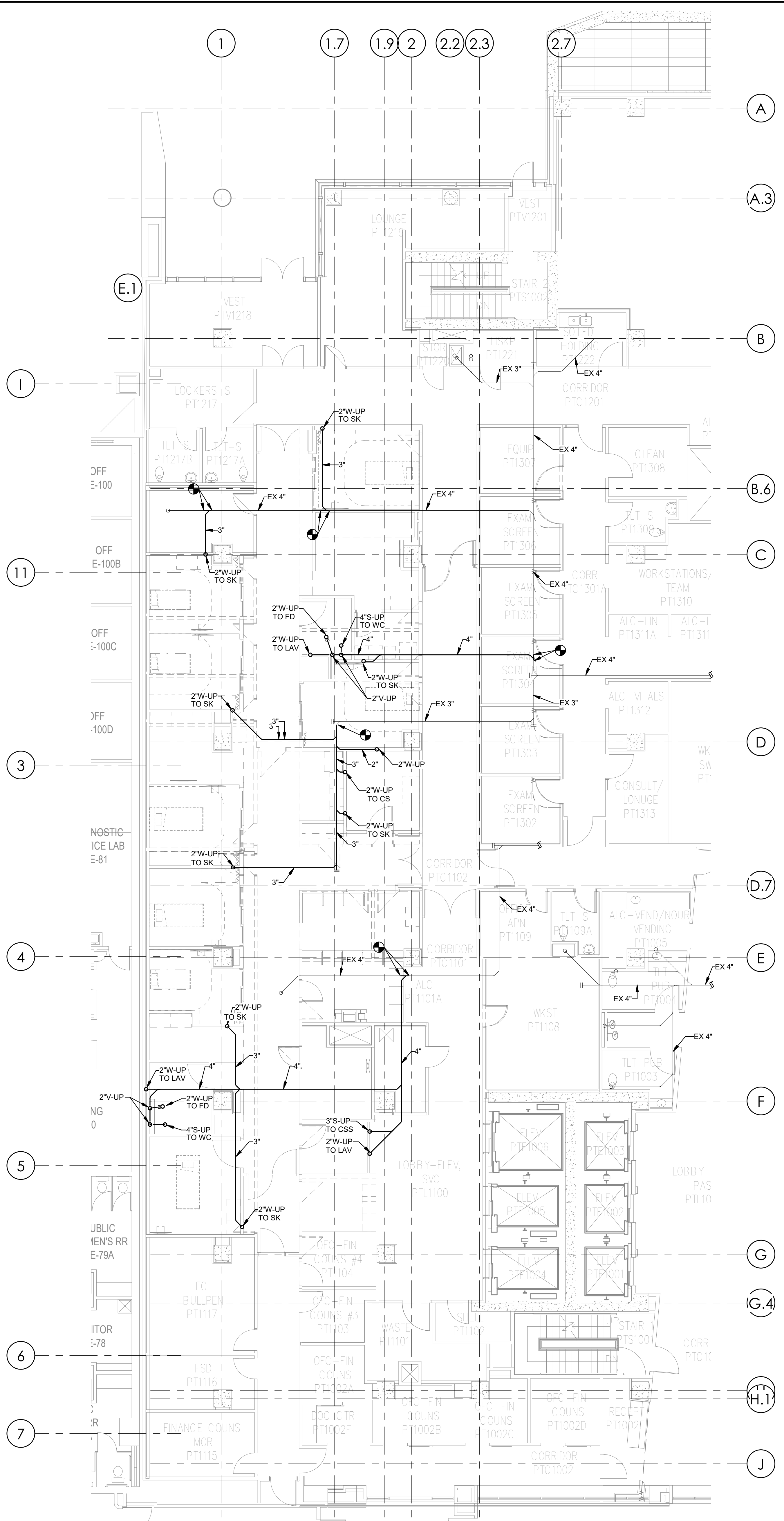
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GROUND FLOOR CBCU - UNDERFLOOR PLUMBING PLAN

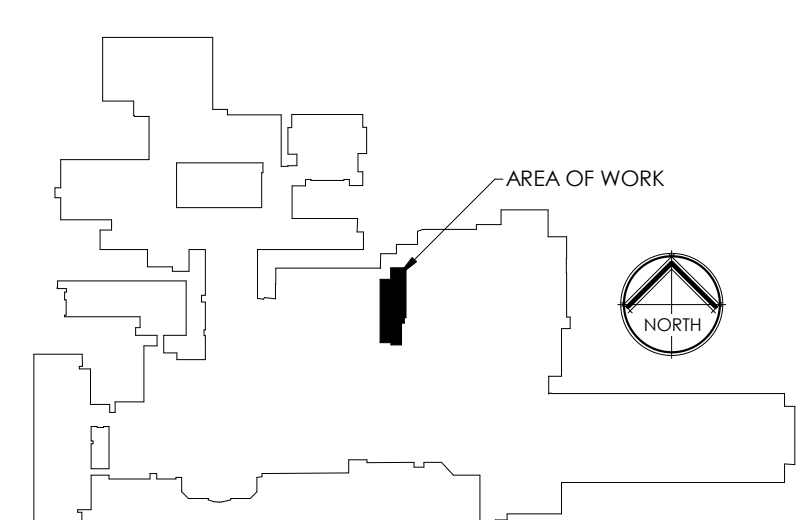
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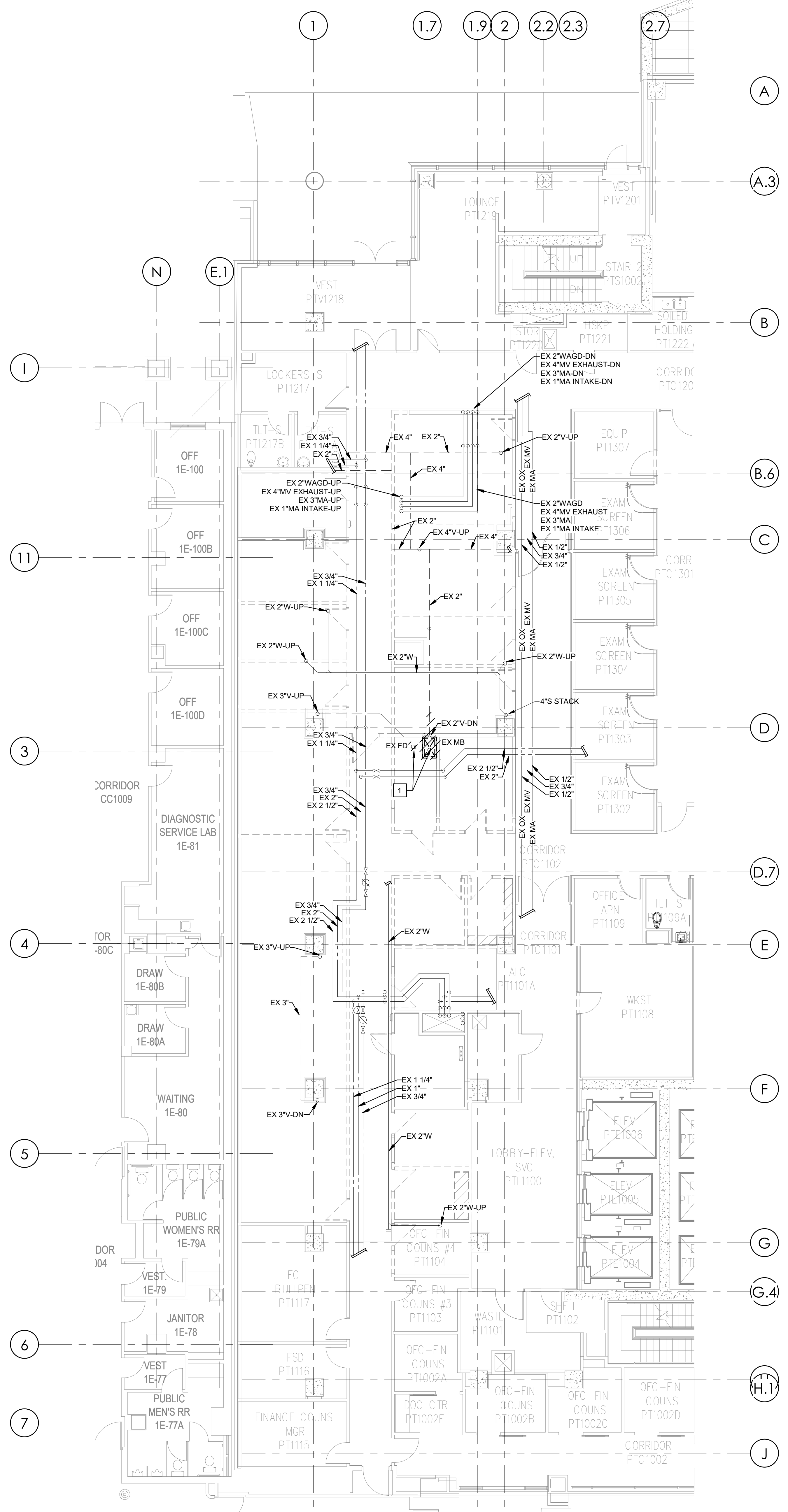
1 GND FLR CBCU - PLBG UNDERFLOOR DEMO  
1/8" = 1'-0"



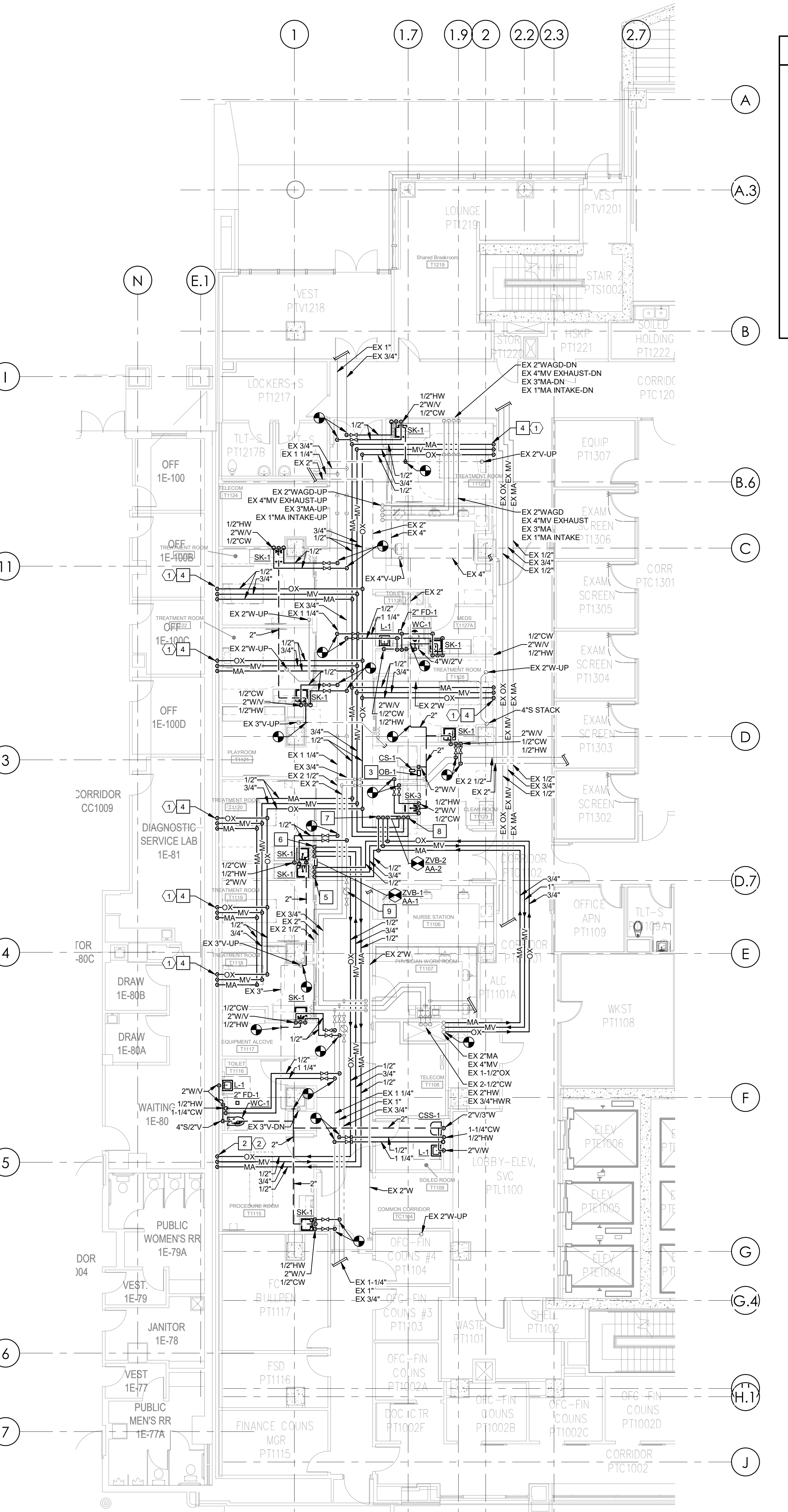
2 GND FLR CBCU - PLBG UNDERFLOOR PLAN  
1/8" = 1'-0"



Keymap 1st Floor  
NTS

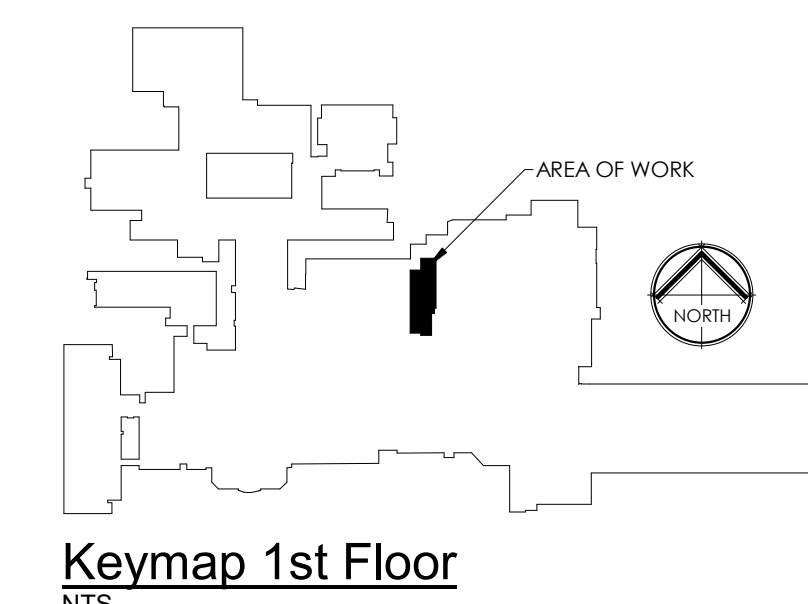


1 1ST FLR CBCU - PLUMBING DEMO PLAN  
1/8" = 1'-0"



2 1ST FLR CBCU - PLUMBING NEW WORK PLAN  
1/8" = 1'-0"

- KEYED NOTES**
- EXISTING PLUMBING FIXTURE TO BE DEMOLISHED PIPING SERVING THIS FIXTURE TO BE DEMOLISHED BACK TO ITS MAIN AND CAPPED.
  - NEW 1/2" MA, 3/4" MV, AND 1/2" OX DOWN TO NEW MEDICAL GAS OXEQUIP-STYLE WALL OUTLETS.
  - OUTLET BOX OB-1 SERVING ICE MAKER SHALL BE INSTALLED BELOW COUNTER IN CASEWORK.
  - NEW 1/2" MA, 3/4" MV, AND 1/2" OX DOWN TO NEW MEDICAL GAS OXEQUIP-STYLE WALL OUTLETS (2 OXYGEN, 1 MEDICAL VACUUM, AND 1 MEDICAL AIR OUTLET).
  - 1/2" OX, 3/4" MV, AND 1/2" MA DOWN TO NEW ZONE VALVE BOX (ZVB-1) SERVING NEW PROCEDURE ROOM.
  - 1/2" OX, 3/4" MV, AND 1/2" MA UP FROM NEW ZONE VALVE BOX (ZVB-1) SERVING NEW PROCEDURE ROOM.
  - 1/2" OX, 3/4" MV, AND 1/2" MA DOWN TO NEW ZONE VALVE BOX (ZVB-2) SERVING NEW TREATMENT ROOMS.
  - 1/2" OX, 3/4" MV, AND 1/2" MA UP FROM NEW ZONE VALVE BOX (ZVB-2) SERVING NEW TREATMENT ROOMS.
  - CONTRACTOR SHALL REBALANCE THE HOT WATER RETURN.



**bcDESIGN GROUP**  
12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790

**Project Team:**  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.818.8383  
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TORI JANELLE GILLESPIE  
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**P101**  
FIRST FLOOR CBCU - PLUMBING FLOOR PLAN  
BID DOCUMENT PACKAGE

**GENERAL SHEET NOTES**

- A. SOME EXISTING PIPING SHOWN WAS LOCATED ON EXISTING AS-BUILT DRAWINGS.
- B. CONTRACTOR SHALL VERIFY EXISTING UNDERFLOOR SANITARY PIPING AND NEW PIPE ROUTES PRIOR TO CONSTRUCTION.



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

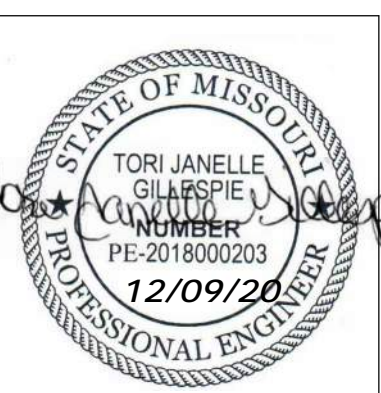
913.232.2123

MO Certificate of Authority Number  
A-201100290

Project Team:

ROSS & BARUZZINI, INC.  
8 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #3321-01

**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE  
PE-2018000203

Issue Date: 12/9/2020

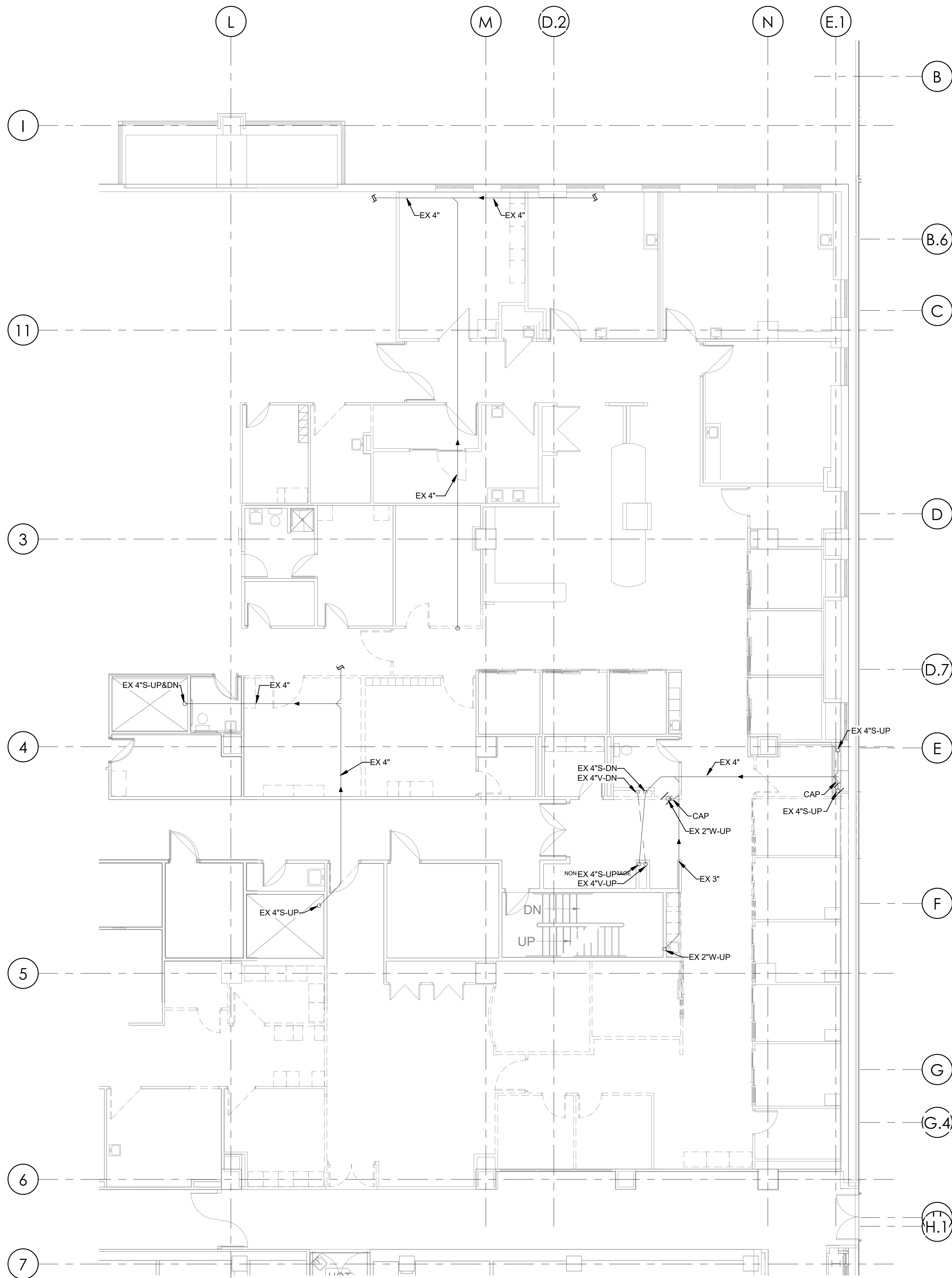
Drawn by: Author

bcdg Project #: 12275.43  
MU Project #: CP210751

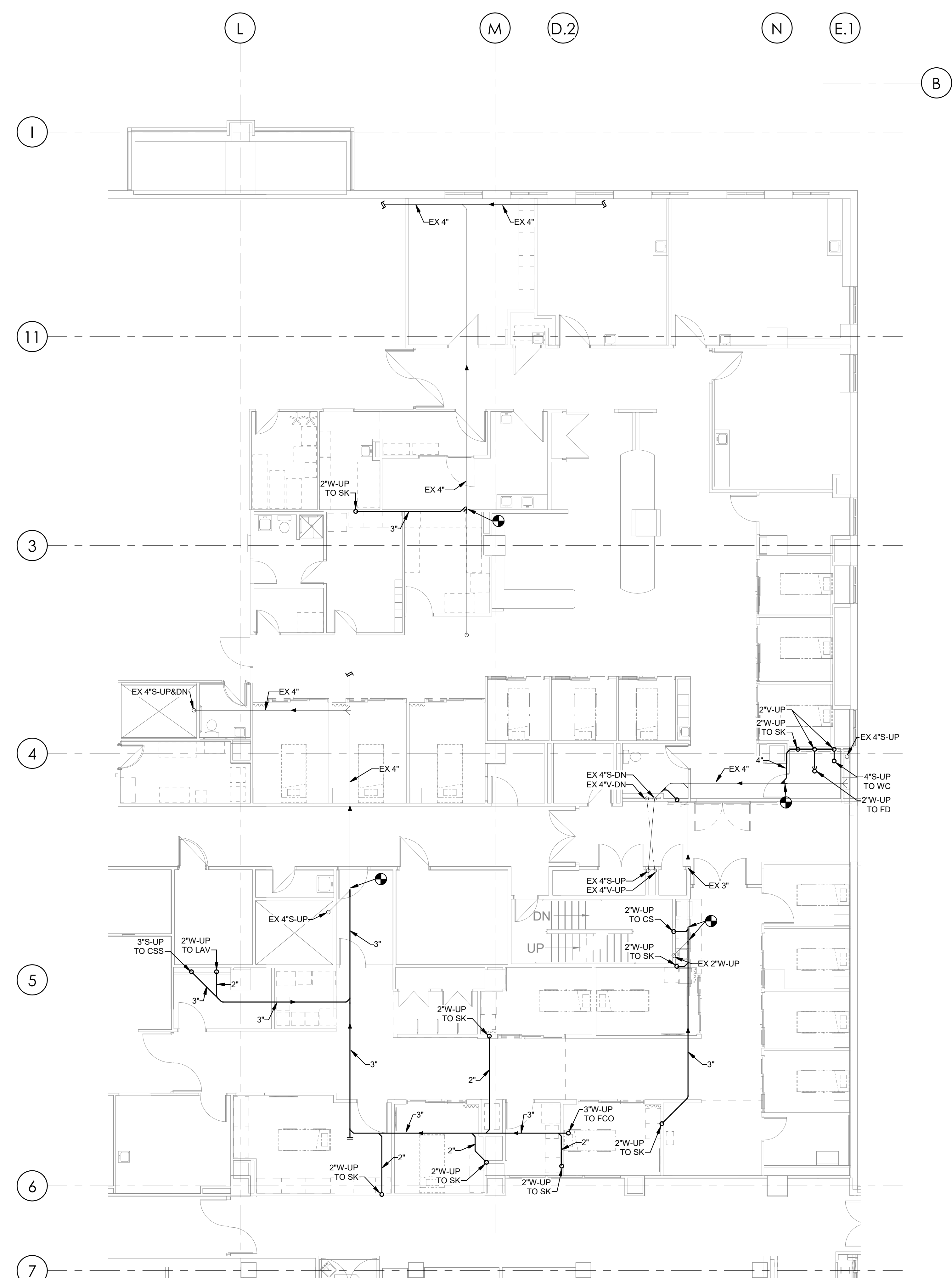
**P102**

FIRST FLOOR CHPS - UNDERFLOOR PLUMBING PLAN

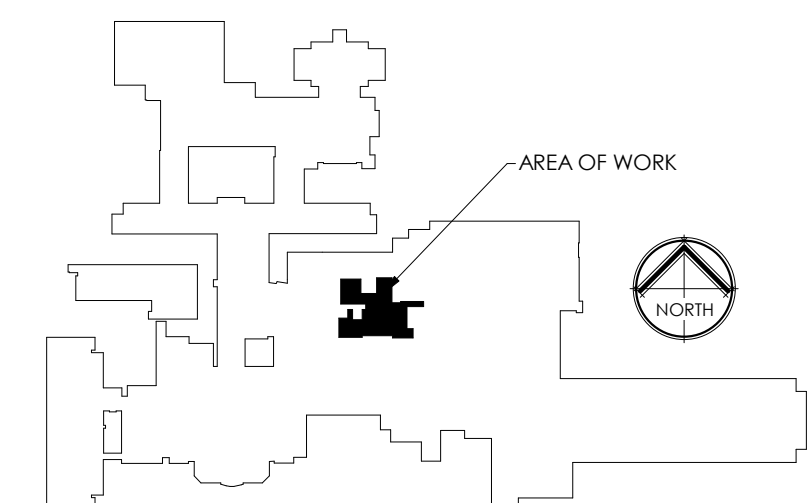
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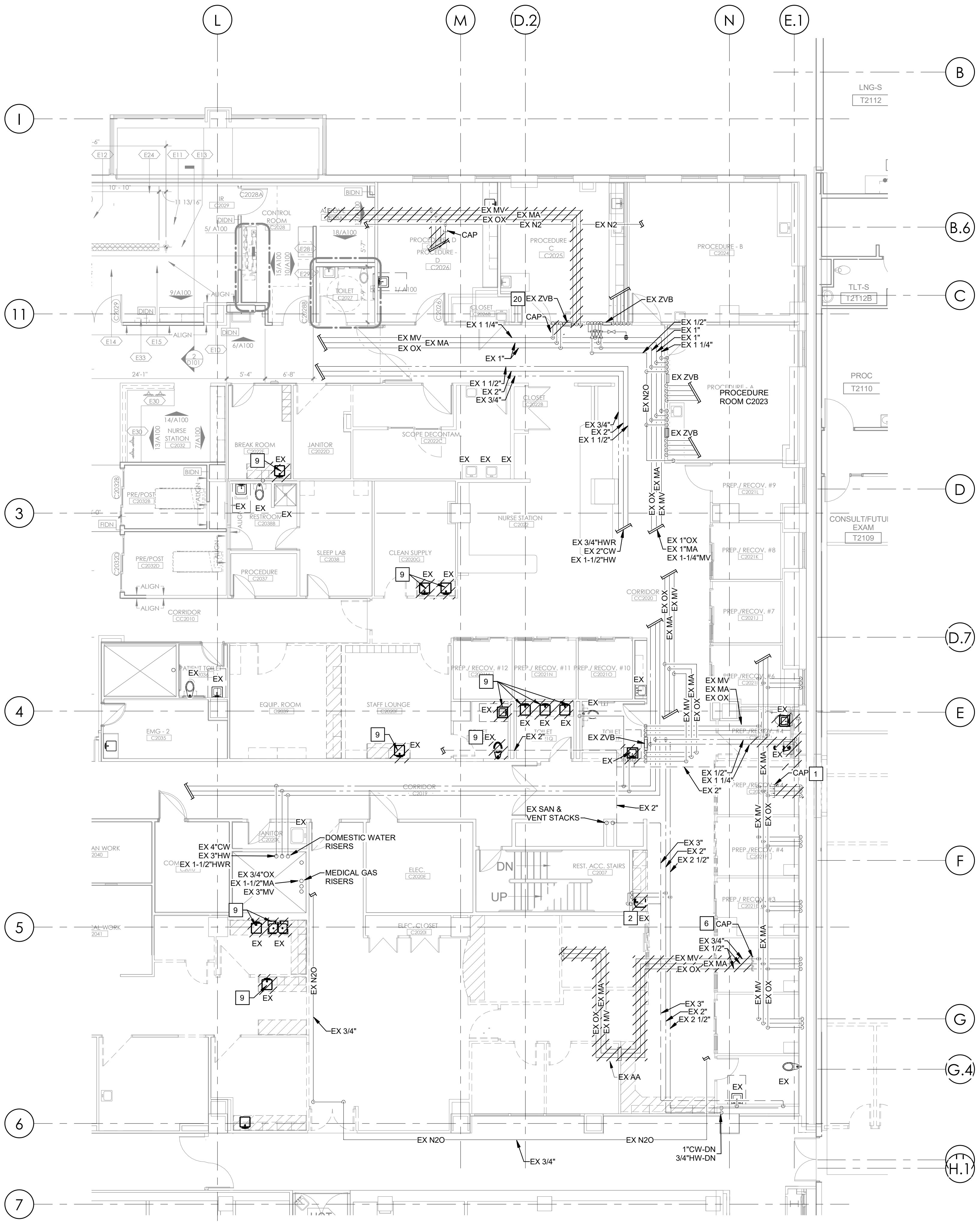
1ST FLR CHPS - PLBG UNDERFLOOR DEMO



2ND FLR CHPS - PLBG UNDERFLOOR PLAN



Keymap 2nd Floor



2ND FLR CHPS - PLUMBING DEMO PLAN  
1/8" = 1'-0"



2ND FLOOR CHPS - PLBG NEW WORK PLAN  
1/8" = 1'-0"



Keymap 2nd Floor  
NTS

- KEYED NOTES**
- EXISTING MED GAS WALL OUTLETS AND PIPING TO BE DEMOLISHED BACK TO THIS POINT AND CAPPED TO MAKE ROOM FOR NEW CORRIDOR IN NEW WORK PHASE.
  - EXISTING PLUMBING FIXTURE TO BE DEMOLISHED. EXISTING ROUGH-IN TO REMAIN FOR CONNECTION TO NEW PLUMBING FIXTURE IN NEW WORK PHASE.
  - NEW 1/2" MA, 3/4" MV, AND 1/2" OX DOWN TO NEW MEDICAL GAS OXEQUIP-STYLE WALL OUTLETS IN TREATMENT ROOM (2x OX, 1x MA, 1x MV, 1x WAGD, 1x NO2).
  - NEW PLUMBING FIXTURES TO BE CONNECTED TO EXISTING ROUGH-IN.
  - TIE NEW 2" V FROM NEW SK-1 INTO EXISTING VENT FOR RESTROOM C2038S.
  - EXISTING MED GAS WALL OUTLETS, PIPING AND AREA ALARM PANEL TO BE DEMOLISHED BACK TO THIS POINT AND CAPPED.
  - OUTLET BOX OB-1 SERVING ICE MAKER SHALL BE INSTALLED BELOW COUNTER IN CASEWORK.

- KEYED NOTES**
- EXISTING WALL BEING RELOCATED. ROUGH IN FOR LAVATORY TO BE RELOCATED INTO NEW WALL LOCATION.
  - EXISTING PLUMBING FIXTURE TO BE DEMOLISHED. EXISTING ROUGH-IN TO REMAIN FOR CONNECTION TO NEW PLUMBING FIXTURE IN NEW WORK PHASE.
  - NEW 1/2" OX, 1/2" MA, 3/4" MV, 3/4" WAGD, AND 1/2" NO2 DOWN TO NEW ZONE VALVE BOX (ZVB-3) FOR USE IN PROCEDURE ROOM IN CHPS AREA.
  - NEW 1/2" OX, 1/2" MA, 3/4" MV, 3/4" WAGD, AND 1/2" NO2 UP FROM NEW ZONE VALVE BOX (ZVB-3) TO PROCEDURE ROOM IN CHPS AREA.
  - NEW 1/2" OX, 1/2" MA, 3/4" MV, 3/4" WAGD, AND 1/2" NO2 TO PROCEDURE ROOM AND DOWN TO NEW OXEQUIP-STYLE WALL OUTLETS.
  - NEW 1/2" OX, 1/2" MA, 3/4" MV, 3/4" WAGD, AND 1/2" NO2 TO PROCEDURE ROOM AND DOWN TO NEW DISSTYLE CEILING OUTLETS.
  - NEW 1/2" OX, 1/2" MA, 3/4" MV, 3/4" WAGD, AND 1/2" NO2 DOWN TO NEW ZONE VALVE BOX (ZVB-5) FOR USE IN PROCEDURE ROOM C2026.
  - NEW 1/2" OX, 1/2" MA, 3/4" MV, 3/4" WAGD, AND 1/2" NO2 UP FROM NEW ZONE VALVE BOX (ZVB-5) TO PROCEDURE ROOM IN PROCEDURE ROOM C2026.
  - NEW 1/2" OX, 1/2" MA, 3/4" MV, 3/4" WAGD, AND 1/2" NO2 DOWN TO NEW ZONE VALVE BOX (ZVB-4) TO TREATMENT ROOMS.
  - NEW 1/2" OX, 1/2" MA, 3/4" MV, 3/4" WAGD, AND 1/2" NO2 UP FROM NEW ZONE VALVE BOX (ZVB-4) TO TREATMENT ROOMS.
  - NEW 1/2" OX, 1/2" MA, 3/4" MV, 3/4" WAGD, AND 1/2" NO2 DOWN TO NEW ZONE VALVE BOX (ZVB-6) TO TREATMENT ROOMS.
  - NEW 1/2" OX, 1/2" MA, 3/4" MV, 3/4" WAGD, AND 1/2" NO2 UP FROM NEW ZONE VALVE BOX (ZVB-6) TO TREATMENT ROOMS.
  - EXISTING ZONE VALVE BOX AND ASSOCIATED PIPING TO BE DEMOLISHED.



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790

**Project Team:**  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.818.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #021-02

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE  
PE-2018000203

Issue Date: 12/9/2020  
Revision 1 Date 1

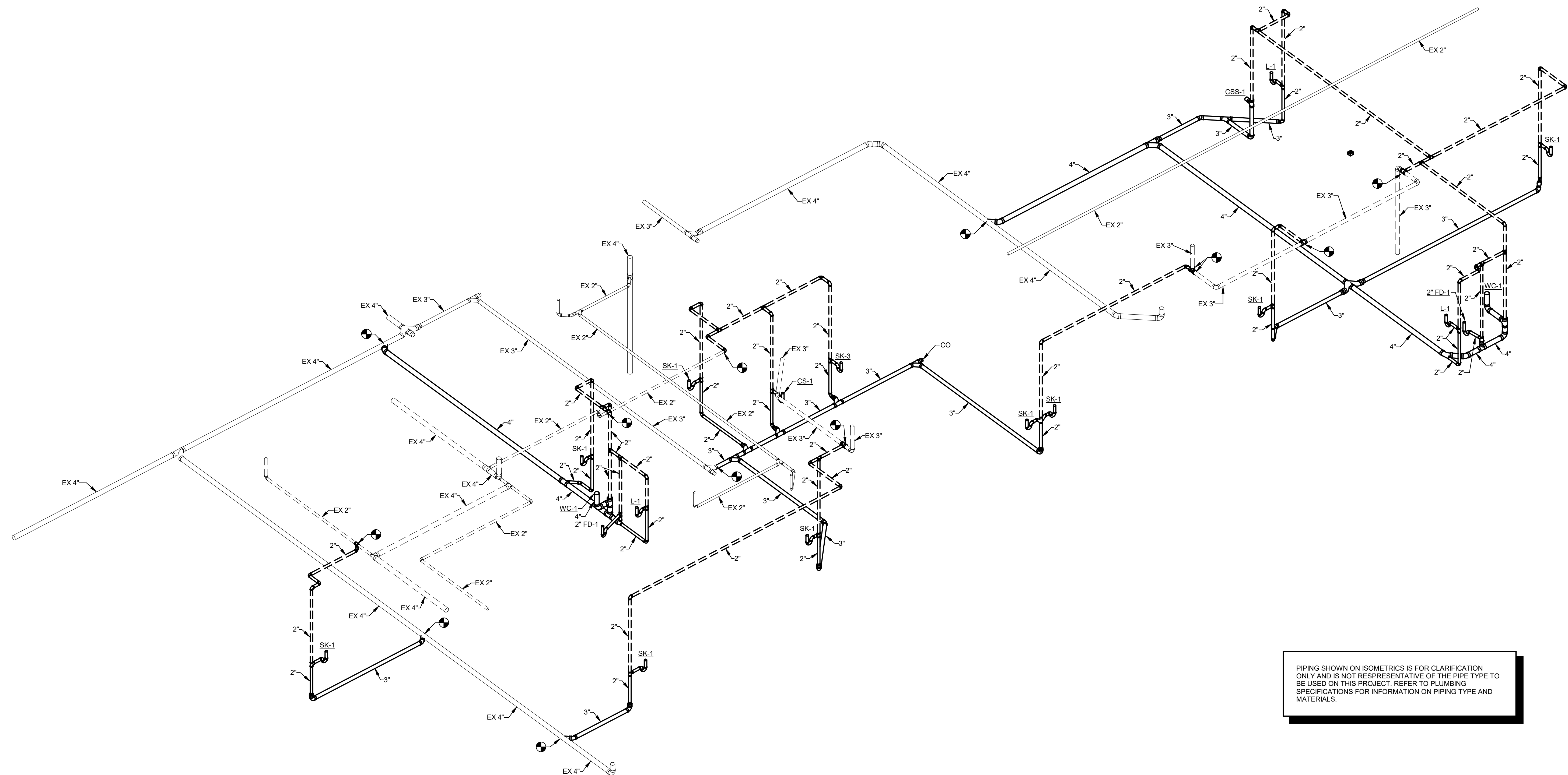
Drawn by: Author

bcgd Project #: 12275.43  
MU Project #: CP210751

**P103**  
SECOND FLOOR CHPS - PLUMBING FLOOR PLAN

BID DOCUMENT PACKAGE





1 CBDU - SANITARY & VENT NEW WORK ISO

PIPING SHOWN ON ISOMETRICS IS FOR CLARIFICATION ONLY AND IS NOT REPRESENTATIVE OF THE PIPE TYPE TO BE USED ON THIS PROJECT. REFER TO PLUMBING SPECIFICATIONS FOR INFORMATION ON PIPING TYPE AND MATERIALS.



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201100290

Project Team:  
ROSS & BARUZZINI, INC.  
8 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #0201-02

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE  
PE-2018000203

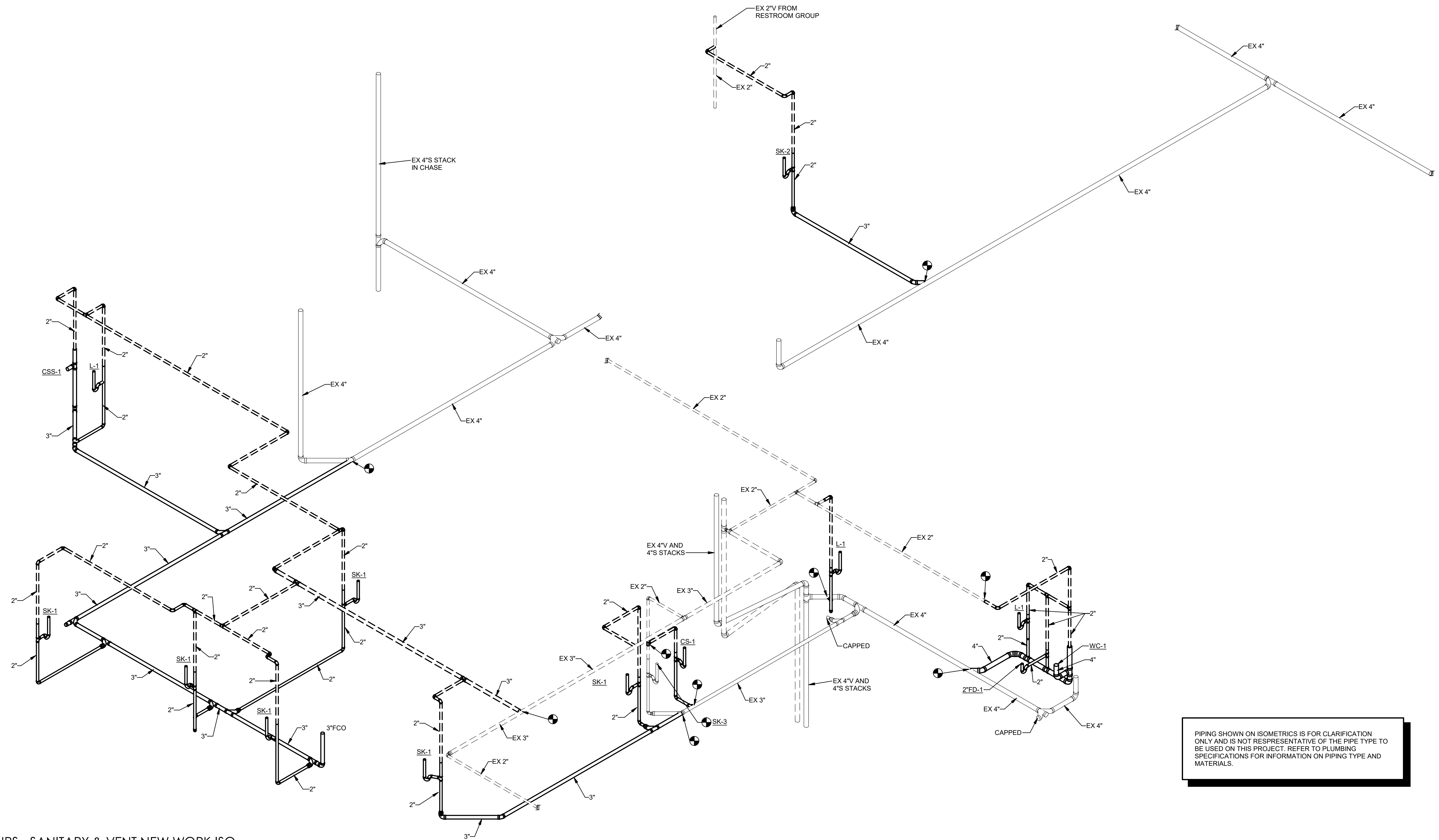
Issue Date: 12/9/2020

Drawn by: MAS

bcdg Project #: 12275.43  
MU Project #: CP210751

**P201**  
PLUMBING ISOMETRICS -  
SANITARY & VENT

BID DOCUMENT PACKAGE



1 CHPS - SANITARY & VENT NEW WORK ISO

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bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

913.232.2123

MO Certificate of Authority Number  
A-201100290

Project Team:

ROSS & BARUZZINI, INC.  
8 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #3321-01

Project Title:  
MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU  
UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE  
PE-2018000203

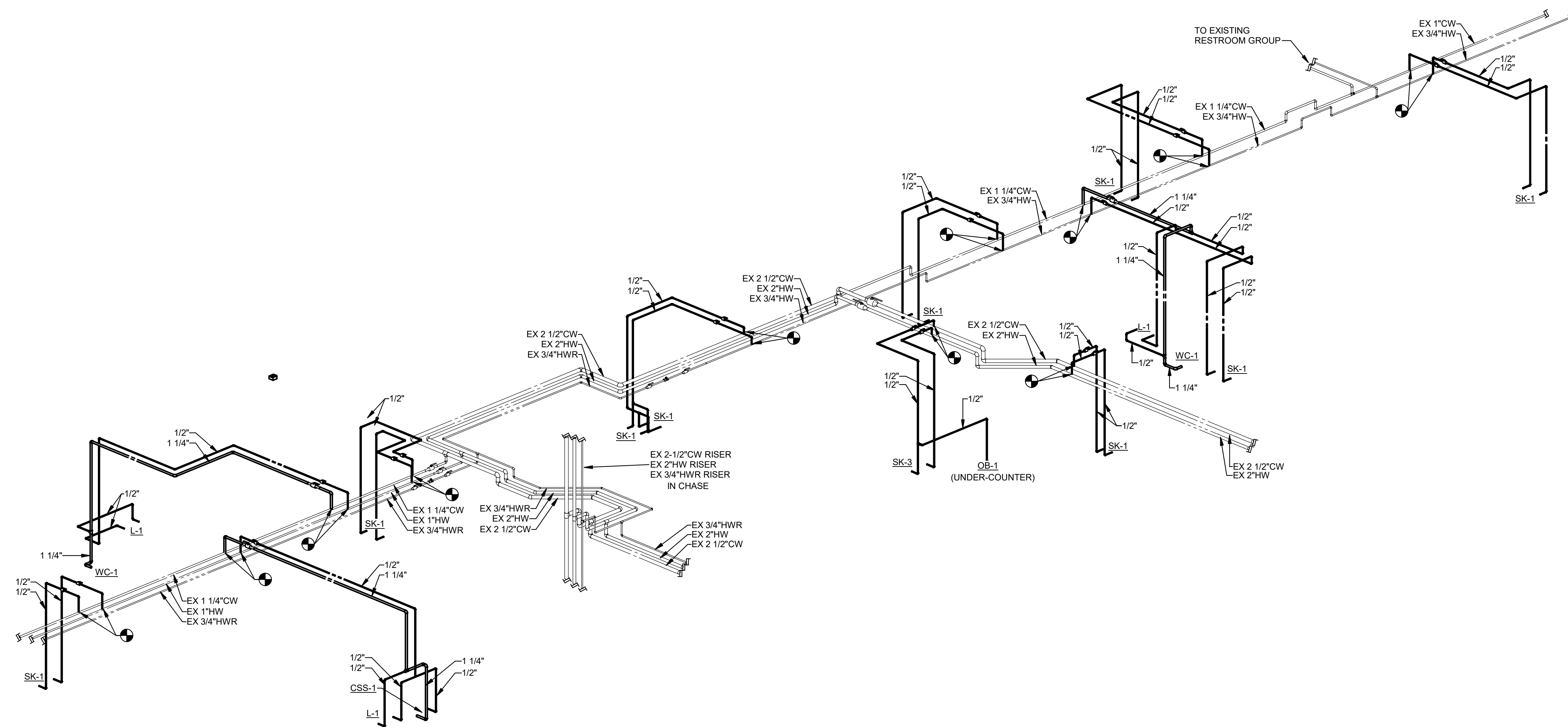
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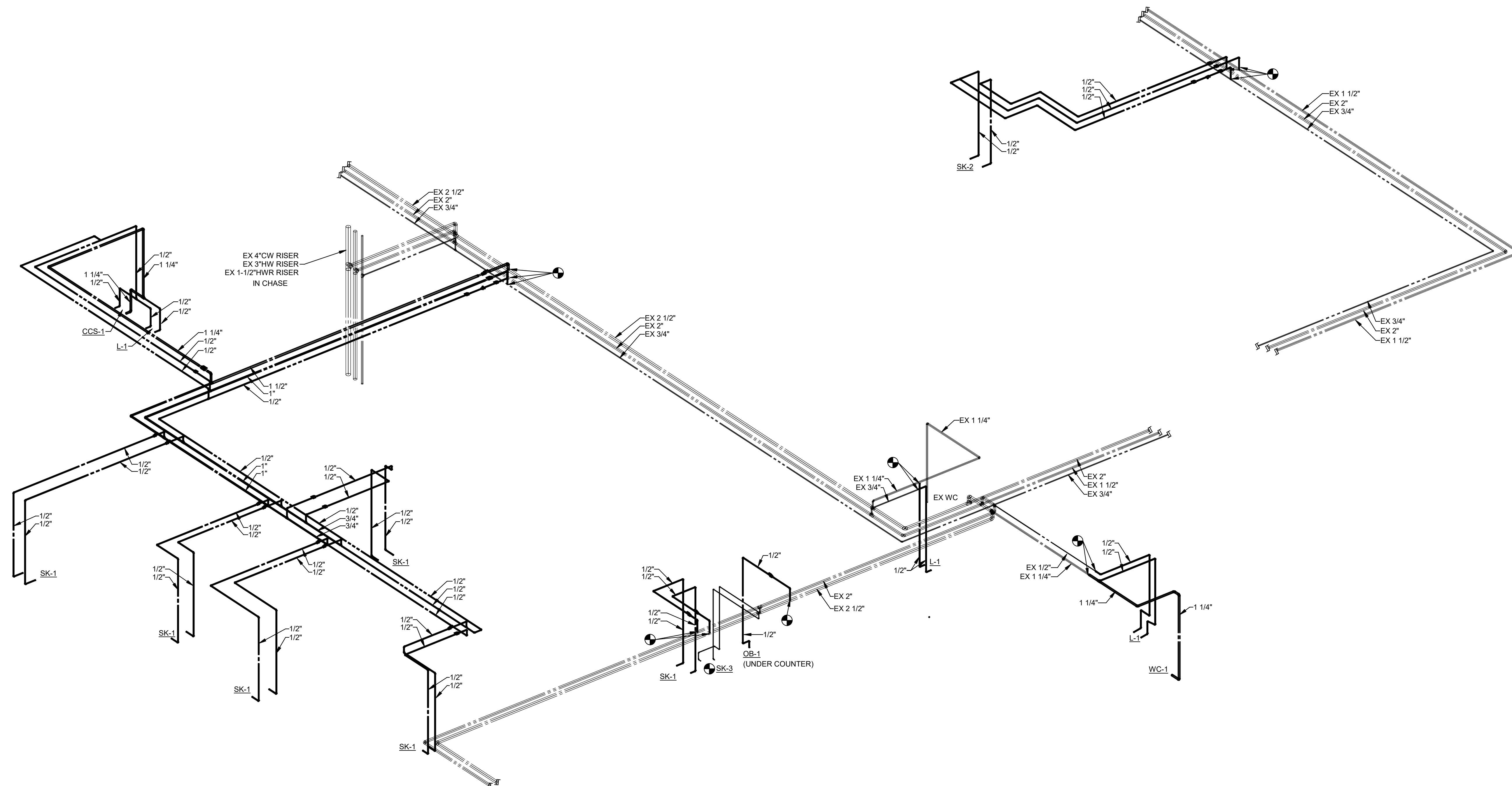
bcdg Project #: 12275.43  
MU Project #: CP210751

**P202**  
PLUMBING ISOMETRICS -  
SANITARY & VENT

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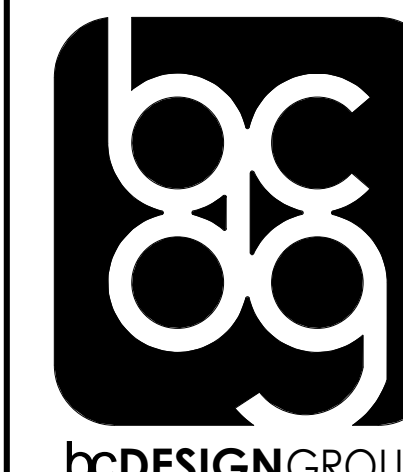


1 CBDU - DOMESTIC WATER ISOMETRIC



2 CHPS - DOMESTIC WATER ISOMETRIC

PIPING SHOWN ON ISOMETRICS IS FOR CLARIFICATION ONLY AND IS NOT REPRESENTATIVE OF THE PIPE TYPE TO BE USED ON THIS PROJECT. REFER TO PLUMBING SPECIFICATIONS FOR INFORMATION ON PIPING TYPE AND MATERIALS.



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

913.232.2123

MO Certificate of Authority Number  
A-2011002790

Project Team:

ROSS & BARUZZINI, INC.  
8 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #332-02

Project Title:  
MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU  
UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE

PE-2018000203

Issue Date: 12/9/2020

Author: \_\_\_\_\_ Date: \_\_\_\_\_

Drawn by: Author

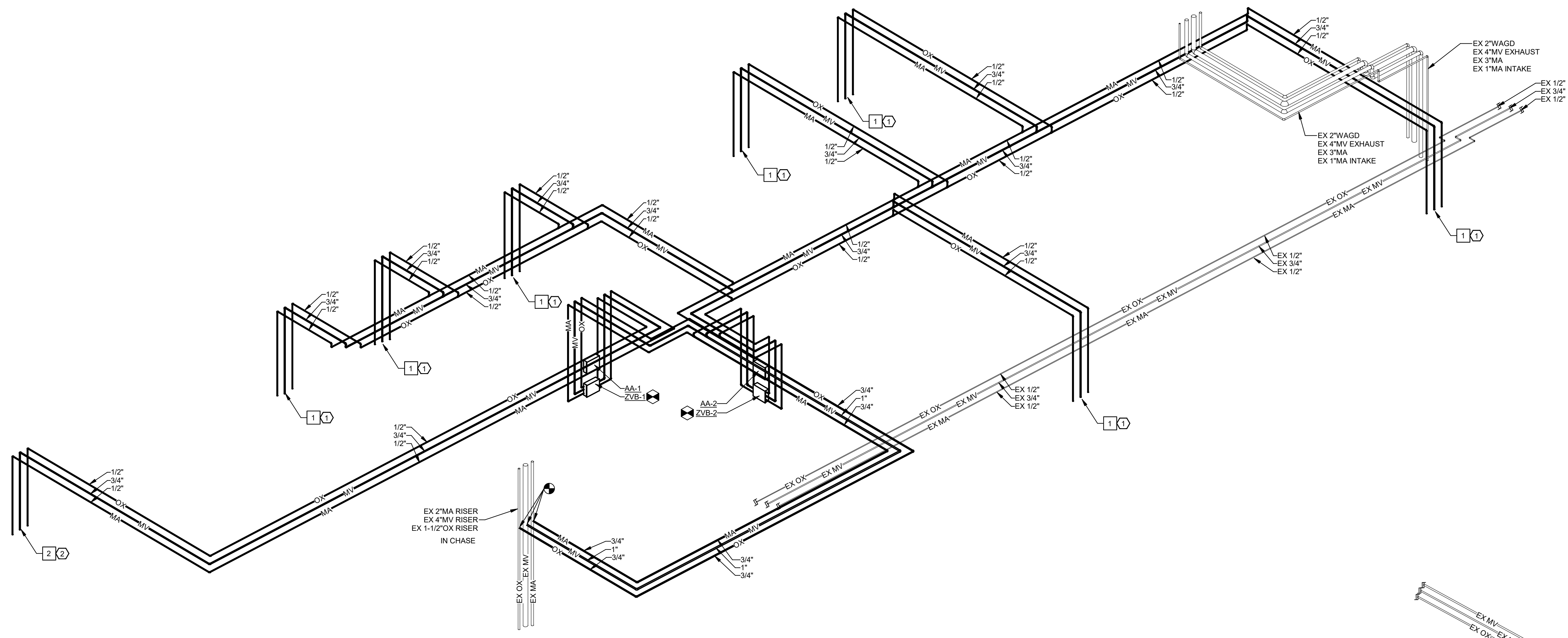
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MU Project #: CP210751

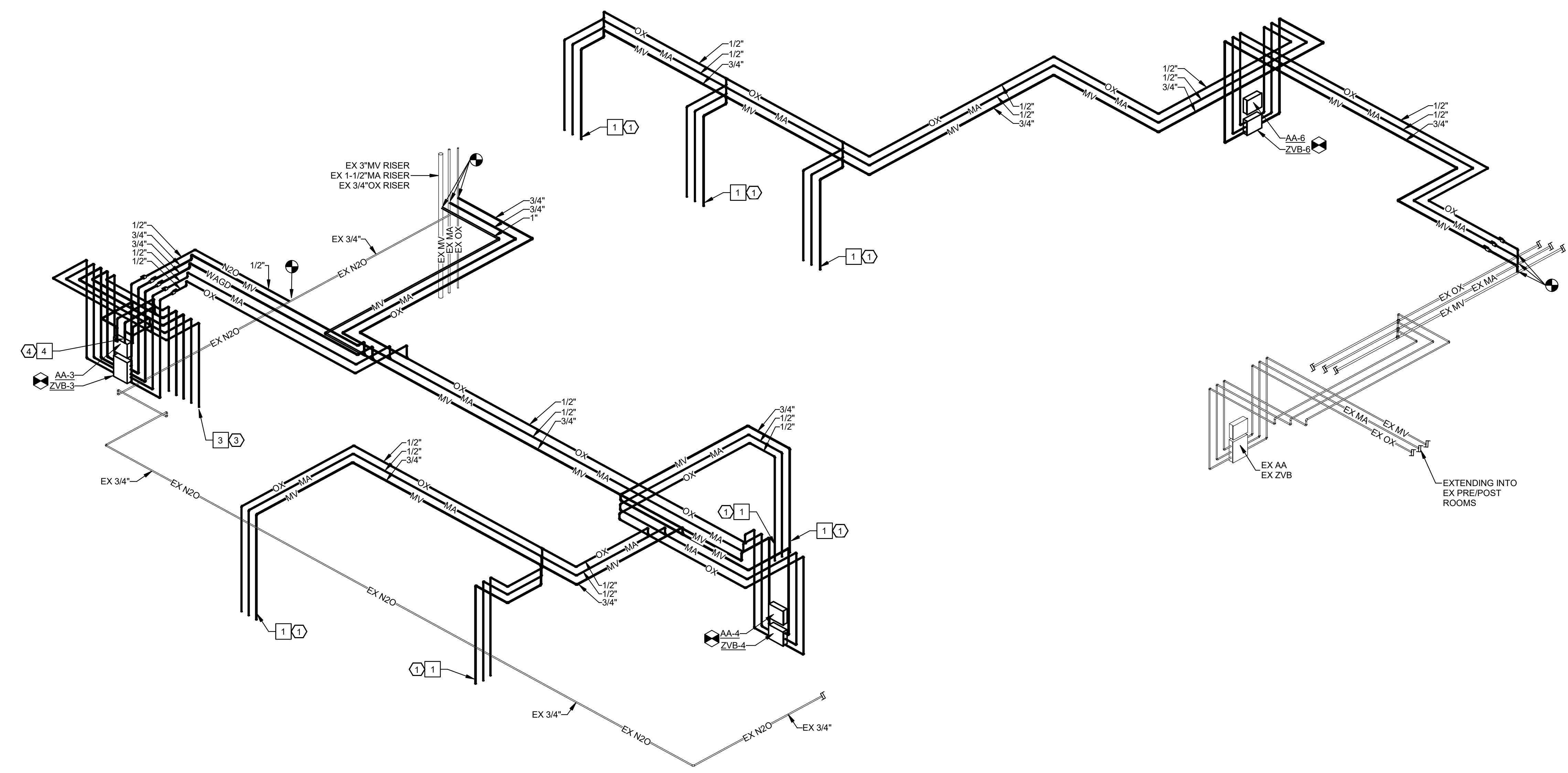
**P203**

PLUMBING ISOMETRICS - DOMESTIC WATER

BID DOCUMENT PACKAGE



1 CBDU - MEDICAL GAS NEW WORK ISO



2 CHPS - MEDICAL GAS NEW WORK ISO

**GENERAL SHEET NOTES**

- A. REFER TO SHEET PFF501 FOR DETAILS REGARDING MEDICAL GAS OUTLETS/INLETS AND ZONE VALVE BOX ROUGH-IN INFORMATION.
- B. REFER TO MEDICAL GAS SCHEDULES ON PFF501 FOR MORE INFORMATION.

**KEYED NOTES**

1. NEW 1/2\"/>
2. NEW 1/2\"/>
3. NEW 1/2\"/>
4. NEW 1/2\"/>

PIPING SHOWN ON ISOMETRICS IS FOR CLARIFICATION ONLY AND IS NOT REPRESENTATIVE OF THE PIPE TYPE TO BE USED ON THIS PROJECT. REFER TO PLUMBING SPECIFICATIONS FOR INFORMATION ON PIPING TYPE AND MATERIALS.



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123

MO Certificate of Authority Number  
A-201102790

Project Team:

ROSS & BARUZZINI, INC.  
8 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #0331-01

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE  
PE-2018000203

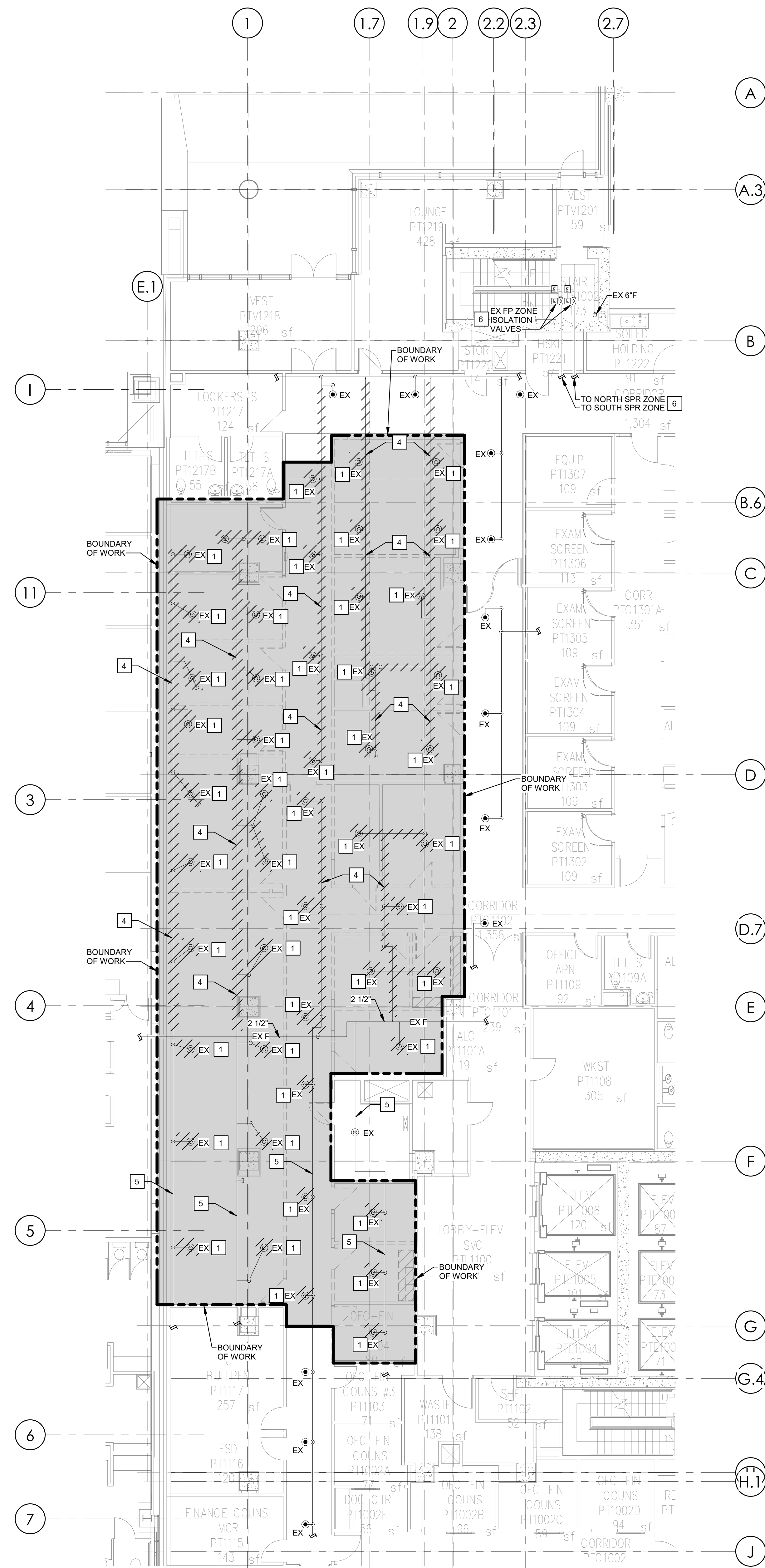
Issue Date: 12/9/2020

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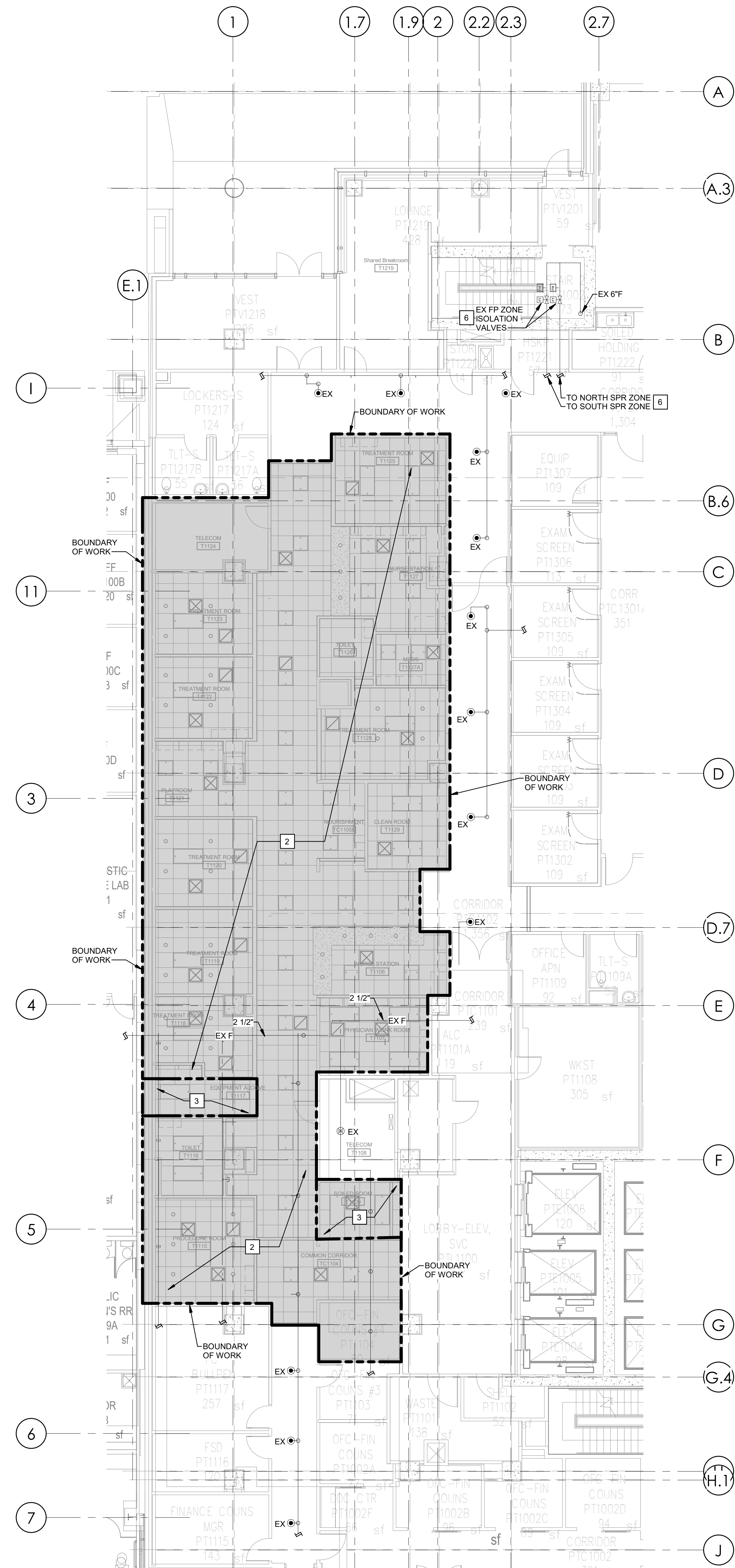
bcdg Project #: 12275.43  
MU Project #: CP210751

**P204**  
PLUMBING ISOMETRICS - MEDICAL GAS

BID DOCUMENT PACKAGE



1 1ST FLOOR CBCU - FP DEMOLITION PLAN  
1/8" = 1'-0"



2 2ND FLOOR CBCU - FIRE PROTECTION RCP  
1/8" = 1'-0"



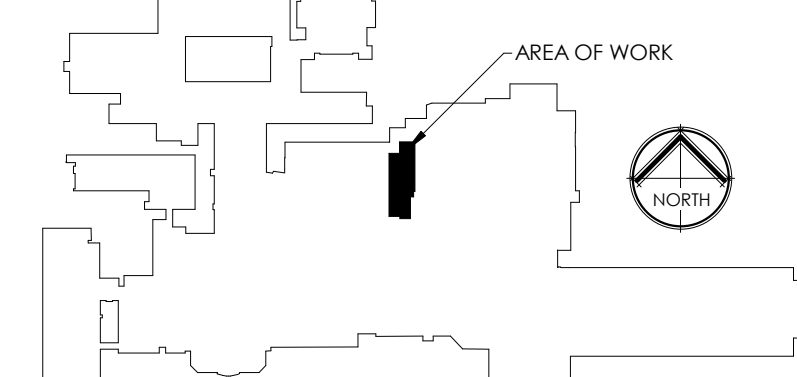
**GENERAL SHEET NOTES**

- A. FIRE SPRINKLER SYSTEM OUTAGES SHALL BE LIMITED IN TIME AND APPROVED BY UMHC. VERIFY ISOLATION VALVE AND AREAS AFFECTED BY SHUTDOWN PRIOR TO CONSTRUCTION.
- B. ONLY SCHEDULE 40 PIPING SHALL BE USED. CONTRACTOR SHALL VERIFY SPRINKLER PIPING SCHEDULE AND NOTIFY OWNER BEFORE WORK COMMENCES.
- C. ONLY FULLY CONCEALED-TYPE SPRINKLER HEADS SHALL BE USED.
- D. COORDINATE ALL SPRINKLER HEAD LOCATIONS WITH CEILING LAYOUT, CEILING-MOUNTED DEVICES, AND ACROSS ALL DISCIPLINES.
- E. SYSTEM SHALL BE DRAINED TO NEAREST MOP BASIN.
- F. FLEXIBLE SPRINKLER HEADS ARE NOT ALLOWED FOR THIS PROJECT.
- G. FIRE PROTECTION SHOP DRAWINGS TO BE PROVIDED, SIGNED AND SEALED BY A LICENSE FIRE PROTECTION ENGINEER IN THE STATE OF MISSOURI.
- H. TEMPORARY FIRE SPRINKLER PROTECTION SHALL BE PROVIDED.

**KEYED NOTES**

- 1. EXISTING CONCEALED SPRINKLER HEADS AND PIPING TO BE REMOVED.
- 2. AREA TO BE CONSIDERED LIGHT HAZARD WITH A SPRINKLER DISCHARGE DENSITY OF 0.10 GPM/SQ. FT. FOR THE MOST HYDRAULICALLY REMOTE 1500 SQ. FT. AND A HOSE STREAM OF 100 GPM. CONTRACTOR SHALL PROVIDE A COMPLETE CODE COMPLIANT AUTOMATIC WET PIPE SYSTEM. SPRINKLER SPACING SHALL BE BASED ON LISTED VALVE AND DISTANCES ESTABLISHED BY NFPA AND FM.
- 3. AREA TO BE CONSIDERED ORDINARY HAZARD, GROUP 1 WITH A SPRINKLER DISCHARGE DENSITY OF 0.15 GPM/SQ. FT. FOR THE MOST HYDRAULICALLY REMOTE 1500 SQ. FT. AND A HOSE STREAM OF 250 GPM. CONTRACTOR SHALL PROVIDE A COMPLETE CODE COMPLIANT AUTOMATIC WET PIPE SYSTEM. SPRINKLER SPACING SHALL BE BASED ON LISTED VALVE AND DISTANCES ESTABLISHED BY NFPA.
- 4. EXISTING FIRE PROTECTION BRANCH PIPING TO BE DEMOLISHED BACK TO THE MAIN AND CAPPED.
- 5. EXISTING BRANCH PIPING TO REMAIN IN ORDER TO SERVE EXISTING SPRINKLERS OUTSIDE OF PROJECT SCOPE.
- 6. THE PROJECT SCOPE IS CURRENTLY SERVED BY BOTH NORTH AND SOUTH SPRINKLER ZONES. THE WORK IN THIS PROJECT WILL REQUIRE BOTH ZONES (COMPRISING THE WHOLE 1ST FLOOR OF THE PCT) TO BE SHUT DOWN IN ORDER TO MAKE MODIFICATIONS TO THE SYSTEM IN THE NEW CBCU PROJECT SCOPE.

SEISMIC PERFORMANCE: SPRINKLER PIPING SHALL WITHSTAND THE EFFECTS OF EARTHQUAKE MOTIONS DETERMINED ACCORDING TO THE NFPA 13 AND ASCE/SEI 7. SEE STRUCTURAL DRAWINGS FOR BUILDING CLASSIFICATION, SEISMIC CATEGORY AND IMPORTANCE FACTOR REQUIREMENTS.



Keymap 1st Floor  
NTS



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

913.232.2123

MO Certificate of Authority Number  
A-201102790

Project Team:

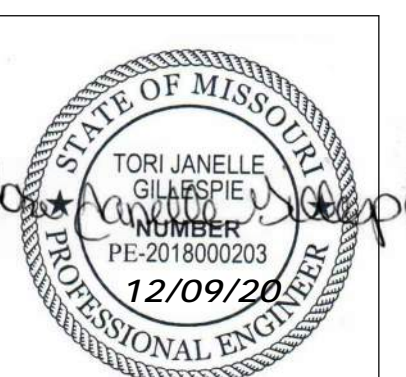
ROSS & BARUZZINI, INC.

4 South Old Orchard | St. Louis, MO 63119

314.918.8383

Missouri Certificate of Authority Missouri Certificate of  
Authority #021-02

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS  
 AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE  
PE-2018000203

Issue Date: 12/19/2020

Drawn by: Author

bcdg Project #: 12275.43

MU Project #: CP210751

**FP101**

FIRST FLOOR CBCU - FIRE  
PROTECTION

BID DOCUMENT PACKAGE



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123

MO Certificate of Authority Number  
A-201102790

Project Team:

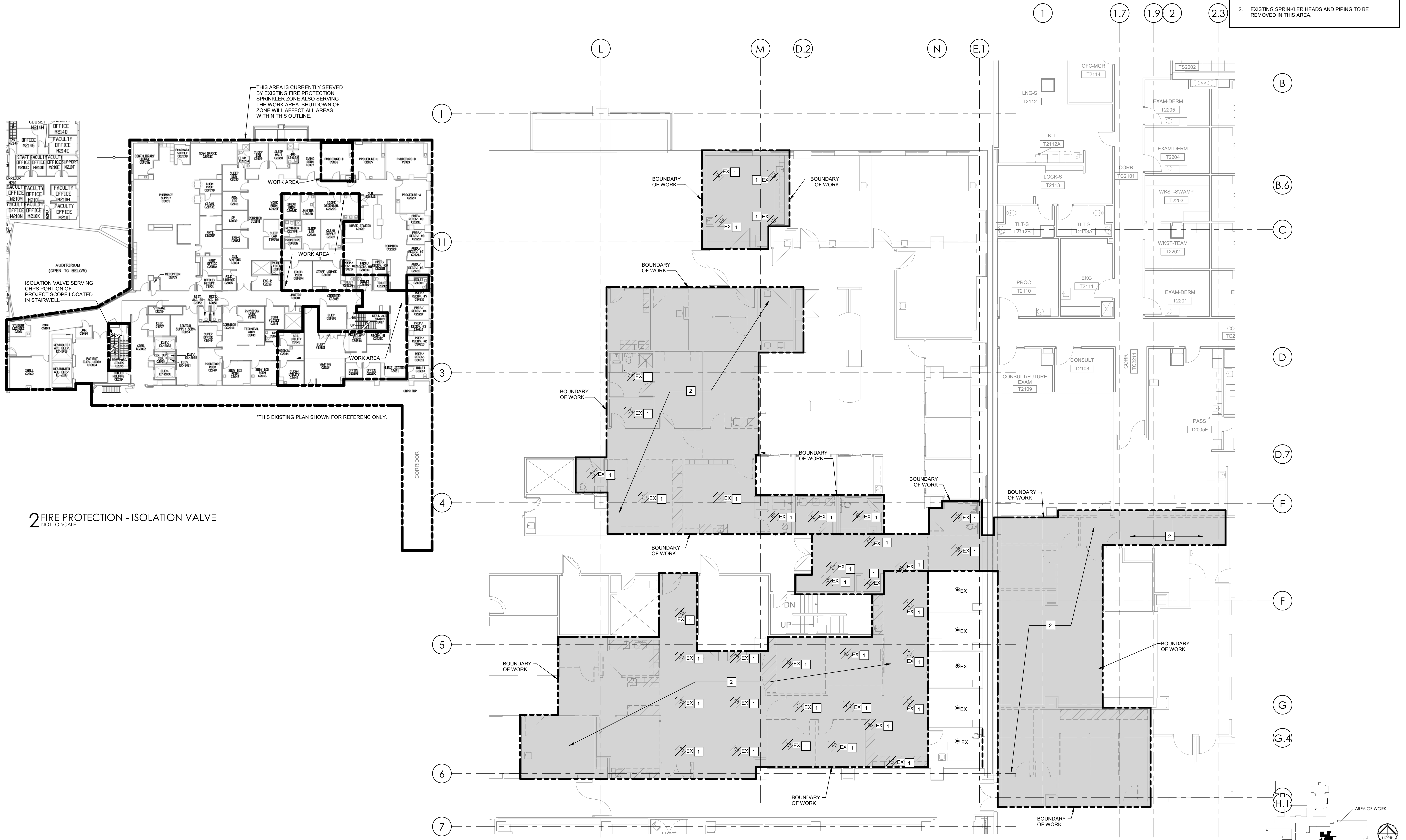
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
Missouri Certificate of Authority Missouri Certificate of  
Authority #0321-01

### GENERAL SHEET NOTES

- A. FIRE SPRINKLER SYSTEM OUTAGES SHALL BE LIMITED IN TIME AND APPROVED BY UMHC. VERIFY ISOLATION VALVE AND AREAS AFFECTED BY SHUTDOWN PRIOR TO CONSTRUCTION.
- B. CONTRACTOR SHALL VERIFY SPRINKLER PIPING SCHEDULE AND NOTIFY OWNER BEFORE WORK COMMENCES.
- C. SYSTEM SHALL BE DRAINED TO NEAREST MOP BASIN.
- D. TEMPORARY FIRE SPRINKLER PROTECTION SHALL BE PROVIDED.

### KEYED NOTES

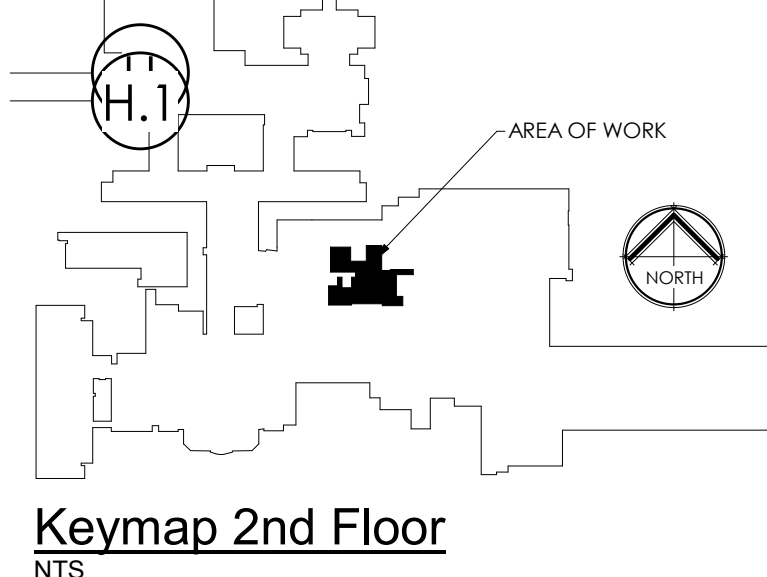
- 1. EXISTING CONCEALED SPRINKLER HEAD AND PIPING TO BE REMOVED.
- 2. EXISTING SPRINKLER HEADS AND PIPING TO BE REMOVED IN THIS AREA.



2 FIRE PROTECTION - ISOLATION VALVE  
NOT TO SCALE

\*THIS EXISTING PLAN SHOWN FOR REFERENC ONLY.

1 2ND FLR CHPS - FP DEMOLITION PLAN  
1/8" = 1'-0"



Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



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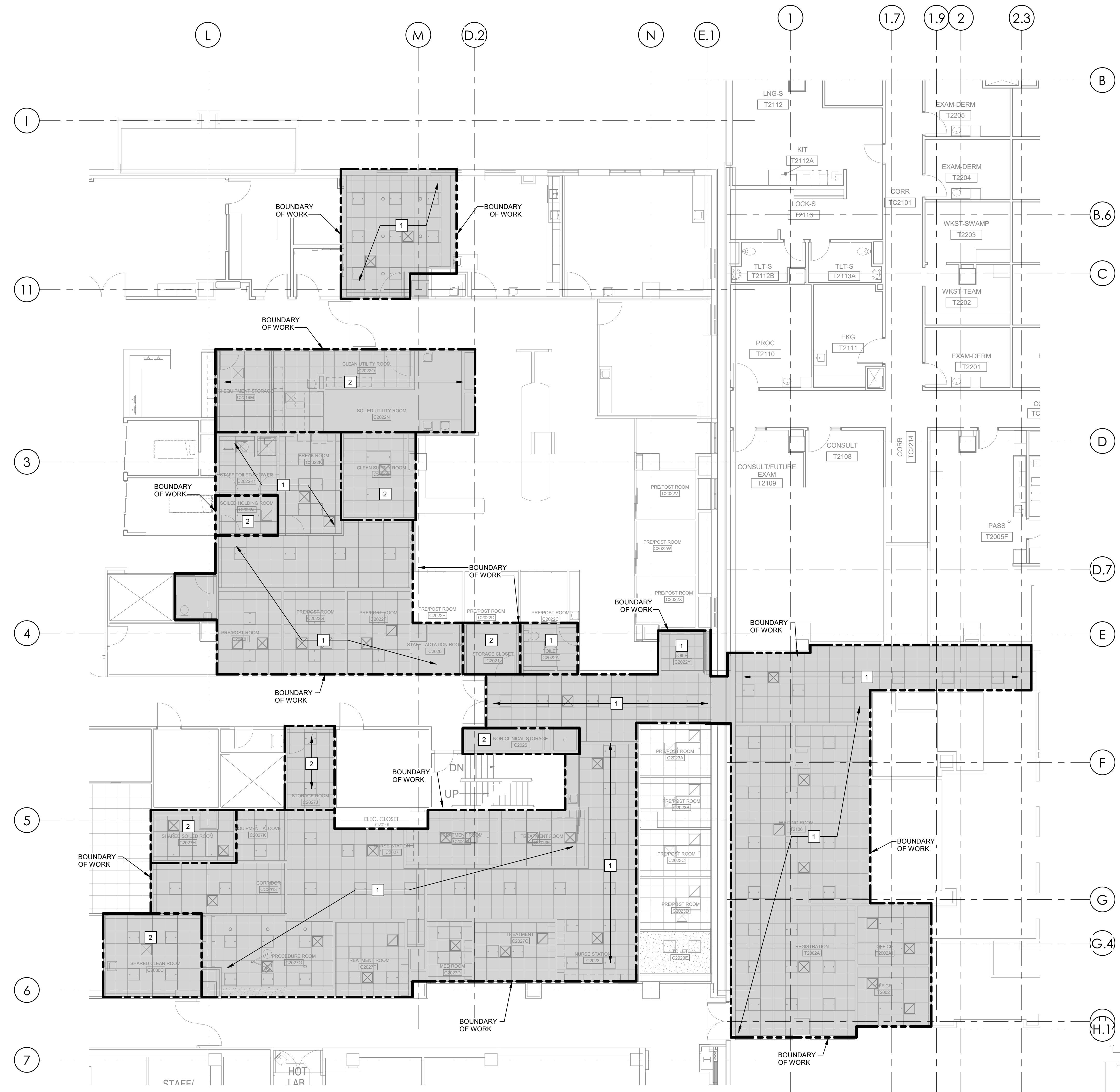
Drawn by: Author  
bcdg Project #: 12275.43  
MU Project #: CP210751

**FP102**  
SECOND FLOOR CHPS - FIRE PROTECTION DEMOLITION PLAN

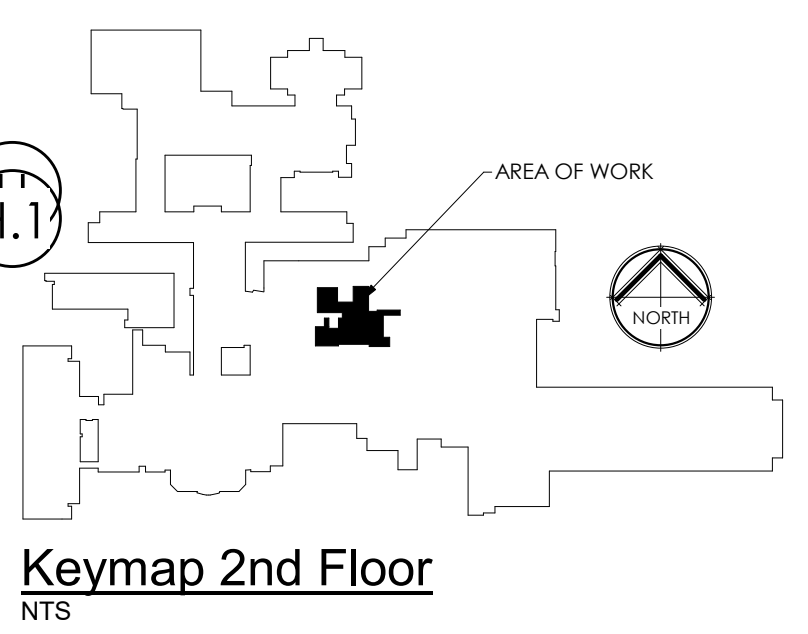
SEISMIC PERFORMANCE: SPRINKLER PIPING SHALL WITHSTAND THE EFFECTS OF EARTHQUAKE MOTIONS DETERMINED ACCORDING TO THE NFPA 13 AND ASCE/SEI 7. SEE STRUCTURAL DRAWINGS FOR BUILDING CLASSIFICATION, SEISMIC CATEGORY AND IMPORTANCE FACTOR REQUIREMENTS.

- ### GENERAL SHEET NOTES
- FIRE SPRINKLER SYSTEM OUTAGES SHALL BE LIMITED IN TIME AND APPROVED BY UMHC.
  - ONLY SCHEDULE 40 PIPING SHALL BE USED. CONTRACTOR SHALL VERIFY SPRINKLER PIPING SCHEDULE AND NOTIFY OWNER BEFORE WORK COMMENCES.
  - ONLY FULLY CONCEALED-TYPE SPRINKLER HEADS SHALL BE USED.
  - COORDINATE ALL SPRINKLER HEAD LOCATIONS WITH CEILING LAYOUT, CEILING-MOUNTED DEVICES, AND ACROSS ALL DISCIPLINES.
  - SYSTEM SHALL BE DRAINED TO NEAREST MOP BASIN.
  - FLEXIBLE SPRINKLER HEADS ARE NOT ALLOWED FOR THIS PROJECT.
  - FIRE PROTECTION SHOP DRAWINGS TO BE PROVIDED, SIGNED AND SEALED BY A LICENSE FIRE PROTECTION ENGINEER IN THE STATE OF MISSOURI.

- ### KEYED NOTES
- AREA TO BE CONSIDERED LIGHT HAZARD WITH A SPRINKLER DISCHARGE DENSITY OF 0.10 GPM/SQ.FT. FOR THE MOST HYDRAULICALLY REMOTE 1500 SQ.FT. AND A HOSE STREAM OF 100 GPM. CONTRACTOR SHALL PROVIDE A COMPLETE CODE COMPLIANT AUTOMATIC WET PIPE SYSTEM. SPRINKLER SPACING SHALL BE BASED ON LISTED VALUE AND DISTANCES ESTABLISHED BY NFPA AND FM. FULLY CONCEALED SPRINKLER HEADS SHALL BE USED.
  - AREA TO BE CONSIDERED ORDINARY HAZARD, GROUP 1 WITH A SPRINKLER DISCHARGE DENSITY OF 0.15 GPM/SQ.FT. FOR THE MOST HYDRAULICALLY REMOTE 1500 SQ. FT. AND A HOSE STREAM OF 250 GPM. CONTRACTOR SHALL PROVIDE A COMPLETE CODE COMPLIANT AUTOMATIC WET PIPE SYSTEM. SPRINKLER SPACING SHALL BE BASED ON LISTED VALUE AND DISTANCES ESTABLISHED BY NFPA. FULLY CONCEALED SPRINKLER HEADS SHALL BE USED.



1 2ND FLOOR CHPS - FIRE PROTECTION RCP  
1/8" = 1'-0"



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790

Project Team:  
ROSS & BARUZZINI, INC.  
8 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #0321-01

Project Title:  
MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU  
UNIVERSITY OF MISSOURI HEALTHCARE

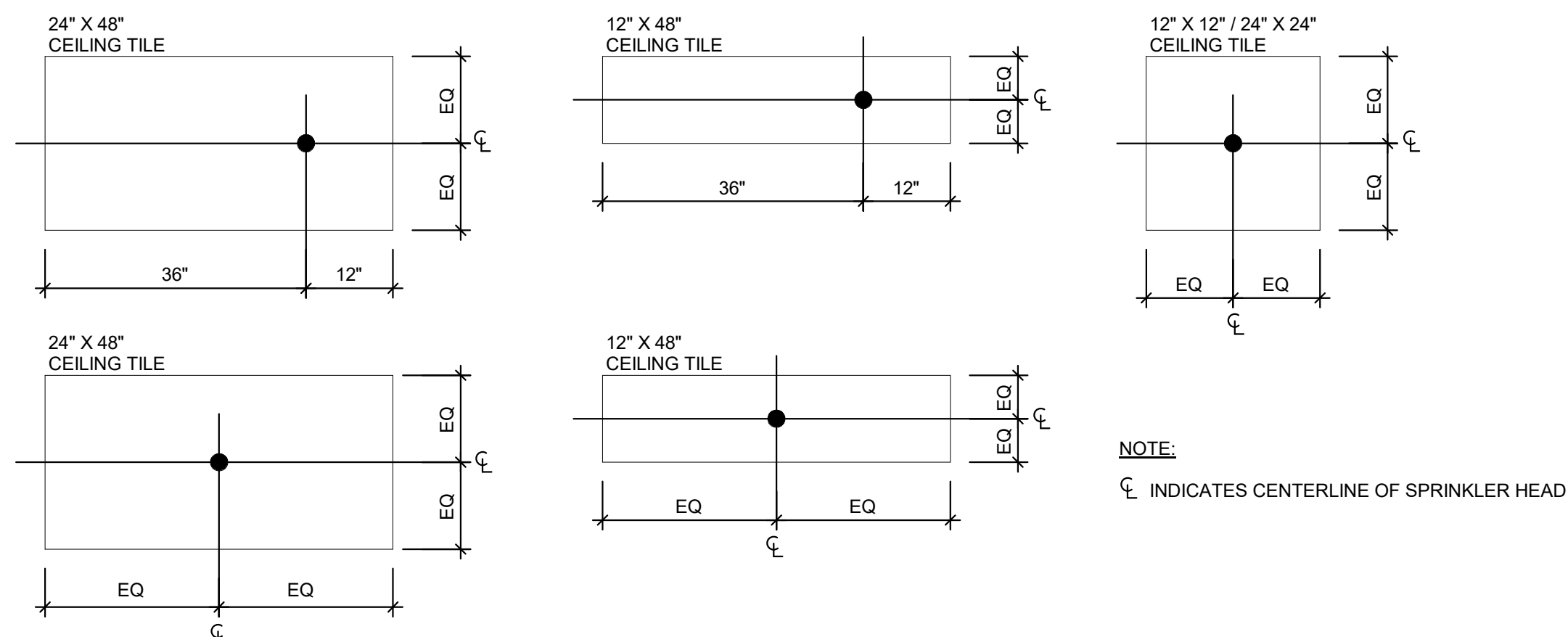


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PE-2018000203

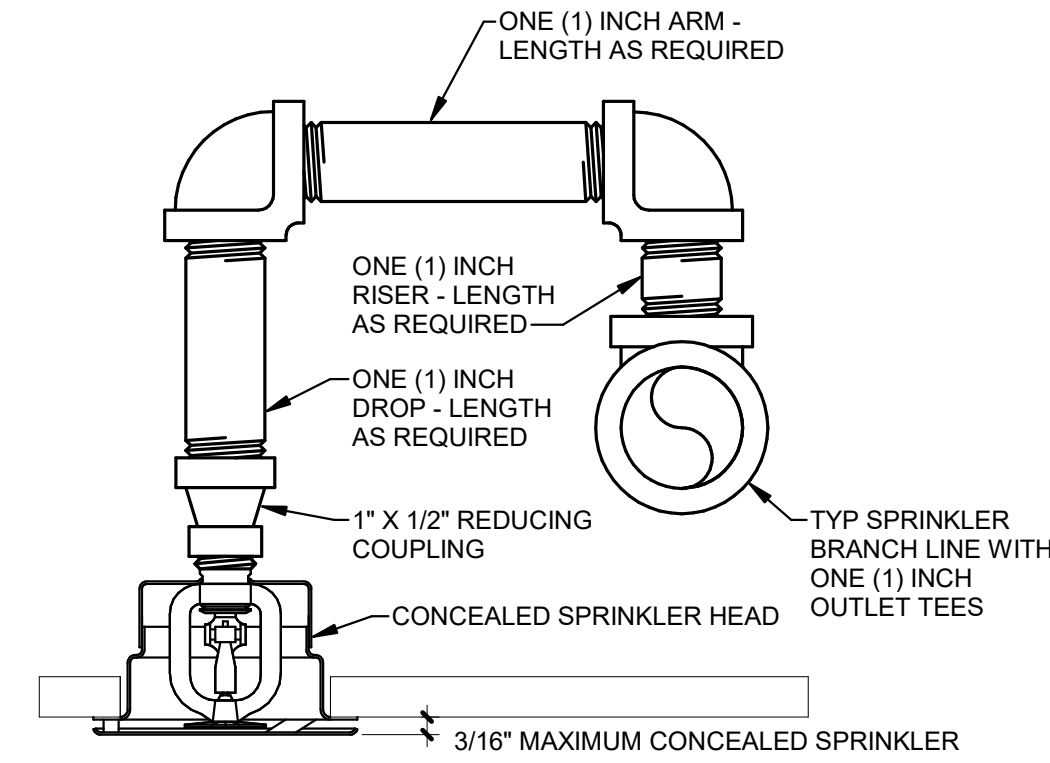
Issue Date: 12/19/2020

Drawn by: Author  
bcdg Project #: 12275.43  
MU Project #: CP210751

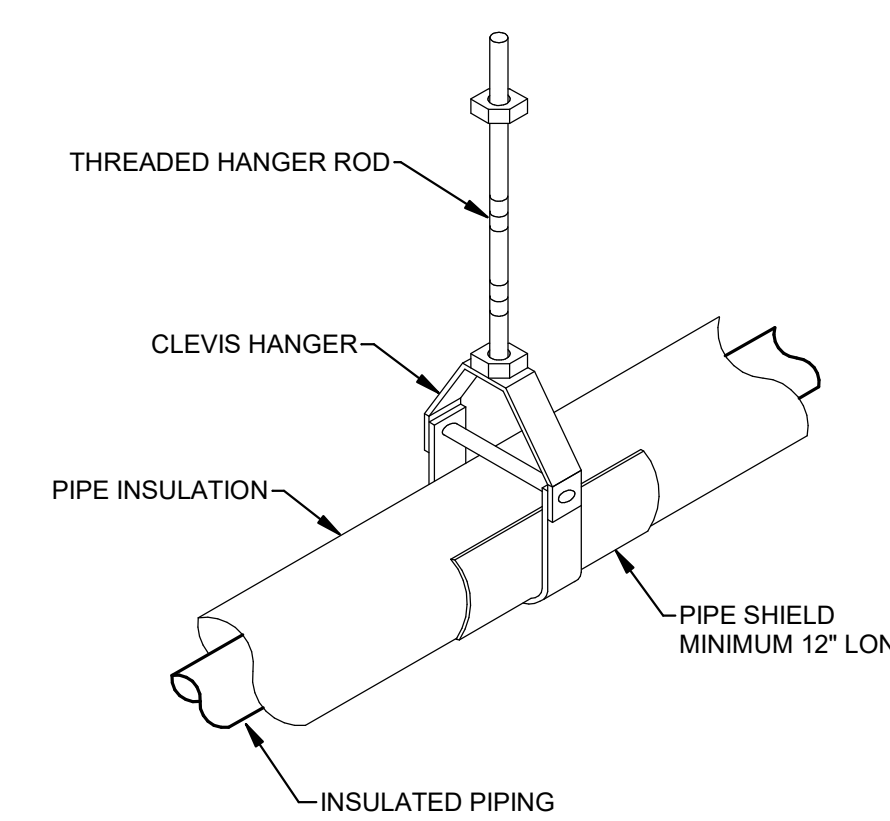
**FP103**  
SECOND FLOOR CHPS - FIRE PROTECTION REFLECTED CEILING PLAN



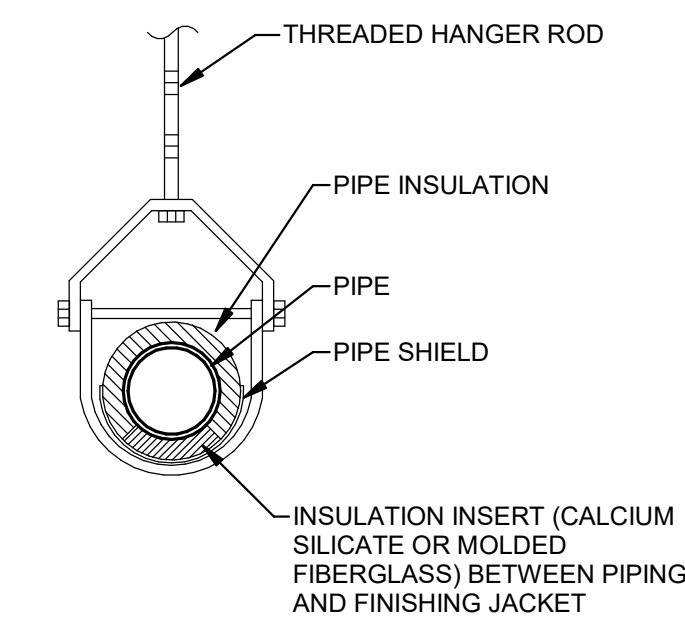
6 SPRINKLER HEAD LOCATION  
NONE



1 CONCEALED SPRINKLER HEAD  
NONE



2 INSULATED PIPE HANGER SUPPORT  
NONE



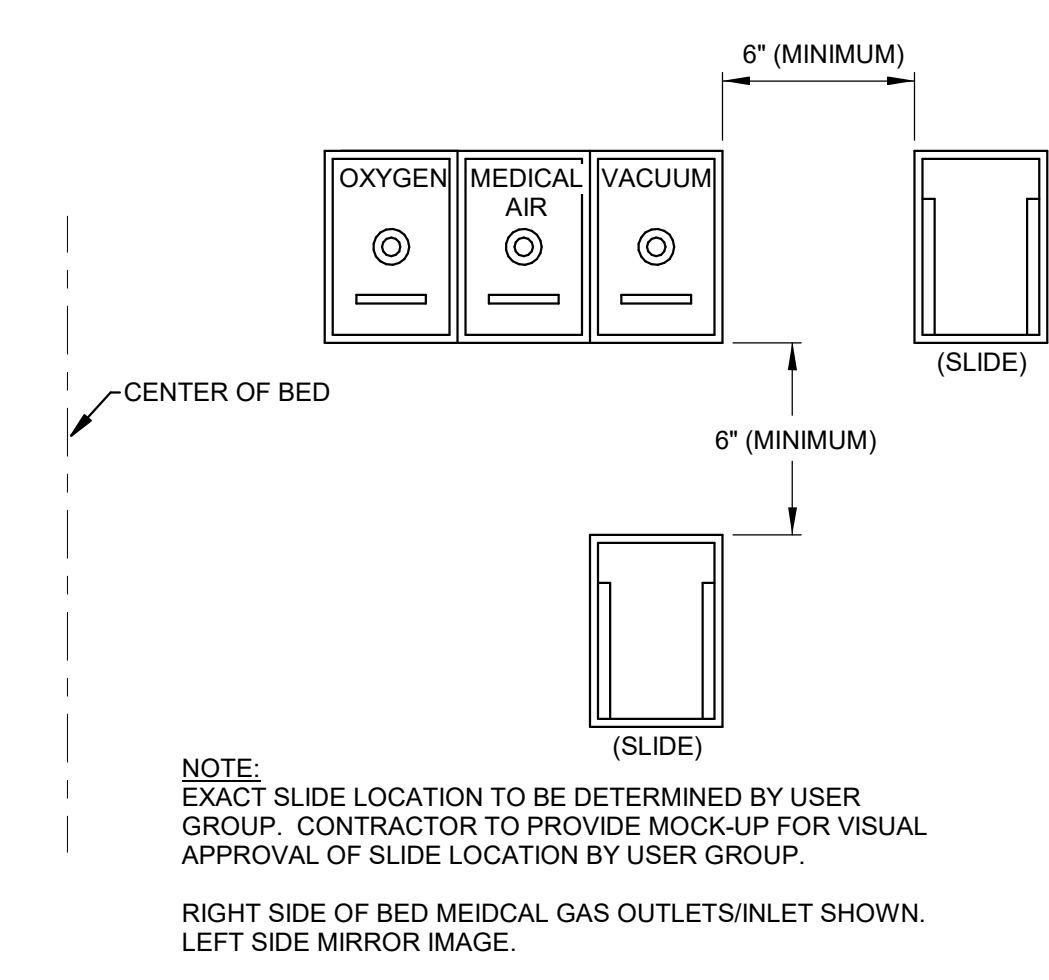
SECTION THRU HANGER  
REFER TO SPECS FOR INSULATION AND HANGER SUPPORTS.

MEDICAL GAS ZONE VALVE SCHEDULE								
PLAN MARK	DESCRIPTION	LOCATION	OXYGEN	MEDICAL AIR	MEDICAL VACUUM	NITROUS OXIDE	WAGD	NOTES
ZVB-1	MEDICAL ZONE VALVE BOX	CORRIDOR (FIRST FLOOR CBCU PROCEDURE ROOM)	■	■	■			TRANSDUCERS TO BE INCLUDED IN ZONE VALVE BOX.
ZVB-2	MEDICAL ZONE VALVE BOX	CORRIDOR (FIRST FLOOR CBCU TREATMENT RMS)	■	■	■			TRANSDUCERS TO BE INCLUDED IN ZONE VALVE BOX.
ZVB-3	MEDICAL ZONE VALVE BOX	CORRIDOR (SECOND FLOOR CHPS PROCEDURE ROOM)	■	■	■	■	■	TRANSDUCERS TO BE INCLUDED IN ZONE VALVE BOX.
ZVB-4	MEDICAL ZONE VALVE BOX	CORRIDOR (SECOND FLOOR CHPS TREATMENT ROOMS)	■	■	■			TRANSDUCERS TO BE INCLUDED IN ZONE VALVE BOX.
ZVB-5	MEDICAL ZONE VALVE BOX	CORRIDOR (SECOND FLOOR PROCEDURE ROOM)	■	■	■	■	■	TRANSDUCERS TO BE INCLUDED IN ZONE VALVE BOX.
ZVB-6	MEDICAL ZONE VALVE BOX	CORRIDOR (SECOND FLOOR CHPS TREATMENT)	■	■	■			TRANSDUCERS TO BE INCLUDED IN ZONE VALVE BOX.

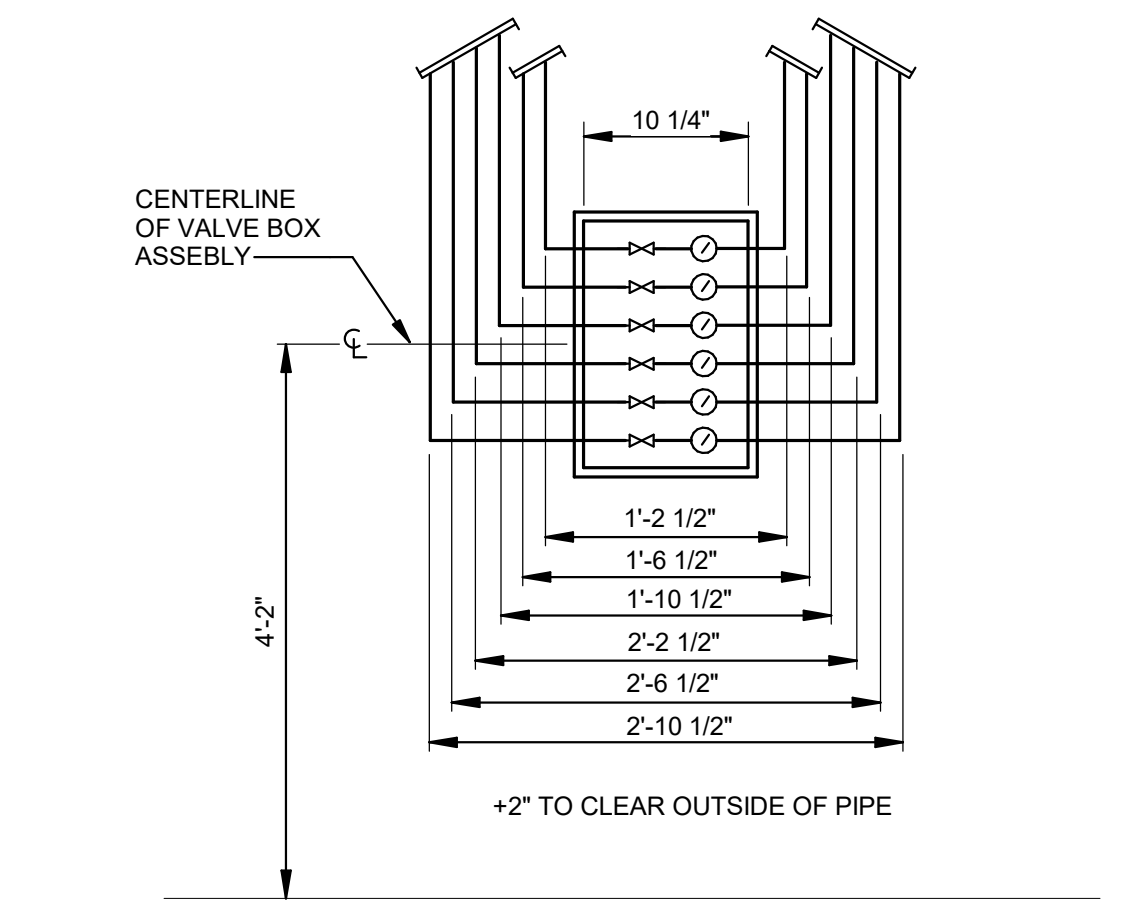
MEDICAL GAS AREA ALARM SCHEDULE							
PLAN MARK	DESCRIPTION	OXYGEN	MEDICAL AIR	MEDICAL VACUUM	NITROUS OXIDE	WAGD	NOTES
AA-1	MEDICAL GAS AREA ALARM PANEL (FIRST FLOOR CBCU PROCEDURE ROOM)	■	■	■			TO BE MONITORED BY EXISTING MASTER ALARM PANEL IN SECURITY OFFICE (1W45D) ON FIRST FLOOR (PER OWNER'S INFORMATION). CONTRACTOR SHALL VERIFY LOCATION, CAPACITY, AND POINTS-OF-CONTACT ON MASTER ALARM PANEL. LOW-VOLTAGE CABLE WOULD HAVE TO BE EXTENDED FROM THE NEW MEDICAL GAS AREA ALARM TO THE FOLLOWING MASTER ALARM LOCATIONS: 1. ROOM 1W45D - MUHC SECURITY OFFICE 2. CORRIDOR CGE13 - ENGINEERING SERVICES TRADE SHOPS COORDINATE WITH ELECTRICAL DISCIPLINE.
AA-2	MEDICAL GAS AREA ALARM PANEL (FIRST FLOOR CBCU TREATMENT RMS)	■	■	■			TO BE MONITORED BY EXISTING MASTER ALARM PANEL IN SECURITY OFFICE (1W45D) ON FIRST FLOOR (PER OWNER'S INFORMATION). CONTRACTOR SHALL VERIFY LOCATION, CAPACITY, AND POINTS-OF-CONTACT ON MASTER ALARM PANEL. LOW-VOLTAGE CABLE WOULD HAVE TO BE EXTENDED FROM THE NEW MEDICAL GAS AREA ALARM TO THE FOLLOWING MASTER ALARM LOCATIONS: 1. ROOM 1W45D - MUHC SECURITY OFFICE 2. CORRIDOR CGE13 - ENGINEERING SERVICES TRADE SHOPS COORDINATE WITH ELECTRICAL DISCIPLINE.
AA-3	MEDICAL GAS AREA ALARM PANEL (SECOND FLOOR CHPS PROCEDURE ROOM)	■	■	■	■	■	TO BE MONITORED BY EXISTING MASTER ALARM PANEL IN SECURITY OFFICE (1W45D) ON FIRST FLOOR (PER OWNER'S INFORMATION). CONTRACTOR SHALL VERIFY LOCATION, CAPACITY, AND POINTS-OF-CONTACT ON MASTER ALARM PANEL. LOW-VOLTAGE CABLE WOULD HAVE TO BE EXTENDED FROM THE NEW MEDICAL GAS AREA ALARM TO THE FOLLOWING MASTER ALARM LOCATIONS: 1. ROOM 1W45D - MUHC SECURITY OFFICE 2. CORRIDOR CGE13 - ENGINEERING SERVICES TRADE SHOPS COORDINATE WITH ELECTRICAL DISCIPLINE.
AA-4	MEDICAL GAS AREA ALARM PANEL (SECOND FLOOR PRE/POST ROOMS)	■	■	■			TO BE MONITORED BY EXISTING MASTER ALARM PANEL IN SECURITY OFFICE (1W45D) ON FIRST FLOOR (PER OWNER'S INFORMATION). CONTRACTOR SHALL VERIFY LOCATION, CAPACITY, AND POINTS-OF-CONTACT ON MASTER ALARM PANEL. LOW-VOLTAGE CABLE WOULD HAVE TO BE EXTENDED FROM THE NEW MEDICAL GAS AREA ALARM TO THE FOLLOWING MASTER ALARM LOCATIONS: 1. ROOM 1W45D - MUHC SECURITY OFFICE 2. CORRIDOR CGE13 - ENGINEERING SERVICES TRADE SHOPS COORDINATE WITH ELECTRICAL DISCIPLINE.
AA-5	MEDICAL GAS AREA ALARM PANEL (SECOND FLOOR PROCEDURE ROOM)	■	■	■	■	■	TO BE MONITORED BY EXISTING MASTER ALARM PANEL IN SECURITY OFFICE (1W45D) ON FIRST FLOOR (PER OWNER'S INFORMATION). CONTRACTOR SHALL VERIFY LOCATION, CAPACITY, AND POINTS-OF-CONTACT ON MASTER ALARM PANEL. LOW-VOLTAGE CABLE WOULD HAVE TO BE EXTENDED FROM THE NEW MEDICAL GAS AREA ALARM TO THE FOLLOWING MASTER ALARM LOCATIONS: 1. ROOM 1W45D - MUHC SECURITY OFFICE 2. CORRIDOR CGE13 - ENGINEERING SERVICES TRADE SHOPS COORDINATE WITH ELECTRICAL DISCIPLINE. NOTE: NO2 PIPING EXTENSION FOR THIS ROOM CONTINGENT ON COMPLETION OF PROCEDURE ROOM C2025 COMPLETION.
AA-6	MEDICAL GAS AREA ALARM PANEL (SECOND FLOOR PRE/POST ROOMS)	■	■	■			TO BE MONITORED BY EXISTING MASTER ALARM PANEL IN SECURITY OFFICE (1W45D) ON FIRST FLOOR (PER OWNER'S INFORMATION). CONTRACTOR SHALL VERIFY LOCATION, CAPACITY, AND POINTS-OF-CONTACT ON MASTER ALARM PANEL. LOW-VOLTAGE CABLE WOULD HAVE TO BE EXTENDED FROM THE NEW MEDICAL GAS AREA ALARM TO THE FOLLOWING MASTER ALARM LOCATIONS: 1. ROOM 1W45D - MUHC SECURITY OFFICE 2. CORRIDOR CGE13 - ENGINEERING SERVICES TRADE SHOPS COORDINATE WITH ELECTRICAL DISCIPLINE.

MEDICAL GAS OUTLET SCHEDULE							
DESIGNATION	DESCRIPTION	MEDICAL GAS QUANTITIES					NOTES
		OX	MA	MV	NO2	WAGD	
1	MEDICAL GAS WALL OUTLETS (TREATMENT ROOMS)	2	1	1			
2	MEDICAL GAS WALL OUTLETS (1ST FLOOR CBCU PROCEDURE ROOM)	1	1	1			
3	MEDICAL GAS WALL OUTLETS (2ND FLOOR CHPS PROCEDURE ROOM)	1	1	1	1	1	
4	MEDICAL GAS CEILING OUTLETS (2ND FLOOR CHPS PROCEDURE ROOM)	1	1	1	1	1	

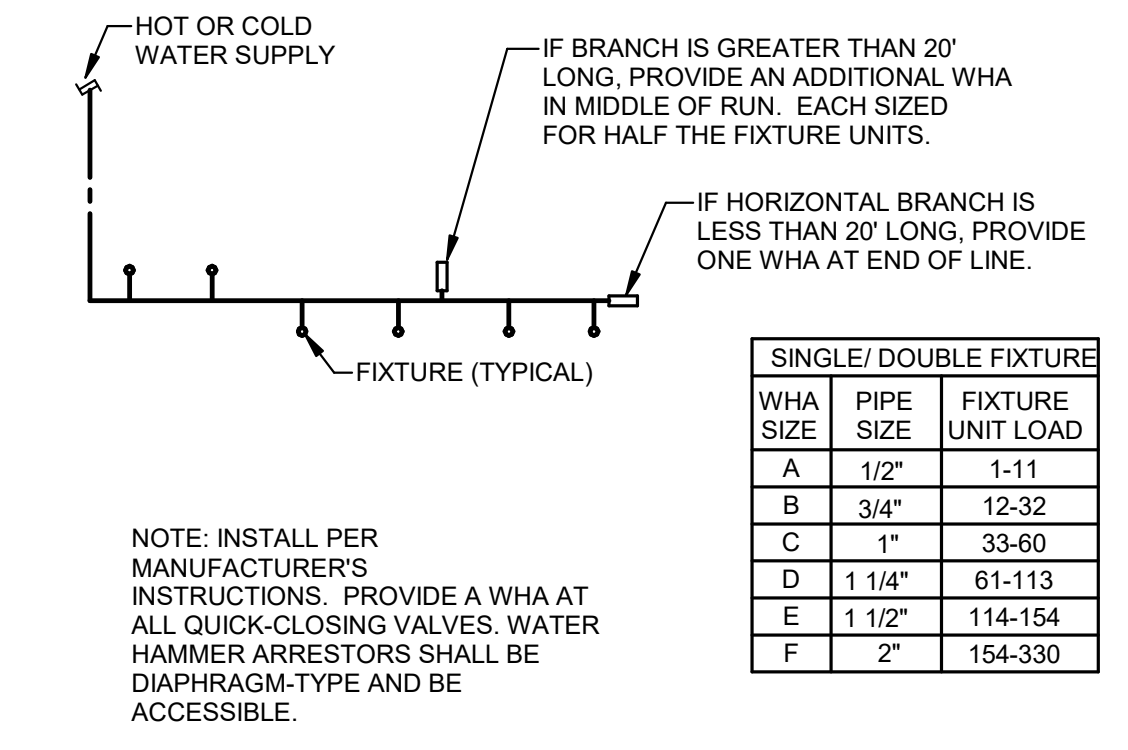
\*NOTES:  
1) ALL WALL OUTLETS TO BE MEDSTAR OXEQUIP OUTLETS.  
2) ALL CEILING OUTLETS TO BE BEACON MEDAES DISS OUTLETS WITH BEACON MEDAES HOSE ASSEMBLIES FOR CEILING DROPS.



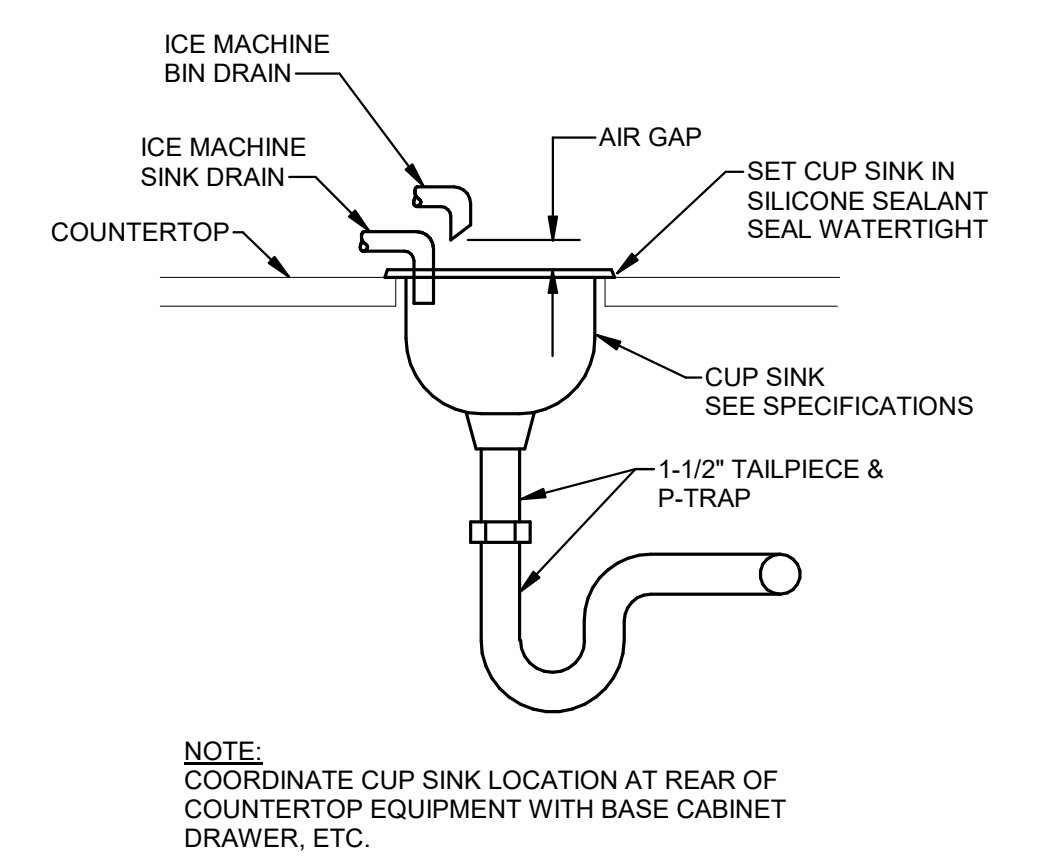
3 MEDICAL GAS OUTLETS/INLET (MED/SURG BED)  
NONE



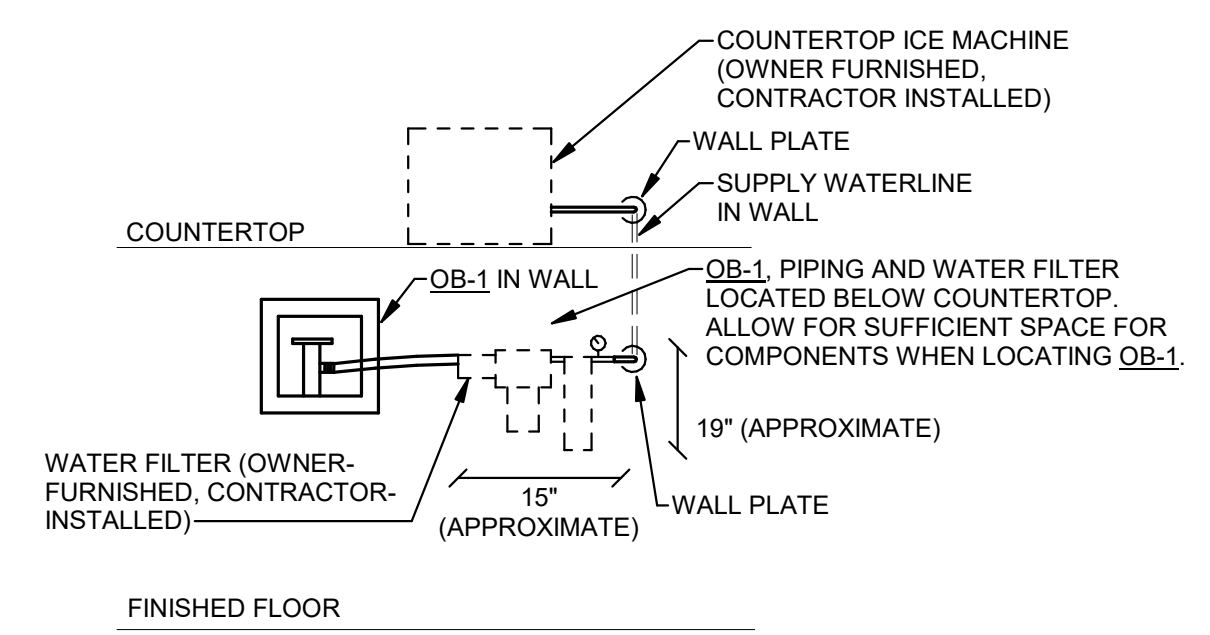
4 MEDICAL GAS ZONE VALVE ROUGH-IN  
NONE



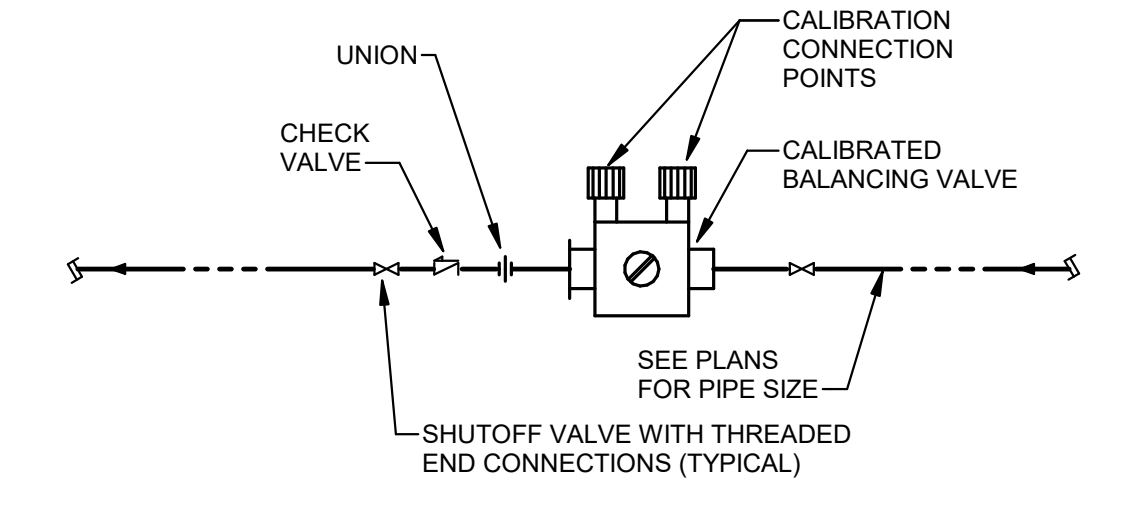
5 WATER HAMMER ARRESTOR SCHEMATIC  
NONE



7 COUNTERTOP ICE MACHINE INDIRECT WASTE CONNECTION  
NONE



8 COUNTERTOP ICE MACHINE WATER SUPPLY DETAIL  
NONE



9 CALIBRATED BALANCING VALVE  
NONE

PLUMBING FIXTURE SCHEDULE													
PLAN MARK	DESCRIPTION	MANUFACTURER	MODEL	TRIM	DRAIN / TRAP	SUPPLIES	CARRIER	SEAT	HOT WATER	COLD WATER	SANITARY / WASTE	VENT	NOTES
CS-1	CUP SINK (ICE MAKER DRAIN)	ORION	CS1-6X3	-	OFFSET GRID DRAIN WITH CHROME PLATED P-TRAP	-	-	-	-	-	2"	2"	
CSS-1	CAST IRON SERVICE SINK	AMERICAN STANDARD	9512.999.020	SLOAN ROYAL 117 MANUAL FLUSHOMETER, AND CHICAGO FAUCETS 814-VBPC	OFFSET GRID DRAIN WITH CHROME PLATED P-TRAP	CHICAGO FAUCET LOOSE KEY ANGLE STOPS AND RISERS	JAY R. SMITH	-	1/2"	1/2"	3"	2"	ANTIMICROBIAL LAMINAR FLOW AERATOR
L-1	WALL HUNG LAVATORY	AMERICAN STANDARD	LUCERNE	CHICAGO FAUCETS 116.606.AB.1	OFFSET GRID DRAIN WITH CHROME PLATED P-TRAP	CHICAGO FAUCET LOOSE KEY ANGLE STOPS AND RISERS	JAY R. SMITH	-	1/2"	1/2"	2"	2"	ANTIMICROBIAL LAMINAR FLOW AERATOR
OB-1	OUTLET BOX	SILOUX CHIEF	696-G1011MF	-	-	-	-	-	-	1/2"	-	-	
SK-1	SINK (EXAM ROOMS)	ELKAY	DLR191910PD	CHICAGO FAUCETS 116.213.AB.1	OFFSET GRID DRAIN WITH CHROME PLATED P-TRAP	CHICAGO FAUCET LOOSE KEY ANGLE STOPS AND RISERS	-	-	1/2"	1/2"	2"	2"	ANTIMICROBIAL LAMINAR FLOW AERATOR
SK-2	SINK (BREAK)	ELKAY	DLR191910PD	SYMMONS S-23-2-W-1.5 MANUAL FAUCET	OFFSET GRID DRAIN WITH CHROME PLATED P-TRAP	CHICAGO FAUCET LOOSE KEY ANGLE STOPS AND RISERS	-	-	1/2"	1/2"	2"	2"	ANTIMICROBIAL LAMINAR FLOW AERATOR
SK-3	SINK (NOURISHMENT)	ELKAY	DLR191910PD	CHICAGO FAUCETS 786-E35XKBCP MANUAL FAUCET	OFFSET GRID DRAIN WITH CHROME PLATED P-TRAP	CHICAGO FAUCET LOOSE KEY ANGLE STOPS AND RISERS	-	-	1/2"	1/2"	2"	2"	ANTIMICROBIAL LAMINAR FLOW AERATOR
WC-1	FLOOR MOUNTED WATER CLOSET	AMERICAN STANDARD	MADERA FLOWISE 3451.001	SLOAN ROYAL 111 1.6 GPF SENSOR FLUSH VALVE (BATTERY OPERATED)	INTEGRAL	-	JAY R. SMITH	KOHLER K-4670-C	-	1-1/4"	4"	2"	SEAT POSITIONED AT ADA HEIGHT.

DRAIN SCHEDULE						
PLAN MARK	DESCRIPTION	MANUFACTURER	MODEL	BODY	STRAINER	NOTES
FD-1	SQUARE FLOOR DRAIN	SILOUX CHIEF	832-25D-NR	CAST IRON	NICKEL BRONZE	PROVIDE TRAP PRIMER CONNECTION AND DEEP SEAL TRAP.



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790  
Project Team:  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.818.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #0331-01

Project Title:  
 MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU  
 UNIVERSITY OF MISSOURI HEALTHCARE



TORI JANELLE GILLESPIE  
PE-2018000203

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**PPF501**  
PLUMBING AND FIRE PROTECTION DETAILS AND SCHEDULES  
BID DOCUMENT PACKAGE



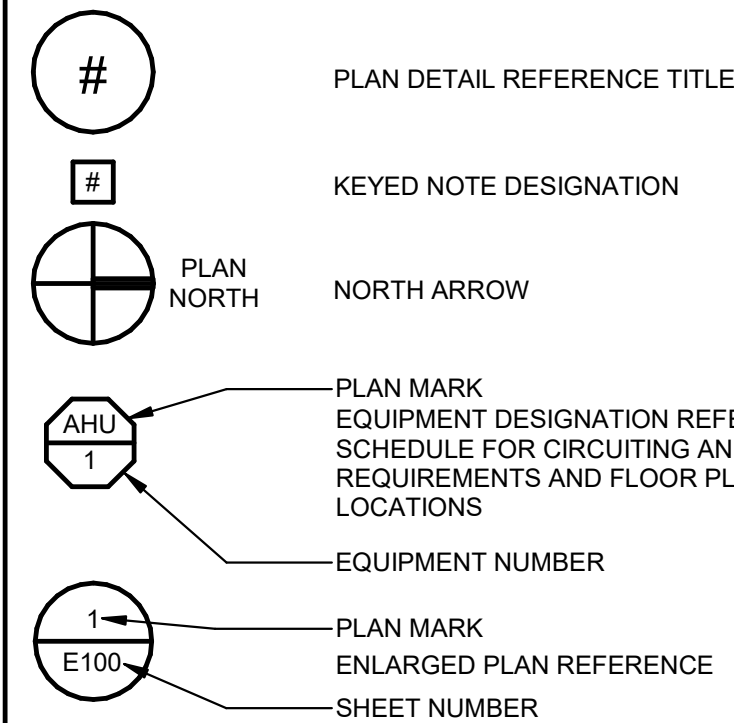
**ELECTRICAL GENERAL NOTES**

- MAKE ALL INSTALLATIONS IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG).
- MOUNTING HEIGHTS INDICATED WITHIN PLANS AND SCHEDULES ARE DIMENSIONED TO THE CENTER LINE OF THE DEVICE, EQUIPMENT, LUMINAIRE, ETC. UNLESS OTHERWISE NOTED.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE EXACT EQUIPMENT LOCATIONS WITH OTHER TRADES. EQUIPMENT LOCATIONS SHOWN ON ELECTRICAL PLANS ARE DIAGRAMMATICAL ONLY AND MIGHT NOT BE EXACT.
- ON PLANS, CIRCUIT IDENTIFICATION NUMBERS BESIDE ELECTRICAL DEVICES AND CONNECTION POINTS ON PLANS CORRESPOND TO AN OVERCURRENT DEVICE IN THE DESIGNATED PANELBOARD. NOTE ALL CIRCUIT NUMBER CHANGES MADE IN THE FIELD AT EACH ELECTRICAL DEVICE AND CONNECTION POINT. ALSO CORRECT THE DIRECTORIES AND DEVICE MARKINGS AT PANELBOARDS, SWITCHBOARDS AND SWITCHGEAR TO ACCURATELY REFLECT THE AS-BUILT CONDITIONS.
- INSTALL EMERGENCY AND EXIT LUMINAIRE WIRING IN A SEPARATE RACEWAY FROM THAT OF ANY NORMAL POWER DEVICE.
- CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, OR ABOVE CEILINGS, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT ROUTED IN MECHANICAL ROOMS, ELECTRICAL ROOMS, AND STORAGE ROOMS WITHOUT CEILINGS MAY BE ROUTED EXPOSED.
- COORDINATE VERTICAL CONDUIT ROUTING TO WALL MOUNTED DEVICES TO ENSURE DEVICES LOCATED WITHIN AN 18-INCH HORIZONTAL DIMENSION WILL BE CENTER-ALIGNED VERTICALLY.
- FIELD COORDINATE ALL ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT MOUNTING LOCATIONS TO AVOID ENCRoACHMENT OF OPERATION AND ACCESS TO EQUIPMENT FROM OTHER TRADES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE APPROPRIATE MOUNTING LOCATION WITH THE AFFECTED DISCIPLINES WHEN EQUIPMENT IS SPECIFIED TO BE MOUNTED ONTO THE SURFACE OF ANOTHER DISCIPLINE'S EQUIPMENT.
- REPAIR ALL OPENINGS MADE IN EXISTING WALLS, PARTITIONS, ETC TO ACCOMMODATE WORK OF THIS DISCIPLINE TO MATCH THE SURROUNDING CONDITIONS, USING WORKERS QUALIFIED IN THE APPROPRIATE TRADE. APPROPRIATELY GROUT OR SEAL ALL CONDUITS THROUGH WALLS.
- ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS MUST HAVE BEEN TESTED AND CERTIFIED AS A SYSTEM PER ASTM E914 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS.
- PERFORM ALL WELDING ACCORDING TO AMERICAN WELDING SOCIETY STANDARDS. FURNISH CERTIFICATES QUALIFYING EACH WELDER TO THE ARCHITECT OR ENGINEER PRIOR TO START OF WORK. THE ARCHITECT OR ENGINEER RESERVES THE RIGHT TO REQUIRE QUALIFYING DEMONSTRATION, AT NO ADDITIONAL EXPENSE, OF ANY WELDERS ASSIGNED TO THE JOB.
- REPLACE OR REINSTALL ALL PORTIONS OF THE BUILDING (CEILING TILES, WALLS, ETC) REMOVED TO ACCOMMODATE THE INSTALLATION OF ANY ELECTRICAL DEVICE, EQUIPMENT, ETC. USING WORKERS QUALIFIED IN THE APPROPRIATE TRADE.
- NEW BACKBOXES INSTALLED WITHIN EXISTING WALLS SHALL BE RECESSED SUCH THAT THE DEVICE FACE WITH COVER PLATE IS FLUSH WITHIN NEW OR EXISTING WALL PANELING. CUT EXISTING WALLS AND PANELING AND PROVIDE EXTENSION RINGS AS REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- MC CABLE IS NOT PERMITTED FOR USE ON THIS PROJECT, OTHER THAN USE WITH UNDER CABINET LIGHT FIXTURE CONNECTIONS.
- SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN 3'-0" OF ANY SUPPLY OR RETURN AIR DIFFUSER.

**GENERAL DEMOLITION NOTES**

- REMOVE, CAP AND RELOCATE EQUIPMENT, OUTLETS, CONDUIT, WIRE, ETC., AS SHOWN AND SPECIFIED ON DRAWINGS, AND AS MAY BECOME NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VISIBLY EXAMINE ALL EXISTING WALLS DESIGNATED FOR REMOVAL TO DETERMINE THE CONDUIT AND THE WIRING THAT WILL REQUIRE CAPPING AND REMOVAL, WHETHER OR NOT SUCH CONDITIONS ARE INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL BE HELD TO HAVING VISITED THE SITE AND TAKEN ALL EXISTING CONDITIONS INTO CONSIDERATION.
- MAINTAIN CIRCUIT CONTINUITY TO ALL EXISTING FIXTURES, EQUIPMENT, OUTLETS, ETC., TO REMAIN IN USE WHETHER NOTED ON THE PLANS OR NOT. FIELD VERIFY EXISTING ITEMS TO REMAIN IN USE. RECONNECT RACEWAYS AND WIRING FOR EXISTING CIRCUITS WHICH MUST BE RE-ROUTED OR WHICH ARE PARTIALLY ABANDONED TO POWER THE REMAINING OUTLETS ON THE CIRCUIT.
- REMOVE ALL UNUSED WIRING AND CABLES BACK TO THEIR SOURCE. REMOVE ALL UNUSED CONDUIT THAT IS EXPOSED OR ABOVE ACCESSIBLE CEILINGS WHICH IS AFFECTED BY OR IS IN THE AREA OF THE DEMOLITION WORK.
- THE INTENTION OF THE ELECTRICAL DEMOLITION DRAWINGS IS TO DISCONNECT AND REMOVE ALL ELECTRICAL WORK MADE VOID BY THE SCOPE OF THE CONSTRUCTION AND ALTERATION. FIELD VERIFY EXACT MATERIAL QUANTITIES REQUIRED TO BE REMOVED.
- DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, DEVICES, ASSOCIATED RACEWAYS, SUPPORTING HARDWARE, AND WIRING, WHICH HAVE BEEN MADE OBSOLETE BY THE WORK OR IS SHOWN DASHED ON THE ELECTRICAL DEMOLITION DRAWINGS, UNLESS OTHERWISE NOTED. ALTHOUGH AN ATTEMPT HAS BEEN MADE TO INDICATE ALL OF THIS WORK, TOTAL ACCURACY IS NOT GUARANTEED. VISIBLY EXAMINE ALL AREAS AND WALLS AND CEILINGS SCHEDULED FOR REMOVAL TO DETERMINE EXISTING ELECTRICAL ITEMS TO REMAIN.
- WHERE ELECTRICAL EQUIPMENT, CONDUIT, BOXES, AND SUPPORTING HARDWARE ARE REMOVED, PATCH AND FINISH THE SURFACE AS REQUIRED TO MATCH THE EXISTING, USING WORKERS QUALIFIED IN THE APPROPRIATE TRADE.
- TAKE ALL REMOVED MATERIALS FROM THE PROJECT SITE, EXCEPT FOR THOSE TO BE RELOCATED, STORED, OR TURNED OVER TO THE OWNER.
- ACCEPTANCE OF CONTRACT MEANS INSTALLER ACCEPTS EXISTING CONDITIONS.
- CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK WITH ALL OTHER TRADES.
- PROVIDE A BLANK COVER OVER THE OUTLET WHERE A FLUSH DEVICE IS BEING REMOVED FROM FLOORS AND WALLS THAT ARE TO REMAIN. MATCH THE COLOR AND MATERIAL TO THE EXISTING REMAINING COVERS IN THE ROOM OR SPACE.
- LEGALLY DISPOSE OF HAZARDOUS MATERIALS AND BALLASTS OR OTHER EQUIPMENT CONTAINING PCBs AND LAMPS CONTAINING MERCURY. COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS.
- MODIFY EXISTING PANEL DIRECTORIES (OR REPLACE) FOR PANELBOARDS WHICH HAVE HAD ALTERATIONS TO THE CIRCUITS ORIGINATING THEREIN. DESCRIBE THE LOAD AND LOCATION. TYPE, DO NOT HAND LETTER NEW PANELBOARD DIRECTORIES.

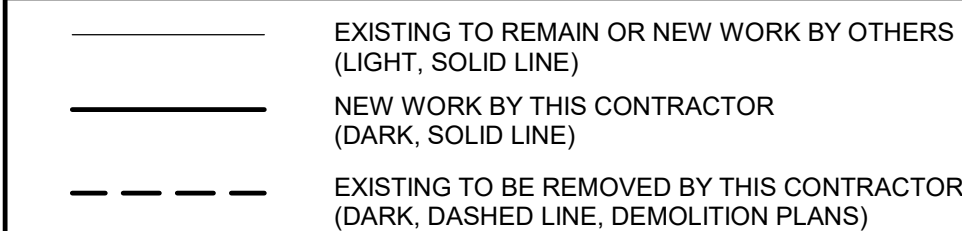
**DRAWING REFERENCES**



**ABBREVIATIONS**

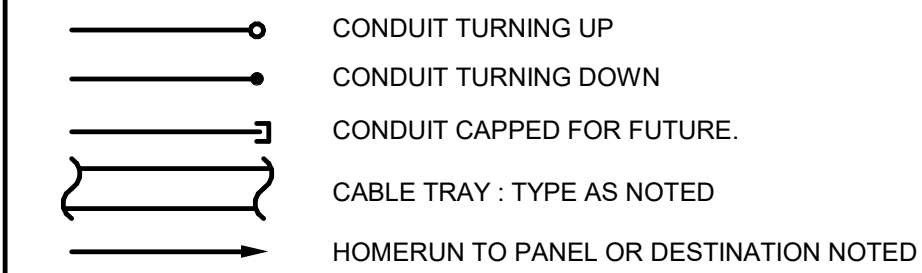
- A.F.F. ABOVE FINISHED FLOOR
- C CONDUIT
- E.C. ELECTRICAL CONTRACTOR
- ER EXISTING RELOCATED
- ETR EXISTING TO REMAIN
- G.C. GENERAL CONTRACTOR
- GND GROUND
- TYP TYPICAL
- U.O.N. UNLESS OTHERWISE NOTED

**LINE TYPE LEGEND**

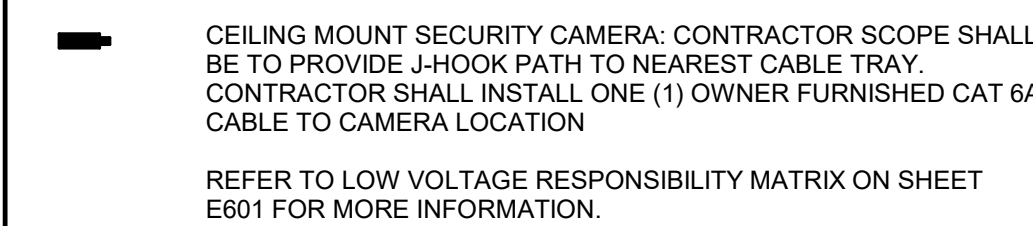


**WIRING PLANS**

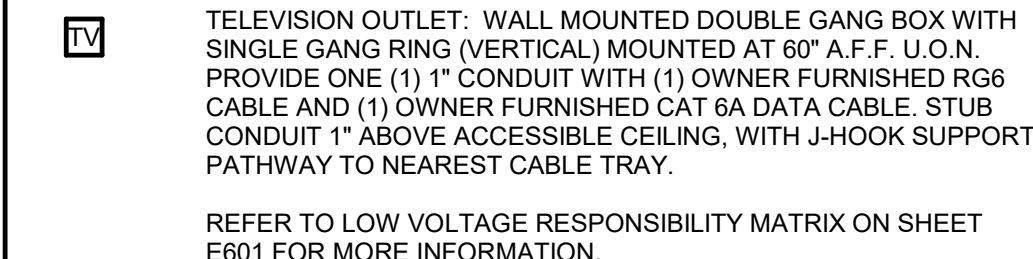
- PROVIDE WIRING REQUIRED BY THE CIRCUITING AND SWITCHING REQUIREMENTS FOR THE PARTICULAR CIRCUITS INVOLVED. TYPICAL 120V HOMERUNS SHALL CONSIST OF #12 AWG CONDUCTORS IN 3/4" CONDUIT MINIMUM UNLESS INDICATED OTHERWISE. NO SHARED NEUTRALS SHALL BE ALLOWED. A MAXIMUM OF THREE CIRCUITS ARE ALLOWED PER HOMERUN CIRCUIT. NEUTRAL CONDUCTORS ARE ALSO CONSIDERED CURRENT-CARRYING CONDUCTORS. FOR CIRCUITS EXCEEDING 75' IN LENGTH, PROVIDE THE NEXT LARGER WIRE SIZE FOR THE CIRCUIT AMPACITY.
- WHERE NUMBER OF CURRENT-CARRYING CONDUCTORS IN A RACEWAY EXCEEDS THREE, THE ALLOWABLE AMPACITY OF EACH CONDUCTOR SHALL BE REDUCED AS SHOWN IN THE ADJUSTMENT FACTOR TABLE IN THE NATIONAL ELECTRIC CODE. LOAD DIVERSITY FACTORS SHALL NOT BE USED IN SIZING CONDUCTORS. NEUTRAL CONDUCTORS SHALL BE COUNTED AS CURRENT-CARRYING CONDUCTORS.



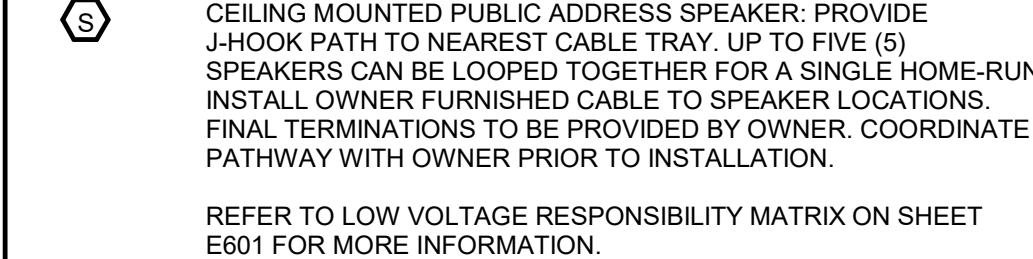
**SECURITY ALARM SYSTEMS**



**DISTRIBUTED TELEVISION**



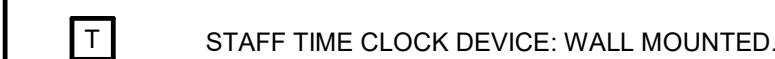
**PUBLIC ADDRESS SYSTEMS**



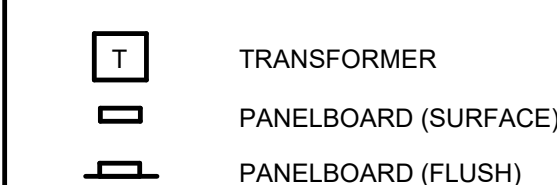
**COMMUNICATION SYSTEMS**



**TIME CLOCK SYSTEMS**

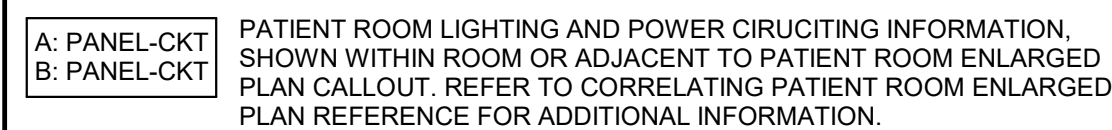


**POWER EQUIPMENT**



**WIRING DEVICES, RECEPTACLES - MISC.**

- TYPICAL MOUNTING HEIGHT: +18" A.F.F.
  - ALL RECEPTACLES PROVIDED SHALL BE HOSPITAL GRADE.
  - SUBSCRIPT LEGEND:
    - A ABOVE COUNTER: MOUNT +6" ABOVE BACKSPASH OR WORK SURFACE
    - DH: DOOR HOLD OPEN: POWER CONNECTION INSTALLED ABOVE ACCESSIBLE CEILING
- A SLASH BETWEEN TWO SUBSCRIPTS INDICATES MULTIPLE PARAMETERS (EXAMPLE: A3 DENOTES ABOVE COUNTER MOUNTING, CIRCUIT 3).
- SHADING INDICATES EMERGENCY BRANCH POWER
  - DUPLX RECEPTACLE OUTLET
  - DUPLX RECEPTACLE OUTLET : GROUND FAULT TYPE
  - DOUBLE DUPLEX RECEPTACLE OUTLET
  - DUPLEX RECEPTACLE OUTLET WITH DUAL USB PORTS: (1) USB-A & (1) USB-C
  - ELECTRICAL CONNECTION: CEILING MOUNTED
  - ELECTRICAL CONNECTION: WALL MOUNTED
  - KEYED SWITCH FOR POWERED DOOR CONTROL (INSTALLED ABOVE CEILING)



**TELECOMMUNICATIONS**

- TYPICAL MOUNTING HEIGHT: +18" A.F.F. UNLESS OTHERWISE NOTED. PROVIDE 4 1/16" SQUARE BOX WITH SINGLE GANG PLASTER RING (VERTICAL).
  - ALL TELECOMMUNICATION CONDUIT SHALL BE A MINIMUM OF 1-1/4" IN DIAMETER STUBBED TO ACCESSIBLE CEILING SPACE U.O.N.
  - ALL TELECOMMUNICATION CABLE SHALL BE OWNER PROVIDED WITH A PLENUM RATED JACKET. ALL CABLES RUN EXPOSED IN STRUCTURE ABOVE OR ABOVE CEILINGS SHALL BE SUPPORTED BY J-HOOKS AT EVERY 5'-0" TO NEAREST CABLE TRAY. PROVIDE INSULATED BUSHINGS ON ALL RACEWAYS.
  - ALL DATA CABLES SHALL BE CAT 6A AND TERMINATED BY OWNER.
  - REFER TO LOW VOLTAGE RESPONSIBILITY MATRIX ON SHEET E601 FOR MORE INFORMATION.
  - PULL TELECOMMUNICATION CABLE DIRECTIONALLY FROM TELECOMMUNICATION ROOM TO OUTLET.
  - SUBSCRIPT LEGEND:
    - A: ABOVE COUNTER: MOUNT +6" ABOVE BACKSPASH OR WORK SURFACE WITH BOX ORIENTED HORIZONTALLY.
    - #: QUANTITY OF OWNER PROVIDED CAT 6A CABLES TO BE INSTALLED BY CONTRACTOR, WHEN NOT INDICATED, THREE (3) CABLES SHALL BE ASSUMED. CABLES SHALL ORIGINATE FROM TELECOMMUNICATION ROOM WITHIN THE SCOPE OF WORK AREA.
- A SLASH BETWEEN TWO SUBSCRIPTS INDICATES MULTIPLE PARAMETERS (EXAMPLE: A3 DENOTES ABOVE COUNTER MOUNTING, 3 CABLES.)
- TELECOMMUNICATION OUTLET: PROVIDE 4-1/16" SQUARE BOX, 2-1/8"D WITH SINGLE GANG RING (VERTICAL) WITH ONE (1) 1-1/4" EMPTY CONDUIT STUBBED TO ACCESSIBLE CEILING SPACE WITH BUSHING. PROVIDE J-HOOK SUPPORTS ABOVE CEILING BETWEEN DEVICE CONDUIT STUB, CORRIDOR FIRE RATED PATHWAY AND CABLE TRAY. PROVIDE 4 POSITION FACEPLATE & TOTAL OF (3) ACTIVE JACKS U.O.N.
  - RFID ROUGH-IN: PROVIDE 4-1/16"x2-1/8" ELECTRICAL BOX WITH SINGLE GANG REDUCING RING ABOVE CEILING WITHIN INTERIOR SIDE OF THE DOOR (NON-CORRIDOR SIDE), CENTERED WITHIN THE DOOR JAMB. # INDICATES THE QUANTITY OF CABLES TO BE INSTALLED. INSTALL OWNER PROVIDED CABLES FROM TELECOM ROOM IN THE SCOPE OF WORK AREA TO BOX. PROVIDE J-HOOK SUPPORTS BETWEEN DEVICE AND CORRIDOR FIRE RATED PATHWAY AND CABLE TRAY.
  - WIRELESS ACCESS POINT DATA OUTLET - FURNISH AND INSTALL ONE (1) OWNER PROVIDED CAT 6A CABLE AND 10' OF SLACK CABLE COILED ABOVE ACCESSIBLE CEILING FROM TELECOM ROOM IN THE SCOPE OF WORK AREA. WIRELESS ACCESS POINTS ARE OWNER FURNISHED, OWNER INSTALLED.
  - EZ PATHWAY: NUMBER SHOWN INDICATES EZ PATH MODEL.

**ACCESS CONTROL SYSTEMS**

- CONTRACTOR SCOPE SHALL BE TO PROVIDE ROUGH-IN COMPONENTS FOR EACH DEVICE INCLUDING ONE SINGLE-GANG BACKBOX U.O.N., ONE 1-INCH CONDUIT ROUTED TO ACCESSIBLE CEILING, CABLE SUPPORTS FROM DEVICE TO NEAREST CABLE TRAY AND INSTALL OWNER FURNISHED CABLE.
- REFER TO LOW VOLTAGE RESPONSIBILITY MATRIX ON SHEET E601 FOR MORE INFORMATION.
  - PUSH PAD: PROVIDE DOUBLE-GANG BAEL BOX WITH SINGLE-GANG PLASTER RING, WALL MOUNT AT +48" A.F.F. OR AS NOTED.
  - ELECTRIC DOOR STRIKE (FURNISHED BY G.C., INSTALLED BY E.C.)
  - CARD READER: PROVIDE DOUBLE-GANG BACK BOX WITH SINGLE-GANG PLASTER RING, WALL MOUNT AT +48" A.F.F.

**LUMINAIRES**

- REFER TO LUMINAIRE SCHEDULE FOR LUMINAIRE DESCRIPTIONS.
- "NL" INDICATES UNSWITCHED LUMINAIRE
- SHADING LEGEND (APPLICABLE TO LUMINAIRE SYMBOLS):
  - NO SHADING: NORMAL POWER
  - HALF-SHADING: LIFE SAFETY
  - FULL-SHADING: CRITICAL POWER
- LUMINAIRE DESIGNATION KEY:
  - A: LUMINAIRE TYPE
  - 1: CIRCUIT NUMBER
  - a: CONTROLLING SWITCH

**SWITCHES AND LIGHTING CONTROL DEVICES**

- TYPICAL MOUNTING HEIGHT: 48" A.F.F. TO CENTER U.O.N.
  - WHERE TWO OR MORE SWITCHES ARE SHOWN ADJACENT TO EACH OTHER, PROVIDE A COMMON GANG BOX WITH A SINGLE, SEAMLESS FACEPLATE.
  - SUBSCRIPT LEGEND:
    - 2: TWO-POLE SWITCH
    - 3: THREE-WAY SWITCH
    - 4: FOUR-WAY SWITCH
    - K: KEY SWITCH
    - D: DIMMER - COORDINATE REQUIREMENTS FOR LUMINAIRE COMPATIBILITY
- A LOWERCASE SUBSCRIPT INDICATES THE SWITCH/LEG THE DEVICE CONTROLS. REFER TO SPECIFICATION SECTION 26 09 23 FOR ADDITIONAL INFORMATION.
- SWITCH - TYPE AS INDICATED BY SUBSCRIPT
  - CEILING OCCUPANCY DETECTOR - PIR TYPE.
  - WALL MOUNTED SINGLE SWITCH OCCUPANCY SENSOR PIR TYPE

**NURSE CALL SYSTEMS**

- COORDINATE ALL ROUGH-IN LOCATIONS WITH OWNER'S NURSE CALL VENDOR (ALL SYSTEMS) AND ARCHITECTURAL ELEVATIONS PRIOR TO COMMENCING WORK.
- PROVIDE RECESSED ROUGH-IN COMPONENTS CONSISTING OF BACKBOX INDICATED AND ONE (1) 1" CONDUIT STUBBED TO ABOVE CEILING SPACE WITH BUSHING. PROVIDE J-HOOK SUPPORTS ABOVE CEILING BETWEEN DEVICE, CORRIDOR FIRE RATED PATHWAY AND CABLE TRAY.
- REFER TO LOW VOLTAGE RESPONSIBILITY MATRIX ON SHEET E601 FOR MORE INFORMATION.
  - DUTY STATION - PROVIDE (1) RECESSED 3-GANG, 3-1/2" DEEP BOX MOUNTED +60" A.F.F. U.O.N.
  - VOICE ENABLED EMERGENCY PULL CORD STATION - PROVIDE ONE (1) RECESSED SINGLE-GANG, 3-1/2" DEEP BOX INSTALLED +60" A.F.F. U.O.N. AND PROVIDE CORD TO WITHIN 6" OF FLOOR.
  - SINGLE ENHANCED PATIENT STATION - PROVIDE ONE (1) RECESSED 3-GANG, 3-1/2" DEEP BOX. PROVIDE #12 COPPER GROUNDING JUMPER SECURELY FASTENED TO BACKBOX FOR USE WITH NURSE CALL DEVICE. COORDINATE REQUIREMENTS WITH NURSE CALL VENDOR PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
  - STAFF REGISTRATION STATION - PROVIDE (1) RECESSED 3-GANG, 3-1/2" DEEP BOX MOUNTED +60" A.F.F. U.O.N.
  - STAFF STATION - PROVIDE (1) RECESSED 3-GANG, 3-1/2" DEEP BOX MOUNTED + 60" A.F.F. U.O.N.
  - EMERGENCY STAFF ASSIST/BLUE STATION - PROVIDE (1) RECESSED 3-GANG, 3-1/2" DEEP BOX MOUNTED +60" A.F.F. U.O.N.
  - CEILING MOUNTED DOME LIGHT: PROVIDE SINGLE GANG, 3-1/2" DEEP BACK BOX ABOVE ACCESSIBLE CEILING WITH SINGLE GANG PLASTER RING INSTALLED FLUSH WITH CEILING TILE.
  - CEILING MOUNTED DOME LIGHT: PROVIDE SINGLE GANG, 3-1/2" DEEP BACK BOX ABOVE ACCESSIBLE CEILING WITH SINGLE GANG PLASTER RING INSTALLED FLUSH WITH CEILING TILE.
  - NURSE CALL MASTER STATION : DESK MOUNTED
  - NURSE CALL EQUIPMENT CABINET: SURFACE MOUNTED

**FIRE ALARM SYSTEMS**

- REFER TO SPECIFICATIONS SECTION 283111 FOR ADDITIONAL INFORMATION PERTAINING TO THE FIRE ALARM SYSTEM.
- SIGNALING LINE CIRCUITS SHALL BE ROUTED IN A CLASS 'A' CONFIGURATION.
- NOTIFICATION APPLIANCE CIRCUITS SHALL BE ROUTED IN A CLASS 'A' CONFIGURATION.
- FIRE ALARM CIRCUITS SHALL BE ROUTED IN CONDUIT, WHERE ROUTED ABOVE ACCESSIBLE CEILINGS, FIRE ALARM CIRCUITS SHALL CONSIST OF WIRING WITHIN CONDUIT BETWEEN DEVICES. ALL CONDUIT SHALL BE RED IN COLOR.
- FOR VISUAL DEVICES, THE # WITHIN THE SYMBOL CORRESPONDS TO THE CANDELA RATING OF THE DEVICE: 1=15cd, 3=30cd, 5=75cd.
- WALL MOUNTED NOTIFICATION DEVICES SHALL BE MOUNTED WITH THE TOP OF THE DEVICE +30" A.F.F. OR 6" BELOW THE CEILING, WHICHEVER IS LOWER.
  - FIRE ALARM MANUAL STATION: +48" A.F.F. TO CENTER LINE
  - WALL MOUNTED SPEAKER WITH STROBE
  - WALL MOUNTED SPEAKER
  - WALL MOUNTED STROBE
  - CEILING MOUNTED SPEAKER WITH STROBE
  - CEILING MOUNTED SPEAKER
  - CEILING MOUNTED WITH STROBE
  - SMOKE DETECTOR - PHOTOELECTRIC TYPE.
  - DUCT MOUNTED SMOKE DETECTOR - PHOTOELECTRIC TYPE
  - ADDRESSABLE CONTROL RELAY
  - FIRE ALARM ELECTROMAGNETIC DOOR HOLD OPEN
  - SMOKE DAMPER



**bcdesigngroup**

12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123

MO Certificate of Authority Number  
A-201102790

**Project Team:**

ROSS & BARUZZINI, INC.  
314181883  
15000 Certificate of Authority Missouri Certificate of Authority #001-02

**Project Title:**  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
**UNIVERSITY OF MISSOURI HEALTHCARE**



ALLAN ROBERT HENDRIKSE  
PE-2004017185

Issue Date: 12/9/2020

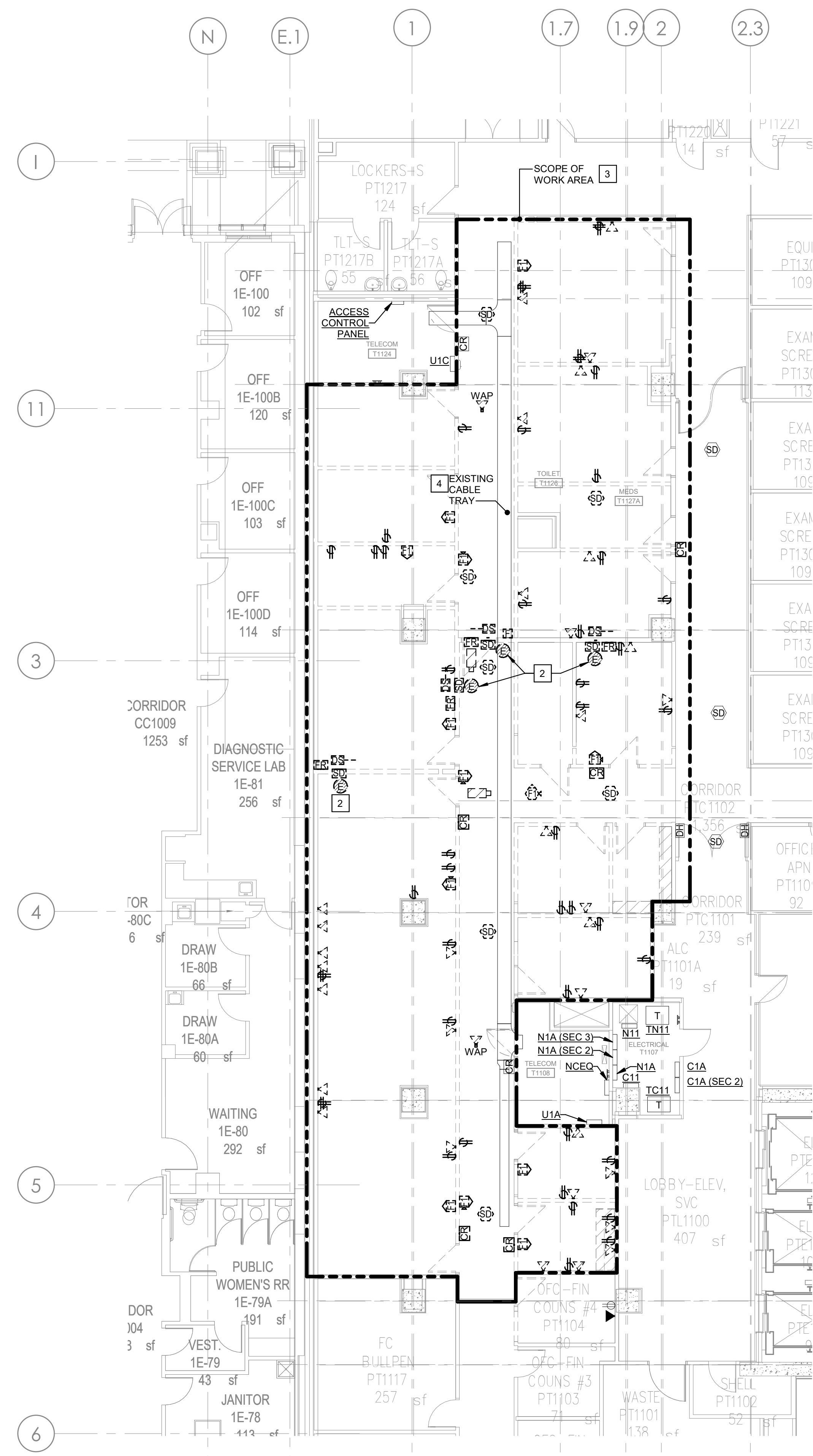
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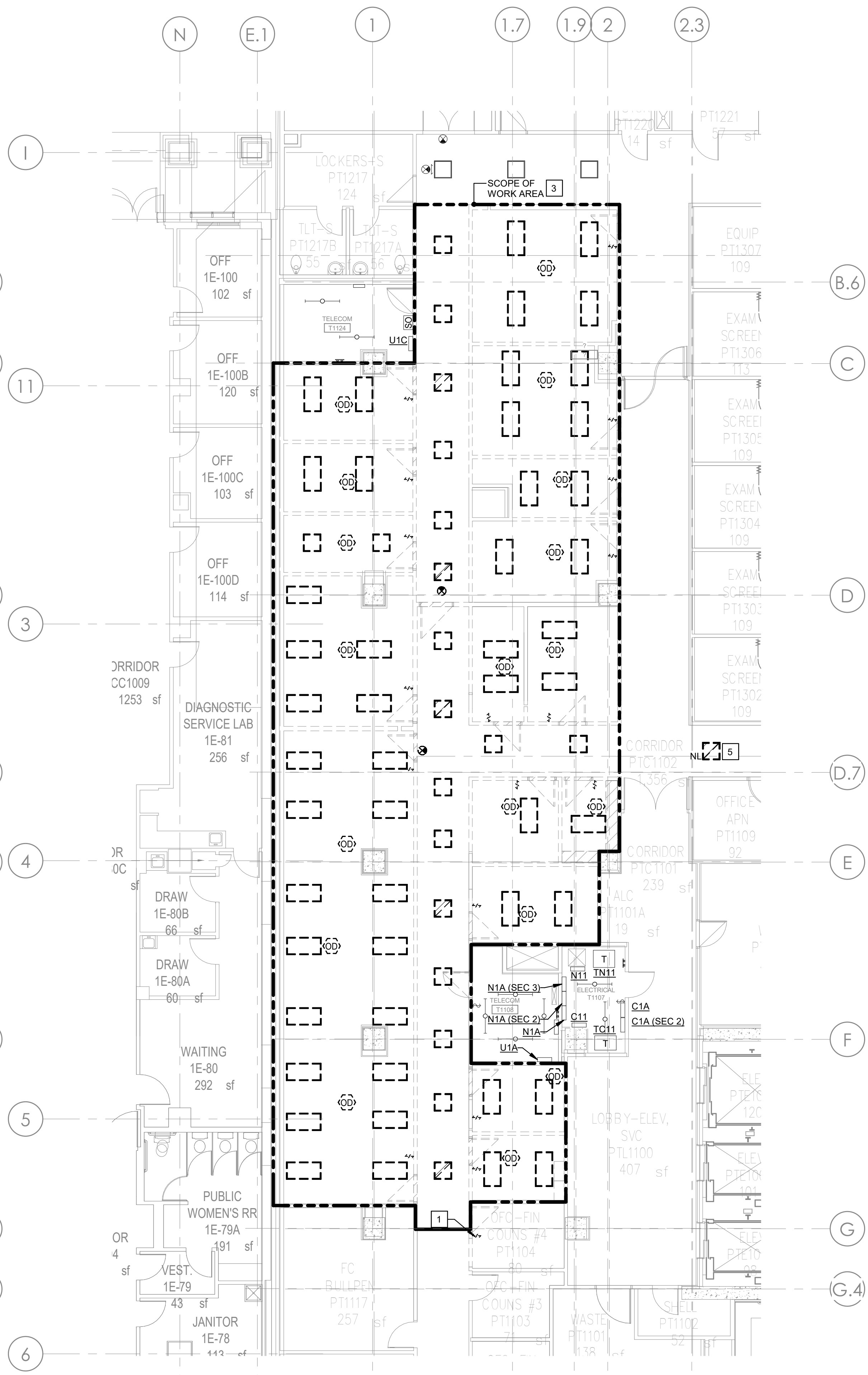
**E000**

ELECTRICAL SYMBOLS & ABBREVIATIONS

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**FIRST FLOOR CBCU - POWER & SYSTEMS - DEMOLITION**  
 1  
 1/8" = 1'-0"  
 0' 4' 8' 16' 32'



**FIRST FLOOR CBCU - LIGHTING - DEMOLITION**  
 2  
 1/8" = 1'-0"  
 0' 4' 8' 16' 32'

**GENERAL SHEET NOTES**

- A. IN AREAS WHERE DEMOLITION WORK IS NOT SCHEDULED, DISCONNECT, REMOVE AND SALVAGE EXISTING CEILING MOUNTED DEVICES, LUMINAIRES, ETC. AS REQUIRED TO COMPLETE ABOVE CEILING WORK FOR ALL TRADES. UPON COMPLETION OF CONSTRUCTION, REINSTALL EXISTING CEILING MOUNTED DEVICES IN ORIGINAL LOCATIONS. DEVICES SHALL OPERATE AS THEY DID PRIOR TO CONSTRUCTION.
- B. RE-SUPPORT ALL EXISTING TO REMAIN ELECTRICAL SYSTEMS (CONDUIT, WIRE, CABLE, ETC.) CURRENTLY SUPPORTED BY WALLS SCHEDULED TO BE DEMOLISHED.
- C. LEGALLY DISPOSE OF LIGHTING BALLASTS AND LAMPS CONTAINING MERCURY. COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS.
- D. SOME CIRCUITS SERVING DEVICES OR FIXTURES SHOWN TO BE REMOVED MAY ALSO SERVE LOADS EXISTING TO REMAIN IN OTHER AREAS. CONTRACTOR SHALL ENSURE ALL EXISTING LOADS REQUIRED TO REMAIN IN OPERATION ARE NOT INTERRUPTED.

**KEYED NOTES**

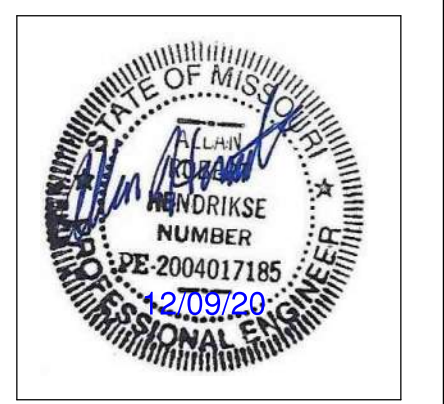
- 1. DISCONNECT, REMOVE AND SALVAGE DEVICE FOR REUSE WITH NEW WORK ON SHIFTED WALL. PROTECT ASSOCIATED CIRCUITS IN PLACE.
- 2. DISCONNECT AND REMOVE ELECTRICAL CONNECTION FOR REMOVED FSD, BACK TO SOURCE OR TO EXISTING FSD TO REMAIN.
- 3. ALL EXISTING ELECTRICAL DEVICES AND FIXTURES LOCATED ON WALLS AND CEILINGS TO BE DEMOLISHED WITHIN THE OUTLINED SCOPE OF WORK AREA SHALL BE DISCONNECTED AND REMOVED. DEVICES AND FIXTURES SHOWN BASED ON FIELD VERIFICATION WITH LIMITED AS-BUILT DRAWINGS AND DO NOT INDICATE ALL DEVICES AND FIXTURES REQUIRED TO BE REMOVED IN THIS AREA. ABANDONED BRANCH CIRCUIT WIRING SHALL BE REMOVED SO BREAKERS CAN BE UTILIZED TO SERVE NEW DEVICES IN THIS SAME AREA.
- 4. EXISTING CABLE TRAY ROUTED THROUGH THIS CORRIDOR IS E.T.R. AND SHALL BE UTILIZED AS THE LOW VOLTAGE CABLE PATHWAY FOR ANY EXISTING AND NEW CABLE.
- 5. DISCONNECT, REMOVE AND SALVAGE FIXTURE FOR REUSE WITH NEW WORK. PROTECT ASSOCIATED CIRCUITS IN PLACE.



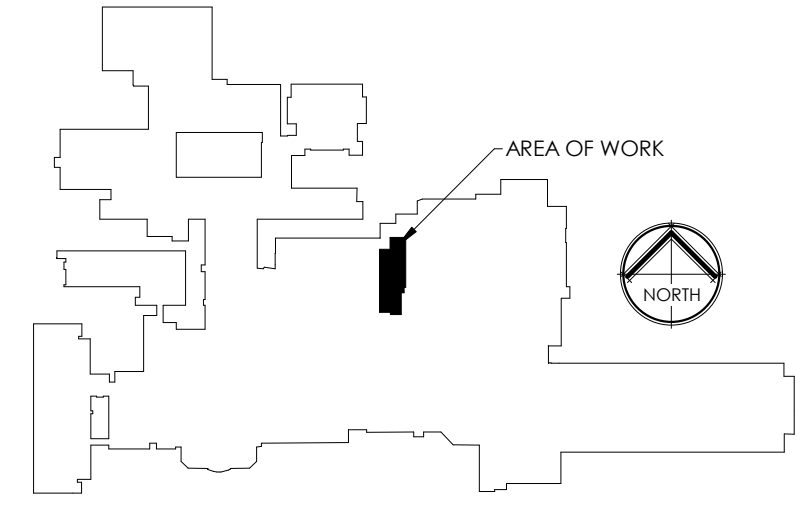
bcDESIGN GROUP  
 12101 W 110th Street, Suite 100  
 Overland Park, KS 66210  
 913.232.2123  
 MO Certificate of Authority Number  
 A-201102720

Project Team:  
 ROSS & BARUZZINI, INC.  
 5 South Old Orchard | St. Louis, MO 63119  
 314.918.8383  
 Missouri Certificate of Authority Missouri Certificate of Authority #022-02

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



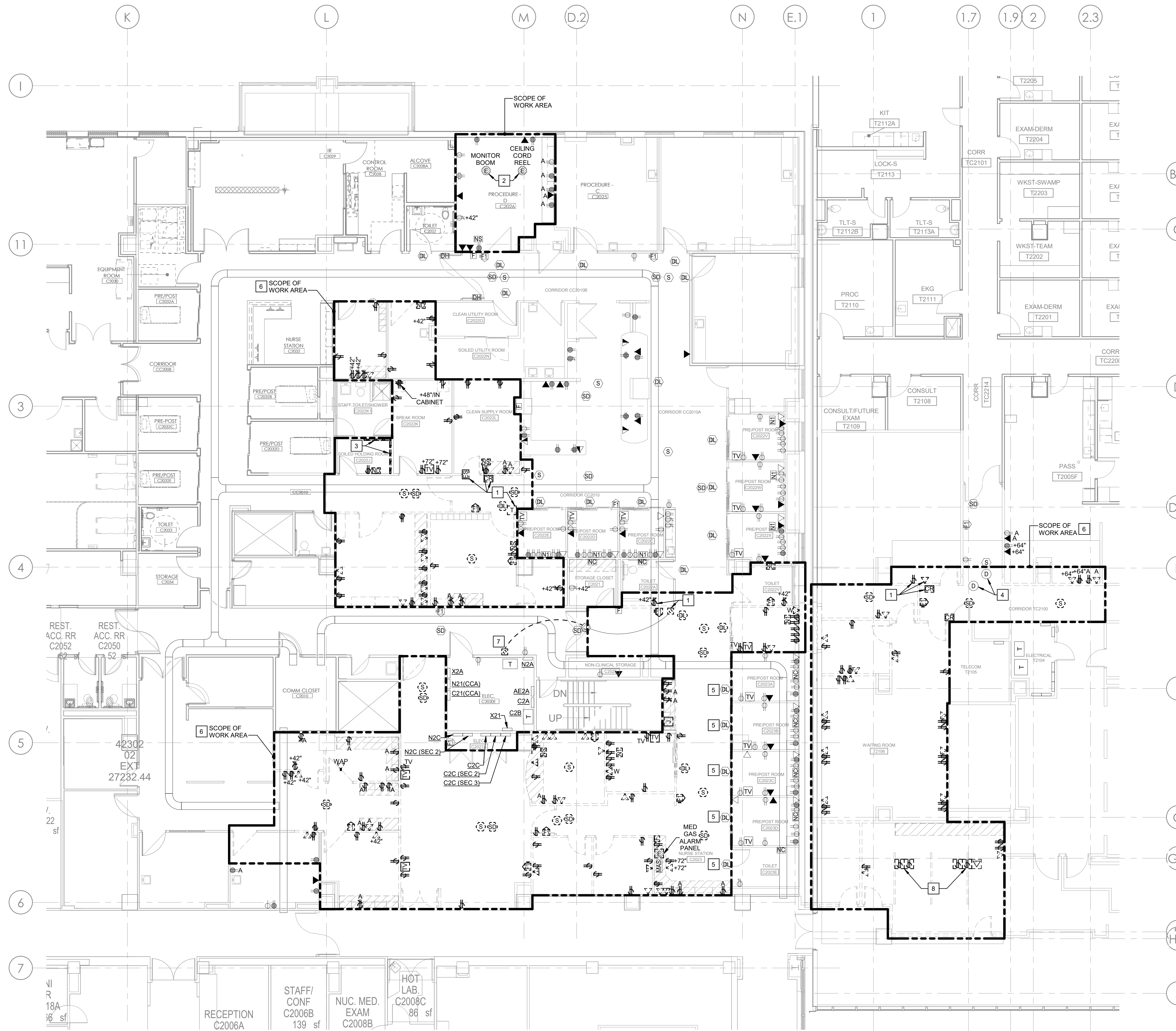
ALLAN ROBERT HENDRIKSE  
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 Date:



Keymap 1st Floor  
 NTS

Drawn by: MTM  
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**ED101**  
 FIRST FLOOR CBCU - ELECTRICAL - DEMOLITION  
 BID DOCUMENT PACKAGE



**SECOND FLOOR CHPS - POWER & SYSTEMS - DEMOLITION**  
 1/8" = 1'-0"  
 0' 4' 8' 16' 32'

**GENERAL SHEET NOTES**

- A. IN AREAS WHERE DEMOLITION WORK IS NOT SCHEDULED, DISCONNECT, REMOVE AND SALVAGE EXISTING CEILING MOUNTED DEVICES, LUMINAIRES, ETC. AS REQUIRED TO COMPLETE ABOVE CEILING WORK FOR ALL TRADES. UPON COMPLETION OF CONSTRUCTION, REINSTALL EXISTING CEILING MOUNTED DEVICES IN ORIGINAL LOCATIONS. DEVICES SHALL OPERATE AS THEY DID PRIOR TO CONSTRUCTION.
- B. RE-SUPPORT ALL EXISTING TO REMAIN ELECTRICAL SYSTEMS (CONDUIT, WIRE, CABLE, ETC.) CURRENTLY SUPPORTED BY WALLS SCHEDULED TO BE DEMOLISHED.
- C. LEGALLY DISPOSE OF LIGHTING BALLASTS AND LAMPS CONTAINING MERCURY. COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS.
- D. SOME CIRCUITS SERVING DEVICES OR FIXTURES SHOWN TO BE REMOVED MAY ALSO SERVE LOADS EXISTING TO REMAIN IN OTHER AREAS. CONTRACTOR SHALL ENSURE ALL EXISTING LOADS REQUIRED TO REMAIN IN OPERATION ARE NOT INTERRUPTED.

**KEYED NOTES**

- 1. DISCONNECT, REMOVE AND SALVAGE DEVICE FOR REUSE WITH NEW WORK ON SHIFTED WALL. PROTECT ASSOCIATED CIRCUITS IN PLACE.
- 2. PROTECT IN PLACE AND TEMPORARILY SUPPORT POWER CONNECTIONS AS REQUIRED FOR THE EXISTING MONITOR BOOM AND CORD REEL. SCOPE OF WORK IN THIS ROOM IS LIMITED TO REPLACING EXISTING CEILING LIGHT FIXTURES AND ASSOCIATED CONTROLS WITH NEW FIXTURES AND CONTROLS. REFER TO SHEETS ELD102 & EL102 FOR MORE INFORMATION.
- 3. THERE ARE 2 SEPARATE SURFACE RACEWAYS INSTALLED AS SHOWN ROUTED UNDER THE WORK STATION IN THIS ROOM, ONE FOR POWER AND ONE FOR DATA. BOTH RACEWAYS SHALL BE DISCONNECTED AND REMOVED.
- 4. TEMPORARILY SUPPORT IN PLACE AND PROTECT THE TWO (2) DIGITAL ANTENNA DEVICES INSTALLED IN THE CEILING AT THIS LOCATION.
- 5. TEMPORARILY SUPPORT IN PLACE AND PROTECT THE NURSE CALL DEVICES INSTALLED IN THE CEILING AT THIS LOCATION.
- 6. ALL EXISTING ELECTRICAL DEVICES AND FIXTURES LOCATED ON WALLS AND CEILING TO BE DEMOLISHED WITHIN THE OUTLINED SCOPE OF WORK AREA SHALL BE DISCONNECTED AND REMOVED. DEVICES AND FIXTURES SHOWN BASED ON FIELD VERIFICATION WITH LIMITED AS-BUILT DRAWINGS AND DO NOT INDICATE ALL DEVICES AND FIXTURES REQUIRED TO BE REMOVED IN THIS AREA. ABANDONED BRANCH CIRCUIT WIRING SHALL BE REMOVED SO BREAKERS CAN BE UTILIZED TO SERVE NEW DEVICES IN THIS SAME AREA.
- 7. DISCONNECT AND REMOVE EXISTING POWERED DOOR PUSH PAD AND ASSOCIATED CONTROL WIRING TO DOOR CONTROLLER. EXISTING DOOR CONTROLLER WILL REMAIN IN PLACE AND BE USED WITH A NEW ACCESS CONTROL DEVICE PROVIDED AS PART OF THE NEW WORK PHASE.
- 8. UPON REMOVAL OF THESE POKE-THRU FLOOR BOXES, CAP AND SEAL PENETRATIONS.



bcDESIGN GROUP  
 12101 W 110th Street, Suite 100  
 Overland Park, KS 66210  
 913.232.2123

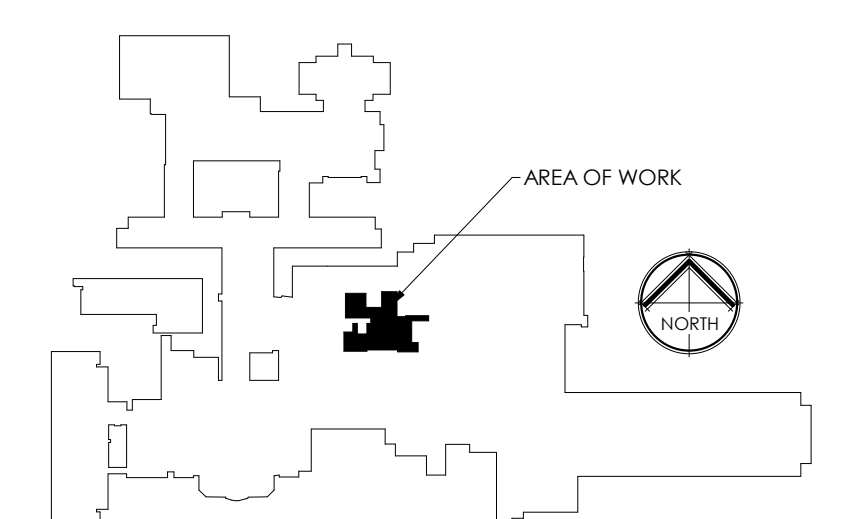
Project Team:  
 ROSS & BARUZZINI, INC.  
 8 South Old Orchard | St. Louis, MO 63119  
 314.918.8383  
 Missouri Certificate of Authority Missouri Certificate of Authority #0321-02

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



ALLAN ROBERT HENDRIKSE  
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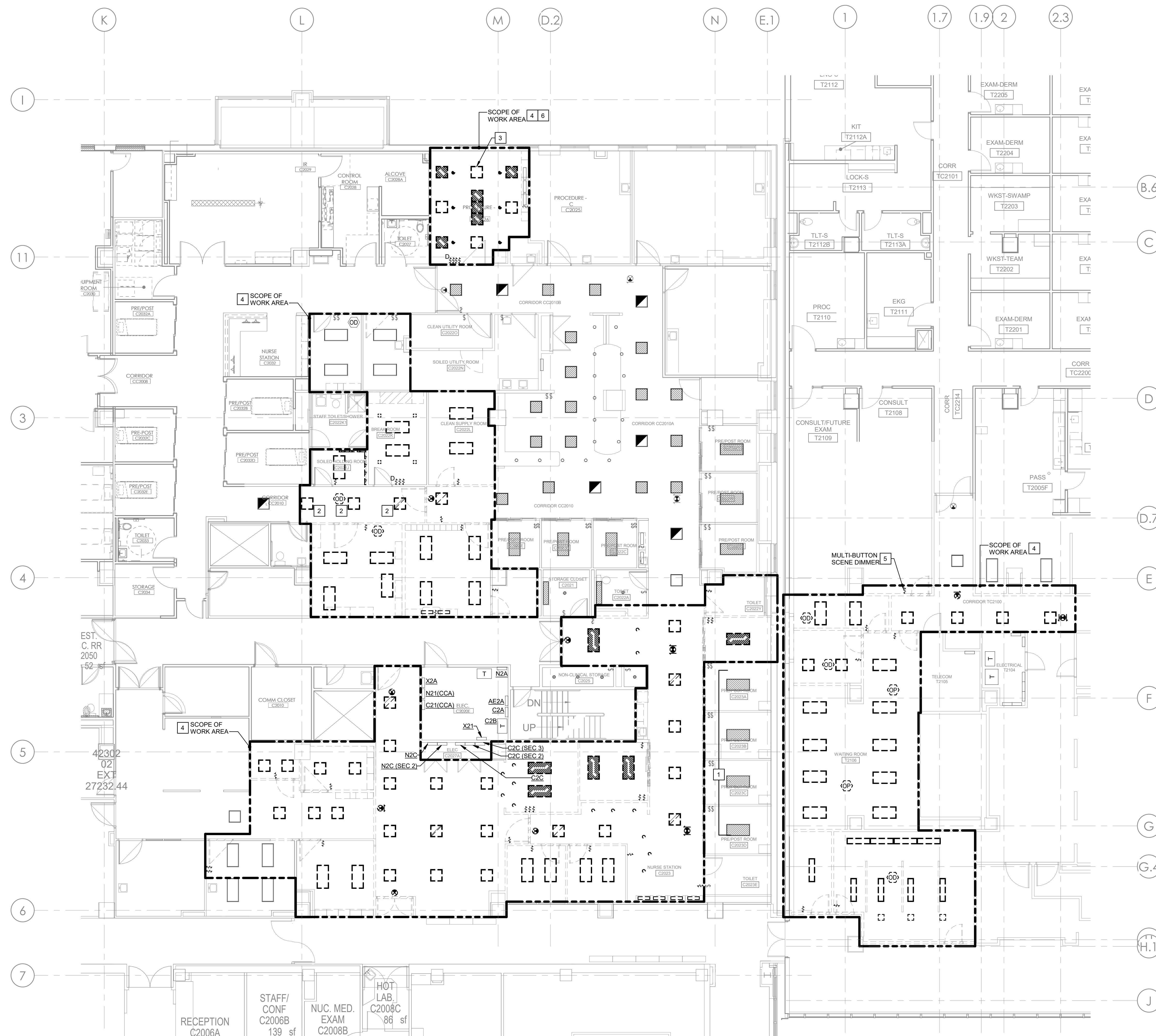


**Keymap 2nd Floor**  
 NTS

Drawn by: MTM

bcdg Project #: 12275.43  
 MU Project #: CP210751

**ED102**  
 SECOND FLOOR CHPS - POWER & SYSTEMS - DEMOLITION



**SECOND FLOOR CHPS - LIGHTING - DEMOLITION**



**GENERAL SHEET NOTES**

- A. IN AREAS WHERE DEMOLITION WORK IS NOT SCHEDULED, DISCONNECT, REMOVE AND SALVAGE EXISTING CEILING MOUNTED DEVICES, LUMINAIRES, ETC. AS REQUIRED TO COMPLETE ABOVE CEILING WORK FOR ALL TRADES. UPON COMPLETION OF CONSTRUCTION, REINSTALL EXISTING CEILING MOUNTED DEVICES IN ORIGINAL LOCATIONS. DEVICES SHALL OPERATE AS THEY DID PRIOR TO CONSTRUCTION.
- B. RE-SUPPORT ALL EXISTING TO REMAIN ELECTRICAL SYSTEMS (CONDUIT, WIRE, CABLE, ETC.) CURRENTLY SUPPORTED BY WALLS SCHEDULED TO BE DEMOLISHED.
- C. LEGALLY DISPOSE OF LIGHTING BALLASTS AND LAMPS CONTAINING MERCURY. COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS.
- D. SOME CIRCUITS SERVING DEVICES OR FIXTURES SHOWN TO BE REMOVED MAY ALSO SERVE LOADS EXISTING TO REMAIN IN OTHER AREAS. CONTRACTOR SHALL ENSURE ALL EXISTING LOADS REQUIRED TO REMAIN IN OPERATION ARE NOT INTERRUPTED.

**KEYED NOTES**

- 1. THESE FOUR (4) FIXTURES SHALL REMAIN IN PLACE, BUT WILL BE SERVED BY A SEPARATE CIRCUIT ROUTED THROUGH A NEW POWER INVERTER. REMOVE THESE FIXTURES FROM THE POWER CIRCUIT CURRENTLY SERVING THEM. REESTABLISH THE POWER CONNECTION TO THE CIRCUIT AND ENSURE ALL OTHER FIXTURES ON THIS CIRCUIT CONTINUE TO OPERATE AS THEY DID PRIOR TO THESE FIXTURES BEING REMOVED FROM THE CIRCUIT.
- 2. THIS FIXTURE IS NEWER AS IT WILL BE PROVIDED AS PART OF A SEPARATE PROJECT SCHEDULE TO FINISH PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT. DISCONNECT, REMOVE AND SALVAGE FIXTURE FOR REUSE WITH NEW WORK. REFER TO SHEET EL102 FOR MORE INFORMATION.
- 3. DISCONNECT AND REMOVE ALL LIGHT FIXTURES IN THIS PROCEDURE ROOM. PROTECT IN PLACE THE EXISTING POWER AND LIGHTING CONTROL CIRCUITS CURRENTLY SERVING THESE FIXTURES FOR REUSE WITH NEW WORK.
- 4. ALL EXISTING ELECTRICAL DEVICES AND FIXTURES LOCATED ON WALLS AND CEILINGS TO BE DEMOLISHED WITHIN THE OUTLINED SCOPE OF WORK AREA SHALL BE DISCONNECTED AND REMOVED. DEVICES AND FIXTURES SHOWN BASED ON FIELD VERIFICATION WITH LIMITED AS-BUILT DRAWINGS AND DO NOT INDICATE ALL DEVICES AND FIXTURES REQUIRED TO BE REMOVED IN THIS AREA. ABANDONED BRANCH CIRCUIT WIRING SHALL BE REMOVED SO BREAKERS CAN BE UTILIZED TO SERVE NEW DEVICES IN THIS SAME AREA.
- 5. DISCONNECT, REMOVE AND SALVAGE DEVICE FOR REUSE WITH NEW WORK ON SHIFTED WALL. PROTECT ASSOCIATED CIRCUITS IN PLACE.
- 6. SCOPE OF WORK IN THIS ROOM IS LIMITED TO REPLACING EXISTING CEILING LIGHT FIXTURES AND ASSOCIATED CONTROLS WITH NEW FIXTURES AND CONTROLS. REFER TO EL102 FOR MORE INFORMATION.



bcDESIGN GROUP  
12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790

Project Team:  
ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #0221-01

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ALLAN ROBERT HENDRIKSE  
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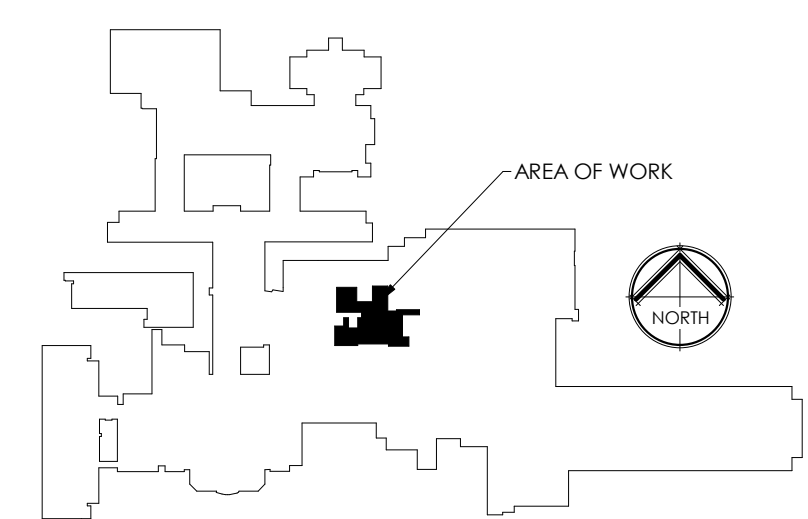
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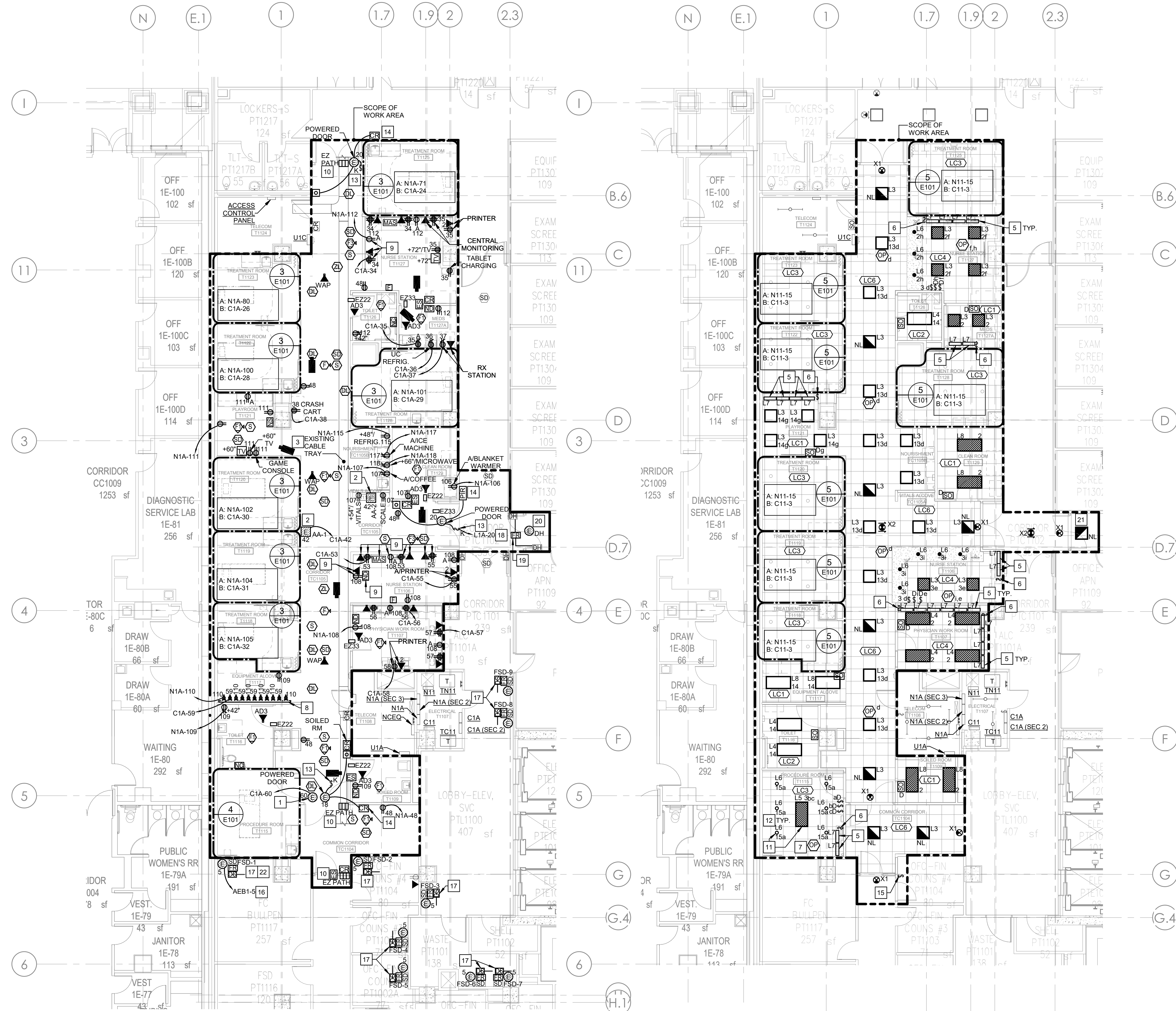
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**ELD102**  
SECOND FLOOR CHPS - LIGHTING - DEMOLITION

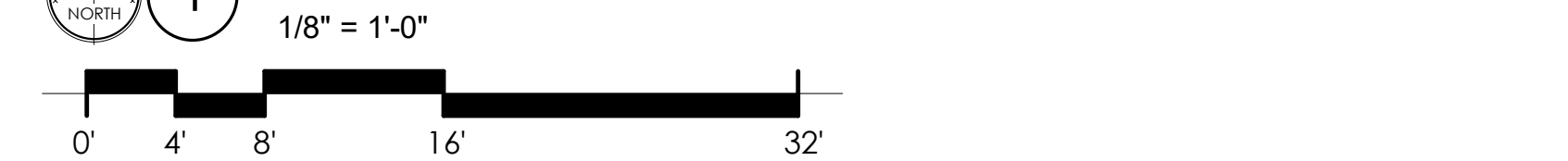
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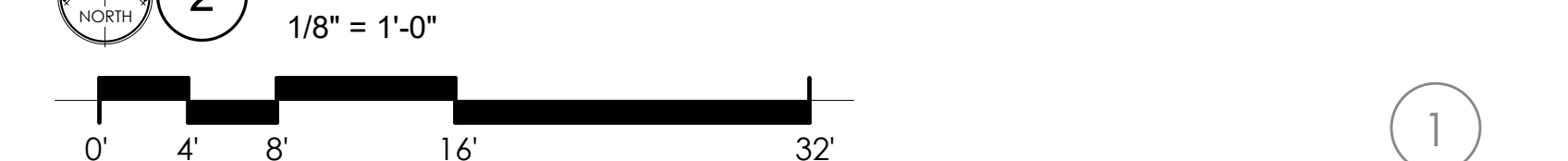
Keymap 2nd Floor  
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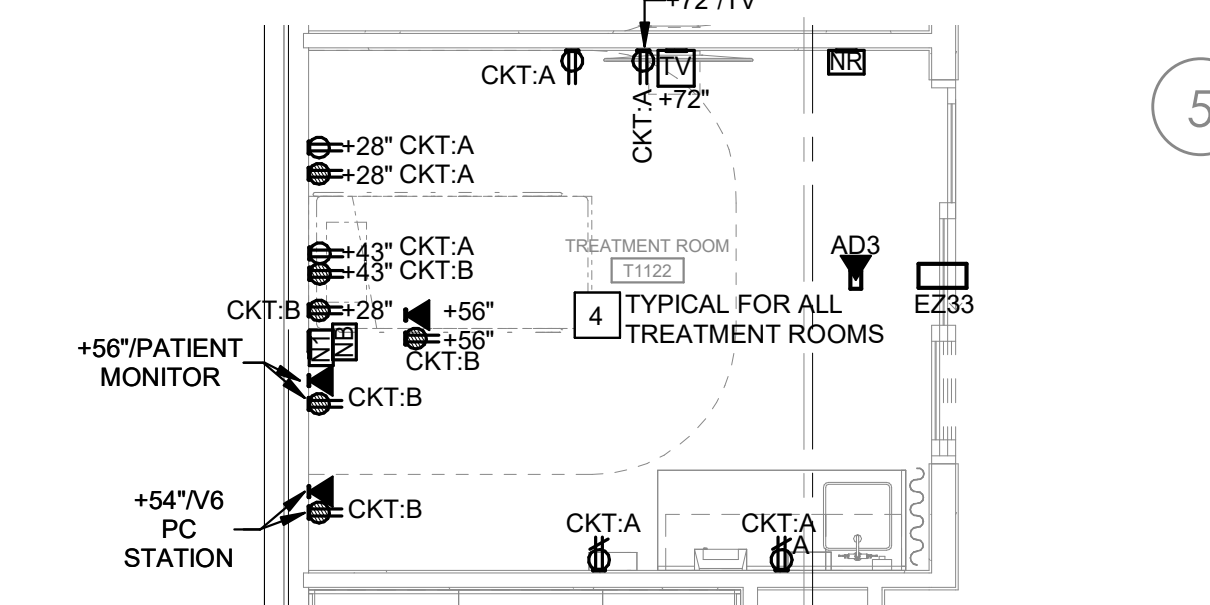
**FIRST FLOOR CBCU - POWER & SYSTEMS - NEW WORK**  
1/8" = 1'-0"



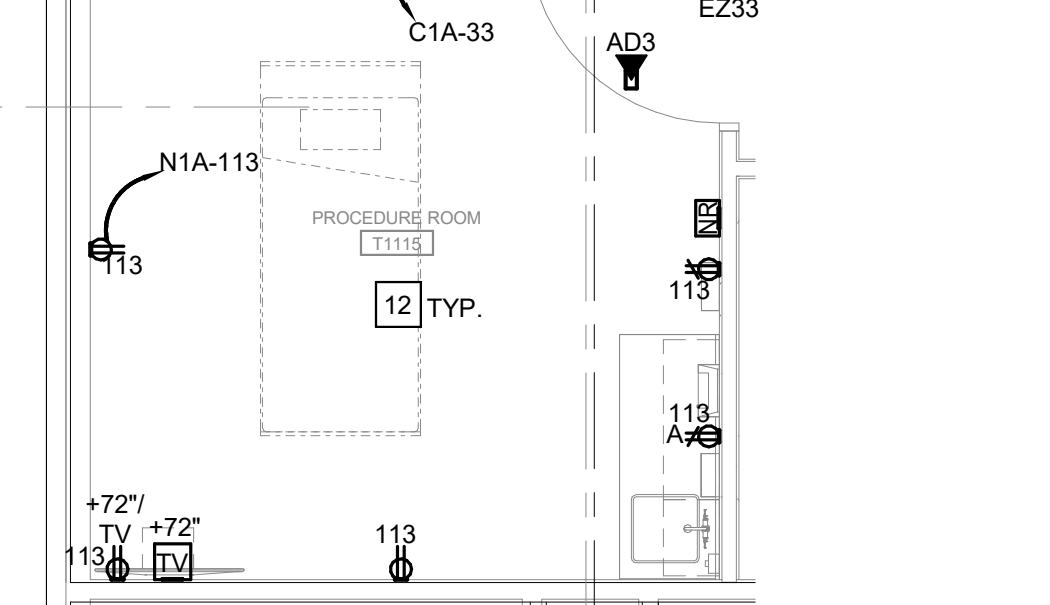
**FIRST FLOOR CBCU - LIGHTING - NEW WORK**  
1/8" = 1'-0"



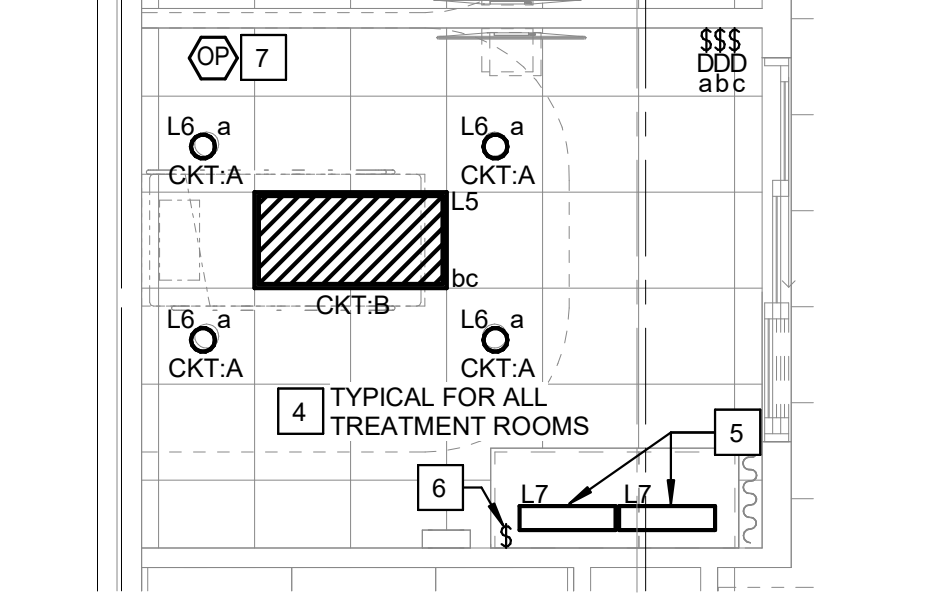
**ENLARGED PLAN - TYPICAL CBCU TREATMENT ROOM - POWER & SYSTEMS**  
1/4" = 1'-0"



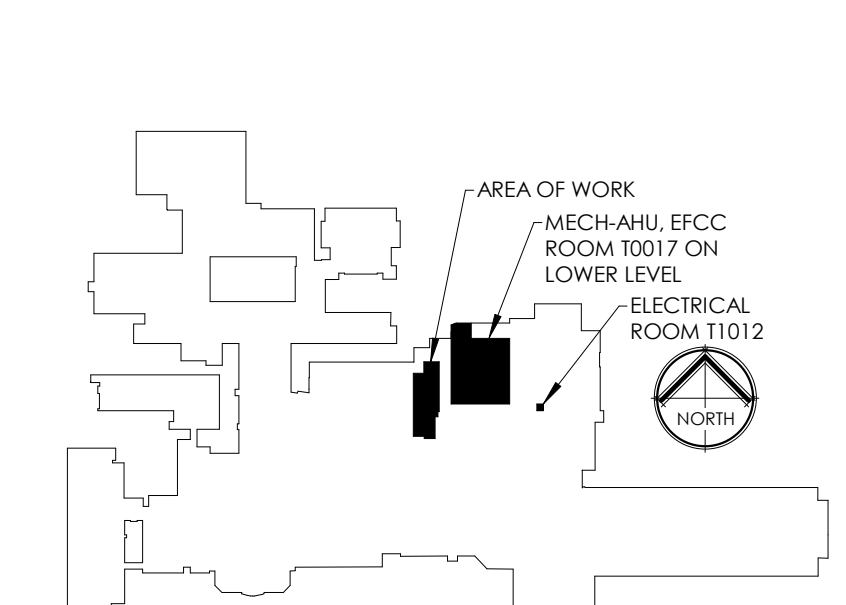
**ENLARGED PLAN - CBCU PROCEDURE ROOM - POWER & SYSTEMS**  
1/4" = 1'-0"



**ENLARGED PLAN - TYPICAL CBCU TREATMENT ROOM - LIGHTING**  
1/4" = 1'-0"



**Keymap 1st Floor**  
NTS



**GENERAL SHEET NOTES**

- A. ORIENT LUMINAIRE CENTER DIFFUSER RAILS PARALLEL TO WALLS WHERE INSTALLED IN CORRIDORS. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR ADDITIONAL INFORMATION.
- B. IN AREAS WHERE DEMOLITION WORK IS NOT SCHEDULED, DISCONNECT, REMOVE AND SALVAGE EXISTING CEILING MOUNTED DEVICES AND FIXTURES AS REQUIRED TO COMPLETE THE ABOVE CEILING WORK FOR ALL TRADES. UPON COMPLETION OF CONSTRUCTION, REINSTALL EXISTING CEILING MOUNTED DEVICES AND FIXTURES IN ORIGINAL LOCATIONS. DEVICES AND FIXTURES SHALL OPERATE AS THEY DID PRIOR TO CONSTRUCTION.
- C. IN GENERAL, THE USE OF MC CABLE IS NOT PERMITTED ON THIS PROJECT. THE ONE EXCEPTION TO THAT IS FOR THE FINAL CONNECTION TO THE UNDER CABINET LIGHT FIXTURES. CONTRACTOR SHALL ROUTE MC CABLE FROM THE LOCAL WALL SWITCH BOX TO THE UNDER CABINET LIGHT FIXTURE USING HOSPITAL GRADE MC CABLE, INCLUSIVE OF FINAL TERMINATION.
- D. ALL RECEPTACLES LOCATED IN PATIENT CARE AREAS, INCLUDING CORRIDORS, TOILETS, TREATMENT ROOMS, PROCEDURE ROOM AND THE PLAYROOM SHALL BE TAMPER RESISTANT AND HOSPITAL GRADE.
- E. WHERE ALCOHOL DISPENSER IS INSTALLED, RECEPTACLE SHALL NOT BE INSTALLED ANY CLOSER THAN 6-INCHES MEASURED HORIZONTALLY FROM LOCATION OF DISPENSER.
- F. DESIGN INTENT IS TO PROVIDE HVAC SET-BACKS VIA OCCUPANCY SENSORS IN ALL SPACES INCLUDED IN THIS SCOPE OF WORK. REFER TO VAV BOX CONTROL DIAGRAM A/M700 FOR INTERCONNECTION REQUIREMENTS BETWEEN OCCUPANCY SENSORS AND VAV BOXES. MULTIPLE OCCUPANCY SENSORS MAY BE ASSOCIATED WITH A SINGLE VAV BOX. REFER TO AIR TERMINAL UNIT SCHEDULE ON SHEET M800 FOR ADDITIONAL INFORMATION.
- G. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ONE (1) FIRE RATED CABLE PATHWAY ABOVE ALL DOORS LOCATED WITHIN CORRIDOR WALLS AND ADDITIONAL DOORS AS SHOWN WITHIN THE SCOPE OF WORK AREAS. INSTALL FIRE RATED CABLE PATHWAY IN THE ABOVE-CEILING SPACE TO CREATE A PATH BETWEEN CORRIDOR AND ADJOINING SPACE ABOVE NEW CABLE TRAY TO BE UTILIZED FOR ROUTING OF LOW-VOLTAGE CABLES. INSTALL PER MANUFACTURER WRITTEN INSTRUCTIONS (BASIS OF DESIGN, E2 PATH 33 SERIES). COORDINATE EXACT LOCATIONS WITH OTHER TRADES.
- H. PROVIDE J-HOOK PATHWAY BETWEEN EXISTING CABLE TRAY AND TELECOMMUNICATIONS OUTLET STUB-UP ABOVE CEILING AS WELL AS WAP, PAGING SPEAKER, CCTV CAMERA AND OTHER LOW VOLTAGE DEVICE & CONDUIT STUB-UP LOCATIONS.
- I. REFER TO ARCHITECTURAL DOOR HARDWARE SPECIFICATION FOR ACCESS CONTROL SEQUENCE OF OPERATION.
- J. CONTRACTOR SHALL GET APPROVAL FROM THE ENGINEER PRIOR TO MOVING ANY DEVICE MORE THAN 12".
- K. DESIGN INTENT IS TO EXTEND AND UTILIZE EXISTING LOCAL LIFE SAFETY CIRCUIT(S) PREVIOUSLY USED TO SERVE REMOVED EMERGENCY EGRESS FIXTURES AND EXIT SIGNS, TO SERVE THE NEW EMERGENCY EGRESS FIXTURES AND EXIT SIGNS SHOWN ON THIS SHEET. MATCH THE TYPE, SIZE AND QUANTITY OF CIRCUITS AND CONDUIT CURRENTLY INSTALLED.
- L. UTILIZE EXISTING NURSE CALL HEAD-END EQUIPMENT IN TELECOM ROOM T1108 AND ACCESS CONTROL HEAD-END EQUIPMENT LOCATED IN TELECOM ROOM T1124 TO SERVE THESE SYSTEM DEVICES PROVIDED AS PART OF THIS PROJECT.
- M. DESIGN INTENT FOR THE FIRE ALARM SYSTEM IS TO RE-USE AND EXTEND AS NEEDED THE EXISTING FIRE ALARM CIRCUITS. COORDINATE WITH SEISMIC REQUIREMENTS FOR EXTENDING THE EXISTING SYSTEM.
- N. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT DEVICE PLACEMENT.

**KEYED NOTES**

1. PROVIDE POWER CONNECTION FOR PRESSURE MONITORING DIGITAL INTERFACE PANEL. COORDINATE WITH DIVISION 23 FOR EXACT ABOVE CEILING LOCATION AND CONNECTION REQUIREMENTS PRIOR TO ROUGH-IN.
2. PROVIDE POWER CONNECTION FOR MED GAS AREA ALARM PANEL, COORDINATE WITH DIVISION 22 FOR EXACT LOCATION AND CONNECTION REQUIREMENTS PRIOR TO ROUGH-IN.
3. EXISTING CABLE TRAY ROUTED THROUGH THIS CORRIDOR IS E.T.R. AND SHALL BE UTILIZED AS THE LOW VOLTAGE CABLE PATHWAY ON THIS PROJECT.
4. ENLARGED FLOOR PLANS SHOWN ARE TYPICAL AND REPRESENT MULTIPLE ROOMS WITH SIMILAR CONFIGURATIONS. ROOM ORIENTATION WILL VARY IN REFERENCE TO WHAT ROOM IS SHOWN AS TYPICAL DEVICE & FIXTURE QUANTITIES WILL REMAIN THE SAME. DEVICES & FIXTURES SHALL BE INSTALLED IN THE RESPECTIVE LOCATION SHOWN BASED ON ROOM ORIENTATION. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
5. EACH L7 LUMINAIRE SHALL BE PROVIDED WITH INTEGRAL ROCKER SWITCH SUPPLIED WITH FIXTURE FOR CONTROL OF EACH INDIVIDUAL FIXTURE. EXTEND #12 AND #12 GND IN 3/4" CONDUIT FROM LOCAL RECEPTACLE NORMAL POWER CIRCUIT TO SERVE THE FIXTURE.
6. PROVIDE SWITCH FOR CONTROL OF L7 FIXTURE. WHERE MULTIPLE L7 LUMINAIRES ARE SHOWN GROUPED, THEY SHALL BE CIRCUITED TOGETHER TO ALLOW FOR THEM TO BE CONTROLLED BY A SINGLE SWITCH. REFER TO DETAIL 4E501 FOR MORE INFORMATION.
7. PROVIDE OCCUPANCY SENSOR AND AUXILIARY RELAY TO CONTROL MECHANICAL EQUIPMENT SET-BACKS WHEN SPACE IS UNOCCUPIED. COORDINATE SET-BACK PROGRAMMING WITH DIVISION 23. THIS OCCUPANCY SENSOR WILL NOT CONTROL THE LIGHTING.
8. PROVIDE CONTINUOUS DUAL CHANNEL ALUMINUM SURFACE MOUNTED RACEWAY INSTALLED AT 48" A.F.F. INSTALL NORMAL POWER AND CRITICAL POWER DUPLEX RECEPTACLES STAGGERED IN RACEWAY AS SHOWN. ROUTE NORMAL AND CRITICAL BRANCH CIRCUITS IN SEPARATE CHANNELS. INSTALL RECEPTACLES EVERY 12-INCHES ON-CENTER. DO NOT EXCEED TEN (10) RECEPTACLES ON A SINGLE CIRCUIT.
9. ROUTE POWER CIRCUITS AND DATA CABLE IN CONDUIT THROUGH CASEWORK AND UP WALL TO CEILING AS REQUIRED. INSTALL DEVICE IN CASEWORK AS SHOWN. COORDINATE FINAL INSTALLATION LOCATIONS WITH CASEWORK PROVIDED.
10. PROVIDE NEW E2-PATH CABLE TRAY RETRO-FIT DEVICE AROUND EXISTING CABLE TRAY IN NEW FIRE RATED CORRIDOR WALL (E2-PATH BY STI). PROVIDE THE SIZE AND QUANTITY TO REQUIRED AT THIS LOCATION.
11. ALL CEILING LIGHT FIXTURES INSTALLED WITHIN PROCEDURE ROOM SHALL BE GASKETED DUE ROOM PRESSURIZATION REQUIREMENTS. REFER TO LUMINAIRE SCHEDULE FOR MORE INFORMATION.
12. ALL WALL AND CEILING BACKBOXES INSTALLED IN THE PROCEDURE ROOM SHALL BE SEALED DUE TO ROOM PRESSURIZATION REQUIREMENTS. REFER TO SEALING DETAILS ON SHEET E501 FOR MORE INFORMATION.
13. PROVIDE KEYPAD ABOVE ACCESSIBLE CEILING TO CONTROL AUTOMATIC OR POWERED DOOR OPERATION. PROVIDE LABEL ON KEYPAD SWITCH INDICATING DOOR CONTROLLED. COORDINATE NAMING WITH OWNER'S REPRESENTATIVE. REFER TO DETAIL 9E501 FOR MORE INFORMATION.
14. POWERED DOORS SHALL BE PROGRAMMED TO AUTOMATICALLY OPEN UPON A CARD SWIPE OR ACTIVATION WAVE PLATE DEVICE. REFER TO DETAIL 9E501 FOR MORE INFORMATION.
15. INSTALL DEVICE PREVIOUSLY REMOVED AND SALVAGED DURING THE DEMOLITION PHASE. EXTEND EXISTING CIRCUITS PROTECTED IN PLACE TO SERVE THIS DEVICE MATCHING THE SIZE AND QUANTITY OF THE EXISTING CIRCUITS. VERIFY PROPER OPERATION OF DEVICE UPON COMPLETION OF INSTALLATION.
16. ROUTE A 120V EQUIPMENT BRANCH CIRCUIT CONSISTING OF 2#10 180 GND IN 3/4" CONDUIT, FROM PANEL 'AEB1' IN MECH-AHU, EFFC ROOM T0017 TO SERVE NEW FIRE SMOKE DAMPERS. THIS MECHANICAL ROOM IS LOCATED ON THE LOWER LEVEL EAST OF THE SCOPE OF WORK AREA, APPROXIMATELY 30' AWAY AND PANEL 'AEB1' IS LOCATED NEAR THE CENTER OF THE SPACE APPROXIMATELY 80' AWAY. REFER TO KEYMAP BELOW.
17. ADDRESSABLE RELAY AND DUCT SMOKE DETECTOR SHALL BE LOCATED AT FIRE/SMOKE DAMPER CONCEALED ABOVE CEILING. DUCT DETECTOR SHALL BE INSTALLED WITHIN 5'-0" OF DAMPER AT AN ACCESSIBLE LOCATION. PROVIDE REMOTE INDICATOR/TEST SWITCH AT CEILING, LOCATED IN DIRECT VICINITY OF DUCT DETECTOR.
18. ROUTE A 120V LIFE SAFETY CIRCUIT CONSISTING OF 2#10 180 GND IN 3/4" CONDUIT, FROM PANEL '11A' IN ELECTRICAL ROOM T1012 TO SERVE NEW FIRE SMOKE DAMPERS. THIS ELECTRICAL ROOM IS LOCATED DIRECTLY EAST OF THE SCOPE OF WORK AREA APPROXIMATELY 150' AWAY OFF MAIN CORRIDOR TC1003. REFER TO KEYMAP BELOW.
19. PROVIDE ADDRESSABLE RELAY FOR DOOR HOLD OPEN RELEASE SEQUENCE AND INSTALL CONCEALED ABOVE CEILING AT AN ACCESSIBLE LOCATION. DOOR HOLD OPEN RELEASE SEQUENCE SHALL BE PROGRAMMED TO ACTUATE UPON AN ALARM SIGNAL FROM ANY EXISTING SMOKE DETECTOR INSTALLED IN THE CORRIDOR SPACES ON EITHER SIDE OF THIS DOUBLE DOOR.
20. EXTEND EXISTING LOCAL 120V LIFE SAFETY CIRCUIT CURRENTLY SERVING MAGNETIC HOLD OPEN DEVICES LOCATED AT ADJACENT DOUBLE DOORS, TO SERVE ELECTROMAGNETIC DOOR HOLD OPEN DEVICES AT THIS DOOR. MATCH TYPE, SIZE AND QUANTITY OF EXISTING CIRCUIT AND CONDUIT. POWER CIRCUIT SHALL INTERFACE WITH FIRE ALARM CONTROL RELAY FOR DOOR HOLD OPEN RELEASE SEQUENCE.
21. INSTALL FIXTURE PREVIOUSLY REMOVED AND SALVAGED DURING DEMOLITION PHASE. THIS FIXTURE SHALL BE CONNECTED TO AND CONTROLLED BY EXISTING LIFE SAFETY CIRCUITS PREVIOUSLY USED TO SERVE IT. EXTEND CIRCUITS AS REQUIRED. MATCH THE TYPE, SIZE AND QUANTITY OF CIRCUITS AND CONDUIT CURRENTLY INSTALLED.
22. INSTALL FIRE ALARM DEVICES ON THE OUTSIDE OF THE PROCEDURE ROOM WHERE SHOWN AT PROCEDURE ROOM PARTITIONS. REFER TO MECHANICAL SHEETS FOR FIRE/SMOKE DAMPER EXACT LOCATIONS.



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102792

Project Team:  
ROSS & BARUZZINI, INC.  
3141818383  
15001 Carondelet Avenue, Suite 200  
St. Louis, MO 63141

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



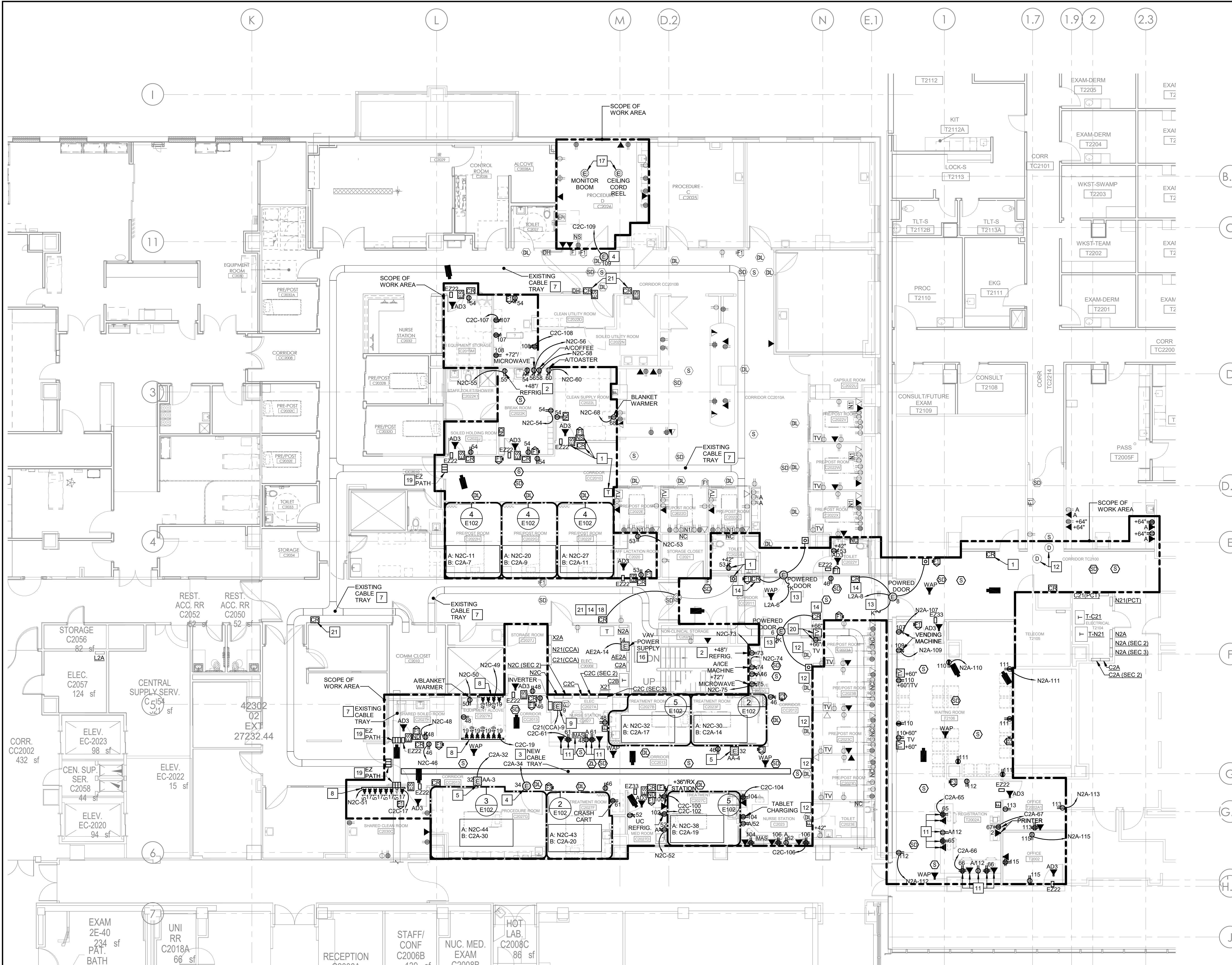
ALLAN ROBERT HENDRIKSE  
PE-2004017185

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Drawn by: MTM  
bcdg Project #: 12275.43  
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**E101**

FIRST FLOOR CBCU - ELECTRICAL - NEW WORK  
BID DOCUMENT PACKAGE



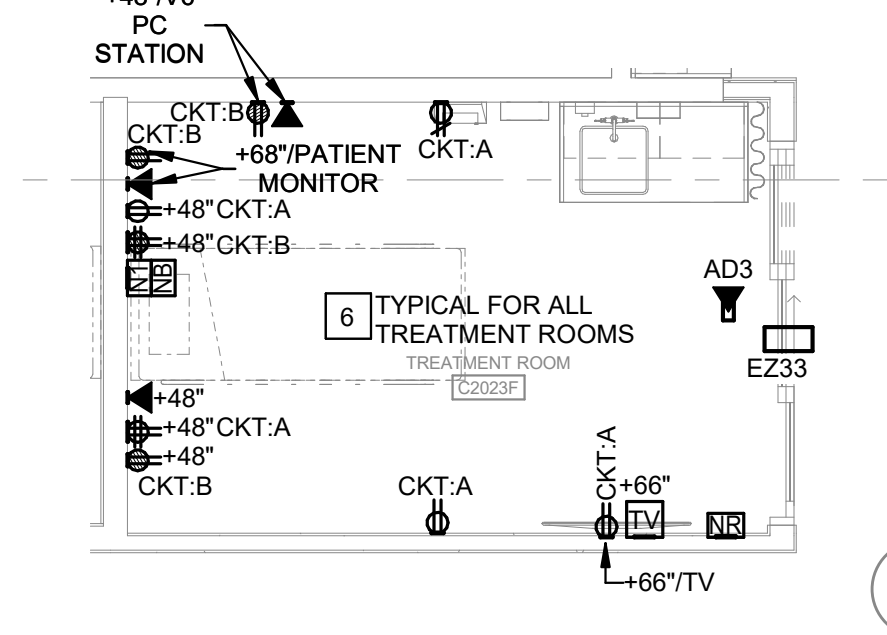
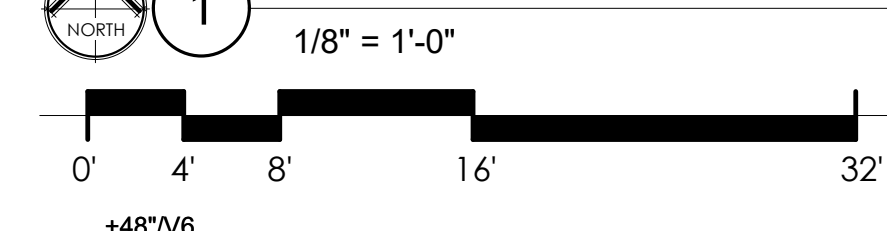
**GENERAL SHEET NOTES**

- A. IN AREAS WHERE DEMOLITION WORK IS NOT SCHEDULED, DISCONNECT, REMOVE AND SALVAGE EXISTING CEILING MOUNTED DEVICES AND FIXTURES AS REQUIRED TO COMPLETE THE ABOVE CEILING WORK FOR ALL TRADES. UPON COMPLETION OF CONSTRUCTION, REINSTALL EXISTING CEILING MOUNTED DEVICES AND FIXTURES IN ORIGINAL LOCATIONS. DEVICES AND FIXTURES SHALL OPERATE AS THEY DID PRIOR TO CONSTRUCTION.
- B. ALL RECEPTACLES LOCATED IN PATIENT CARE AREAS, INCLUDING CORRIDORS, TOILETS, TREATMENT ROOMS, PROCEDURE ROOM, PRE/POST ROOMS AND THE WAITING ROOM SHALL BE TAMPER RESISTANT AND HOSPITAL GRADE.
- C. WHERE ALCOHOL DISPENSER IS INSTALLED, RECEPTACLE SHALL NOT BE INSTALLED ANY CLOSER THAN 6-INCHES MEASURED HORIZONTALLY FROM LOCATION OF DISPENSER.
- D. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ONE (1) FIRE RATED CABLE PATHWAY ABOVE ALL DOORS LOCATED WITHIN CORRIDOR WALLS AND ADDITIONAL DOORS AS SHOWN WITHIN THE SCOPE OF WORK AREAS. INSTALL FIRE RATED CABLE PATHWAY IN THE ABOVE CEILING SPACE TO CREATE A PATH BETWEEN CORRIDOR AND ADJOINING SPACE ABOVE NEW CABLE TRAY TO BE UTILIZED FOR ROUTING OF LOW VOLTAGE CABLES. INSTALL PER MANUFACTURER WRITTEN INSTRUCTIONS (BASIS OF DESIGN: EZ PATH 33 SERIES), COORDINATE EXACT LOCATION WITH OTHER TRADES.
- E. PROVIDE J-HOOK PATHWAY BETWEEN EXISTING CABLE TRAY AND TELECOMMUNICATIONS OUTLET STUB-UP ABOVE CEILING AS WELL AS WAP, PAGING SPEAKER, CCTV CAMERA AND OTHER LOW VOLTAGE DEVICE & CONDUIT STUB-UP LOCATIONS.
- F. REFER TO ARCHITECTURAL DOOR HARDWARE SPECIFICATION FOR ACCESS CONTROL SEQUENCE OF OPERATION.
- G. CONTRACTOR SHALL GET APPROVAL FROM THE ENGINEER PRIOR TO MOVING ANY DEVICE MORE THAN 12".
- H. UTILIZE EXISTING NURSE CALL & ACCESS CONTROL HEAD-END EQUIPMENT LOCATED IN TELECOM ROOM C2002L IN CCA OR T2015 IN PCT RESPECTIVELY TO SERVE THESE SYSTEM DEVICES PROVIDED AS PART OF THIS PROJECT IN THE SEPARATE BUILDINGS.
- I. DESIGN INTENT FOR THE FIRE ALARM SYSTEM IS TO RE-USE AND EXTEND AS NEEDED THE EXISTING FIRE ALARM CIRCUITS. COORDINATE WITH SEIMENS ON REQUIREMENTS FOR EXTENDING THE EXISTING SYSTEM.
- J. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT DEVICE PLACEMENT.
- K. INSTALLATION OF NEW CABLE TRAY MUST BE CAREFULLY COORDINATED WITH EXISTING SYSTEMS TO REMAIN AND WITH NEW SYSTEMS INSTALLED WITHIN THIS PORTION OF THE CHPS AREA PROVIDE TEMPORARY CABLE SUPPORTS FOR CABLING TO REMAIN DURING THE COURSE OF CONSTRUCTION. CONTRACTOR TO FIELD VERIFY FINAL CABLE TRAY ROUTE UPON COMPLETION OF CEILING DEMOLITION WORK.

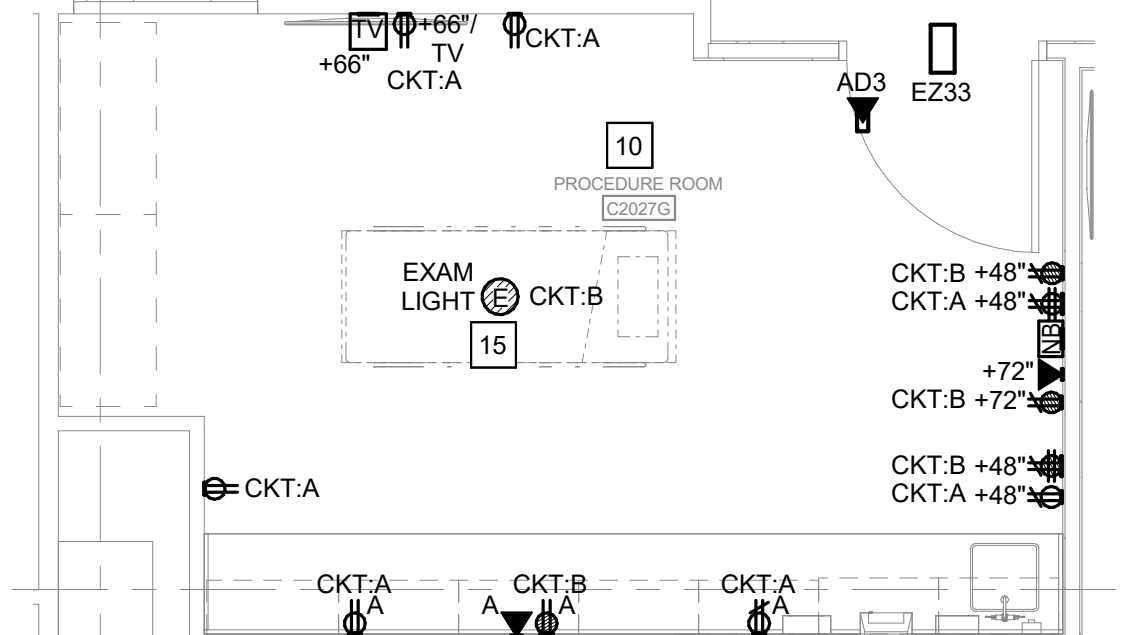
**KEYED NOTES**

1. INSTALL DEVICE PREVIOUSLY REMOVED AND SALVAGED DURING THE DEMOLITION PHASE. EXTEND EXISTING CIRCUITS PROTECTED IN PLACE TO SERVE THIS DEVICE MATCHING THE TYPE, SIZE AND QUANTITY OF THE EXISTING CIRCUITS AND CONDUIT. VERIFY PROPER OPERATION OF DEVICE UPON COMPLETION OF INSTALLATION.
2. PROVIDE GFCI RATED CIRCUIT BREAKER TO PROTECT THIS CIRCUIT AT PANEL NOTED TO SERVE THIS LOAD.
3. PROVIDE NEW 12"W X 4" DEEP BASKET TYPE CABLE TRAY INSTALLED ABOVE ACCESSIBLE CEILING. PROVIDE ALL PARTS, TRANSITIONS, FITTINGS, HANGERS, ETC. AS REQUIRED TO CREATE A COMPLETE AND FULLY FUNCTIONAL SYSTEM. GROUND AND BOND CABLE TRAY PER MANUFACTURER WRITTEN REQUIREMENTS. ROUTE NEW CABLE TRAY TO LOCATION OF EXISTING CABLE TRAY ROUTED NORTH-SOUTH TO COMM CLOSET C2010. INSTALL NEW LOW VOLTAGE CABLE IN NEW CABLE TRAY. TRANSITION TO EXISTING CABLE TRAY AND ROUTE TO COMM CLOSET C2010.
4. PROVIDE POWER CONNECTION FOR PRESSURE MONITORING DIGITAL INTERFACE PANEL. COORDINATE WITH DIVISION 23 FOR EXACT ABOVE CEILING LOCATION AND CONNECTION REQUIREMENTS PRIOR TO ROUGH-IN.
5. PROVIDE POWER CONNECTION FOR MED GAS AREA ALARM PANEL. COORDINATE WITH DIVISION 22 FOR EXACT LOCATION PRIOR TO ROUGH-IN.
6. ENLARGED FLOOR PLANS SHOWN ARE TYPICAL AND REPRESENT MULTIPLE ROOMS WITH SIMILAR CONFIGURATIONS. TREATMENT ROOM ORIENTATION WILL VARY IN REFERENCE TO WHAT ROOM IS SHOWN IN TYPICAL. DEVICES SHALL BE INSTALLED IN THE RESPECTIVE LOCATION SHOWN BASED ON ROOM ORIENTATION. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
7. EXISTING CABLE TRAY ROUTED THROUGH THIS SPACE IS E.T.R. AND SHALL BE UTILIZED FOR LOW VOLTAGE CABLE PATHWAY ON THIS PROJECT.
8. PROVIDE CONTINUOUS DUAL CHANNEL ALUMINUM SURFACE MOUNTED RACEWAY INSTALLED AT 48" A.F.F. INSTALL NORMAL POWER AND CRITICAL POWER DUPLEX RECEPTACLES STAGGERED IN RACEWAY AS SHOWN. ROUTE NORMAL AND CRITICAL BRANCH CIRCUITS IN SEPARATE CHANNELS. INSTALL RECEPTACLES EVERY 12-INCHES ON-CENTER. DO NOT EXCEED TEN (10) RECEPTACLES ON A SINGLE CIRCUIT.
9. PROVIDE 375W, 277V, SINGLE PHASE EMERGENCY LIGHTING INVERTER UNIT FOR PROCEDURE ROOM C2027G LIGHTING (BASIS OF DESIGN: SURE-LITES INV SERIES). INVERTER SHALL MONITOR POWER CIRCUIT SERVING FIXTURES WITHIN THIS SPACE. REFER TO E102 FOR MORE INFORMATION. MOUNT INVERTER IN ELECTRICAL CLOSET C2027A AT APPROXIMATE LOCATION SHOWN. ENSURE ALL CLEARANCES REQUIRED BY INVERTER SYSTEM ARE ACHIEVED AT INSTALLATION LOCATION. COORDINATE INSTALLATION AND INTERCONNECTION REQUIREMENTS WITH FINAL SYSTEM PROVIDED.
10. ALL WALL AND CEILING BACKBOXES INSTALLED IN THE PROCEDURE ROOM SHALL BE SEALED DUE TO ROOM PRESSURIZATION REQUIREMENTS. REFER TO SEALING DETAILS ON SHEET E501 FOR MORE INFORMATION.
11. ROUTE POWER CIRCUITS IN CONDUIT AND DATA CABLE THROUGH CASEWORK TO THIS DEVICE LOCATION. INSTALL DEVICE IN CASEWORK AS SHOWN. COORDINATE FINAL INSTALLATION LOCATIONS WITH CASEWORK PROVIDED.
12. INSTALL DIGITAL ANTENNA & NURSE CALL DEVICES TEMPORARILY SUPPORTED IN PLACE DURING DEMOLITION PHASE, IN NEW CEILING AT THE SAME APPROXIMATE LOCATION.
13. PROVIDE KEYSWITCH ABOVE ACCESSIBLE CEILING TO CONTROL AUTOMATIC OR POWERED DOOR OPERATION. PROVIDE LABEL ON KEYSWITCH INDICATING DOOR CONTROLLED. COORDINATE NAMING WITH OWNER'S REPRESENTATIVE. REFER TO DETAIL 9/E501 FOR MORE INFORMATION.
14. POWERED DOORS SHALL BE PROGRAMMED TO AUTOMATICALLY OPEN UPON A CARD SWIPE. REFER TO DETAIL 9/E501 FOR MORE INFORMATION.
15. EXTEND CRITICAL BRANCH CIRCUIT FROM LOCAL RECEPTACLE TO CEILING MOUNTED EXAM LIGHT. PROVIDE JUNCTION BOX WITHIN 3'-0" OF MOUNTING PLATE WITH A MAXIMUM OF 5'-0" CONDUIT LENGTH. COORDINATE WITH EXAM LIGHT PRE-INSTALLATION MANUAL. AVOID ROUTING ELECTRICAL SYSTEMS WITHIN STRUCTURAL MOUNTING PLATE AREA. REFER TO ARCHITECTURAL PLANS FOR EXAM LIGHT EXACT LOCATION.
16. PROVIDE #12 AND #12 GND IN 3/4" CONDUIT ROUTED TO THIS LOCATION TO SERVE THE VAV POWER SUPPLY CABINET. REFER TO MECHANICAL SHEETS FOR MORE INFORMATION. COORDINATE WITH MECHANICAL CONTRACTOR FOR CABINET EXACT LOCATION.
17. PROVIDE PERMANENT SUPPORT AS REQUIRED FOR EXISTING MONITOR ROOM AND CORD REEL POWER SUPPLY PREVIOUSLY TEMPORARILY SUPPORTED IN PLACE DURING DEMOLITION PHASE.
18. INSTALL NEW CARD READER ROUGH-IN AT THE SAME LOCATION PREVIOUSLY OCCUPIED BY THE DOOR OPERATOR PUSH PAD. INSTALL NEW OWNER FURNISHED CONTROL WIRING AND ROUTE TO AND TERMINATE AT EXISTING DOOR CONTROLLER.
19. PROVIDE NEW EZ-PATH CABLE TRAY RETRO-FIT DEVICE AROUND EXISTING CABLE TRAY IN NEW FIRE RATED CORRIDOR WALL (EZ-PATH BY STI). PROVIDE THE SIZE AND QUANTITY TO REQUIRED AT THIS LOCATION.
20. INSTALL NEW TV DEVICES AT LOCATION SHOWN. EXTEND EXISTING POWER CIRCUITS AND R66 CABLE IN THIS ROOM TO THIS LOCATION. MATCH THE EXISTING TYPE, SIZE AND QUANTITY OF THE EXISTING CABLES AND CONDUIT.
21. CARD READER AT THIS LOCATION WILL BE PROVIDED AS NEW ALONG WITH ANY ASSOCIATED DEVICES. CABLE AND CONNECTIONS EVEN THOUGH IT IS LOCATED OUTSIDE THE SCOPE OF WORK.

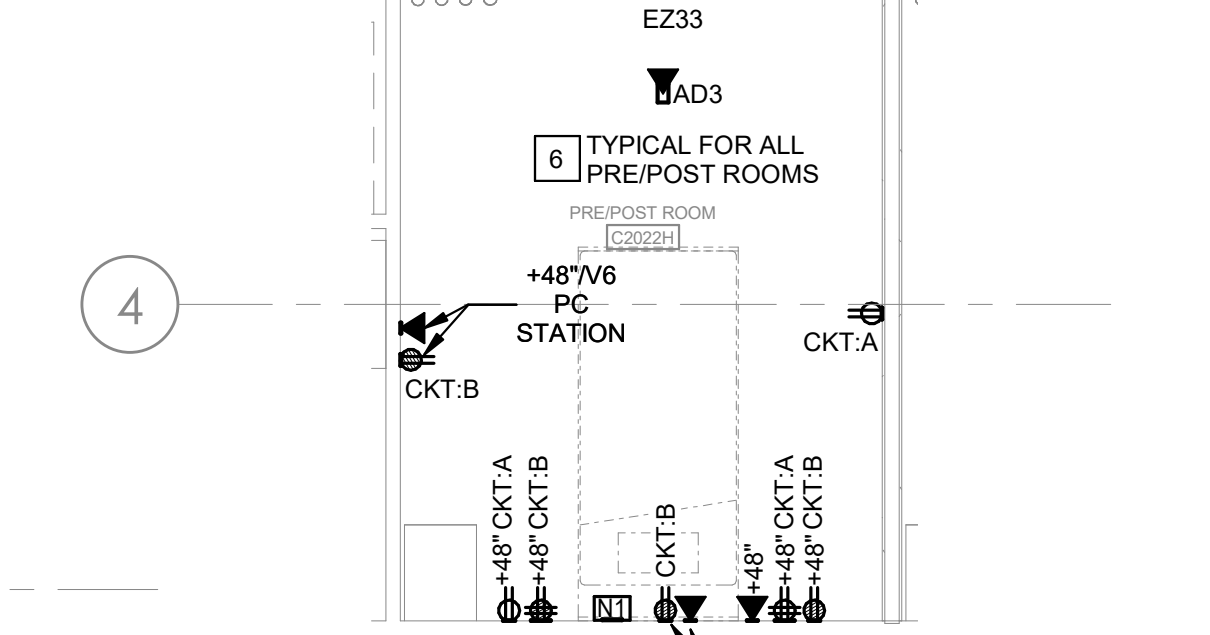
**SECOND FLOOR CHPS - POWER & SYSTEMS - NEW WORK**  
1/8" = 1'-0"



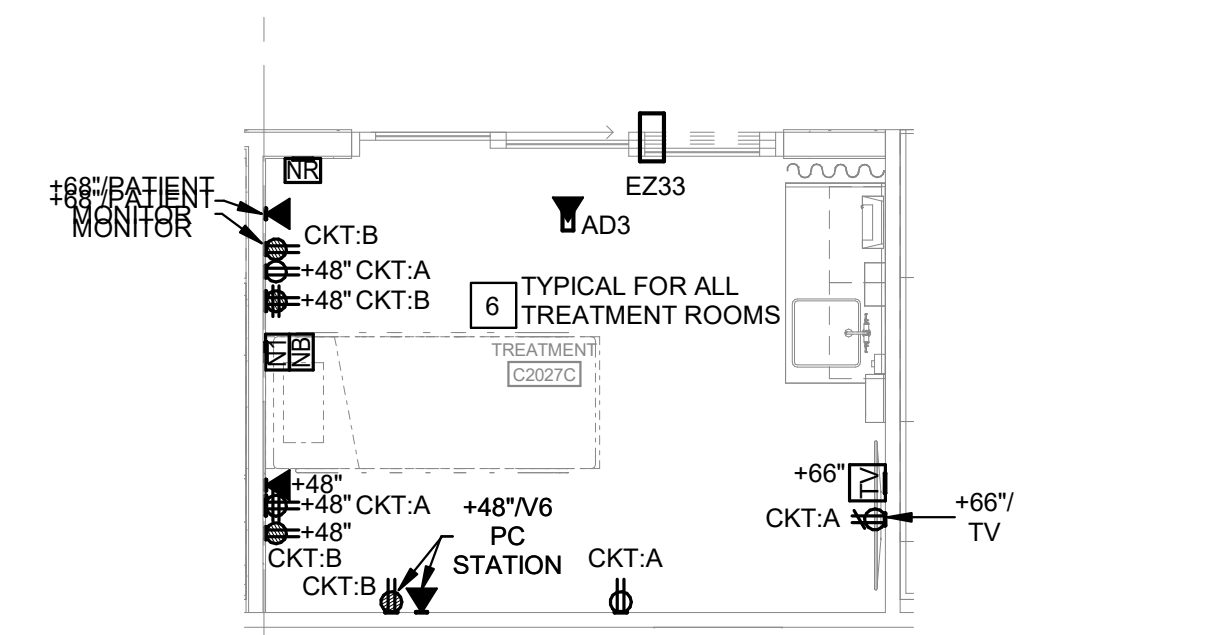
**ENLARGED PLAN - TYPICAL CHPS TREATMENT ROOM FRONT ENTRY - POWER & SYSTEMS**  
1/4" = 1'-0"



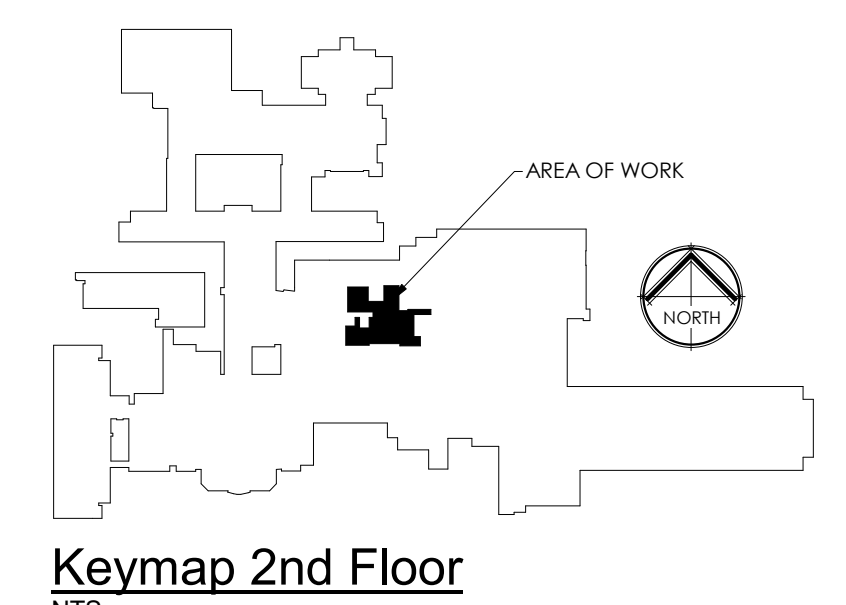
**ENLARGED PLAN - CHPS PROCEDURE ROOM PT1111 - POWER & SYSTEMS**  
1/4" = 1'-0"



**ENLARGED PLAN - TYPICAL CHPS PRE/POST ROOM - POWER & SYSTEMS**  
1/4" = 1'-0"



**ENLARGED PLAN - TYPICAL CHPS TREATMENT ROOM SIDE ENTRY - POWER & SYSTEMS**  
1/4" = 1'-0"



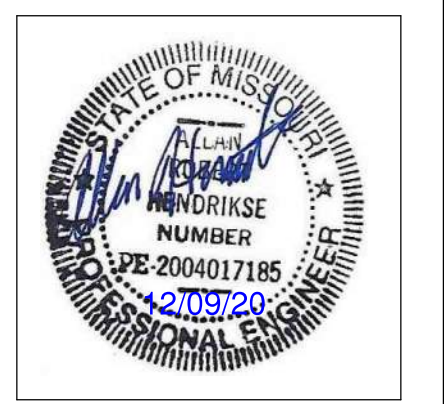
**Keymap 2nd Floor**  
NTS



12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201007920

Project Team:  
ROSS & BARUZZINI, INC.  
3141818383  
5 South Old Orchard | St. Louis, MO 63119  
Missouri Certificate of Authority Missouri Certificate of Authority #032-01

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



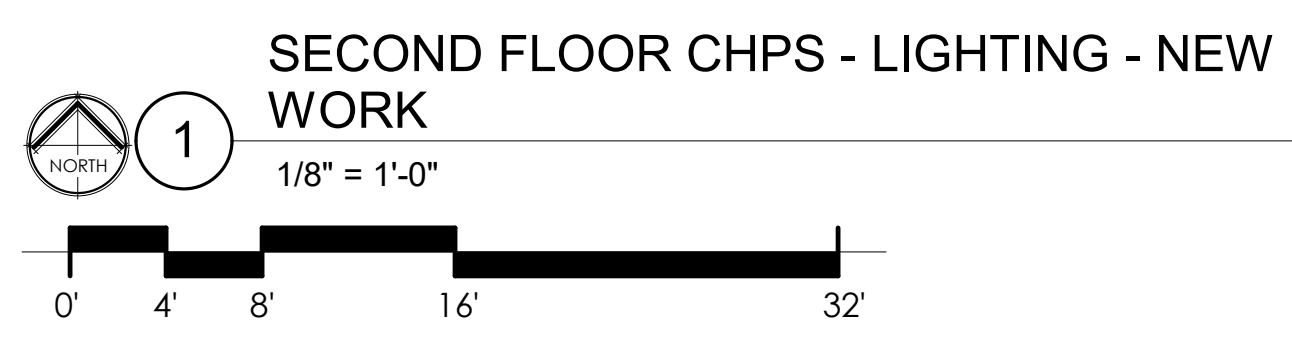
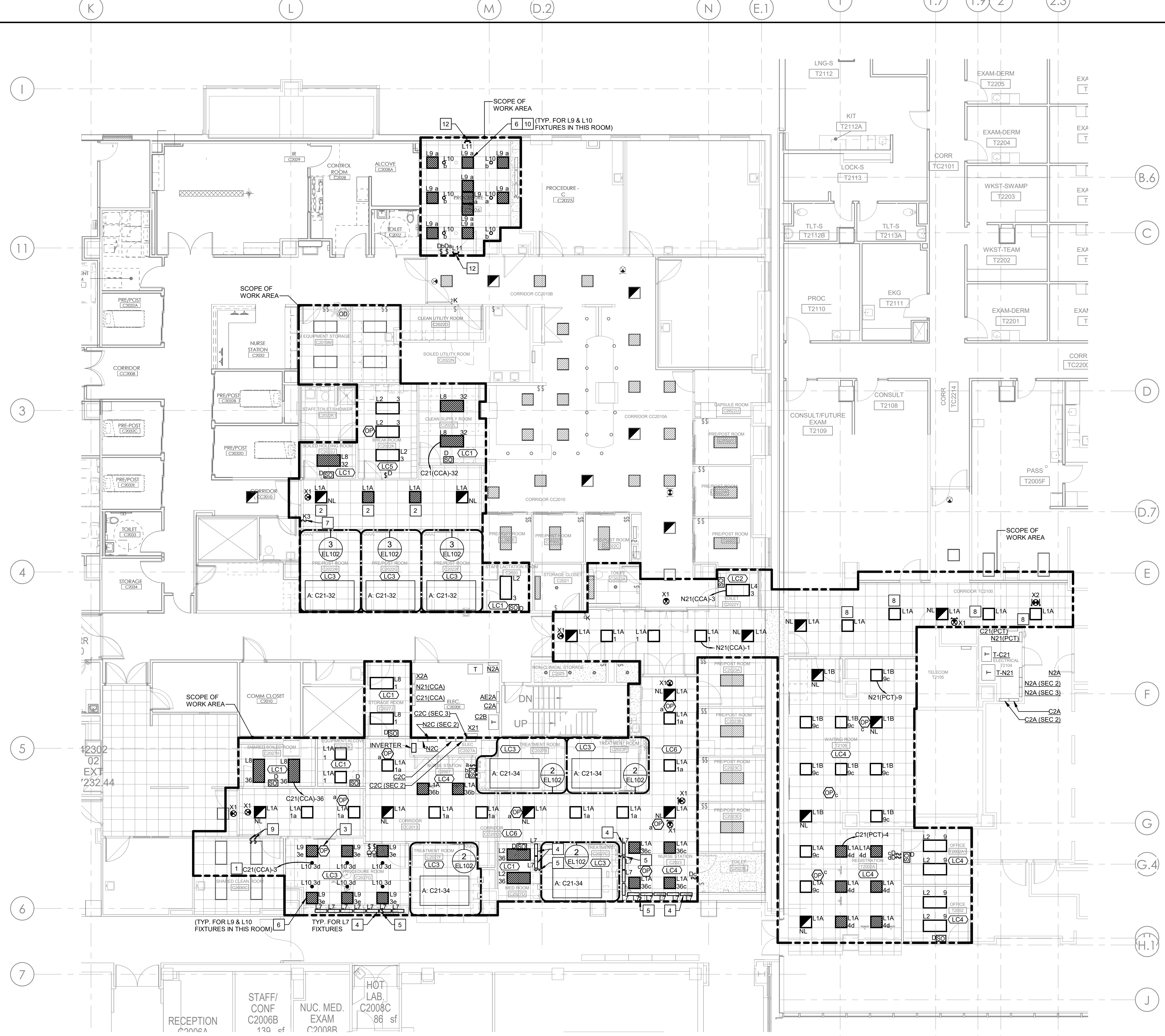
ALLAN ROBERT HENDRIKSE  
PE-2004017185

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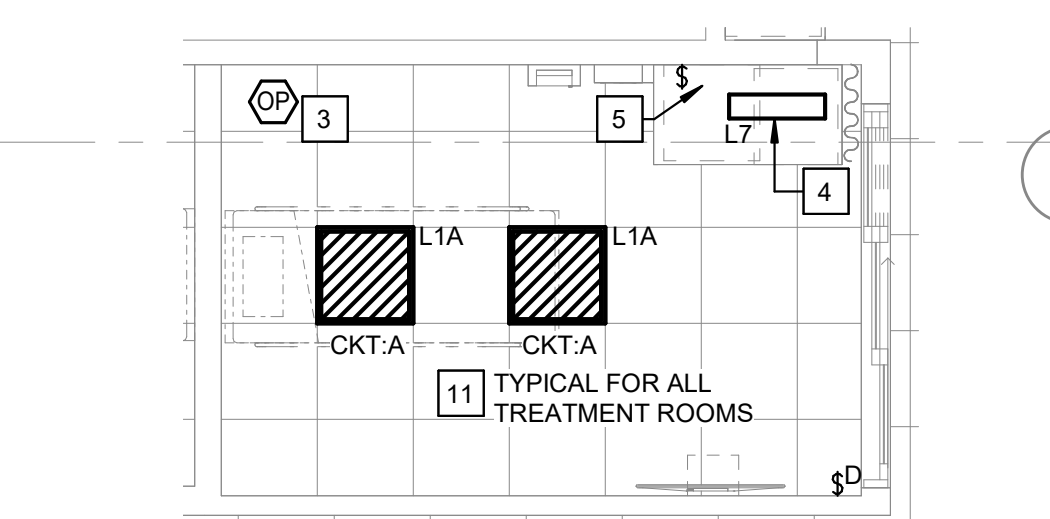
Drawn by: MTM

bcdg Project #: 12275.43  
MU Project #: CP210751

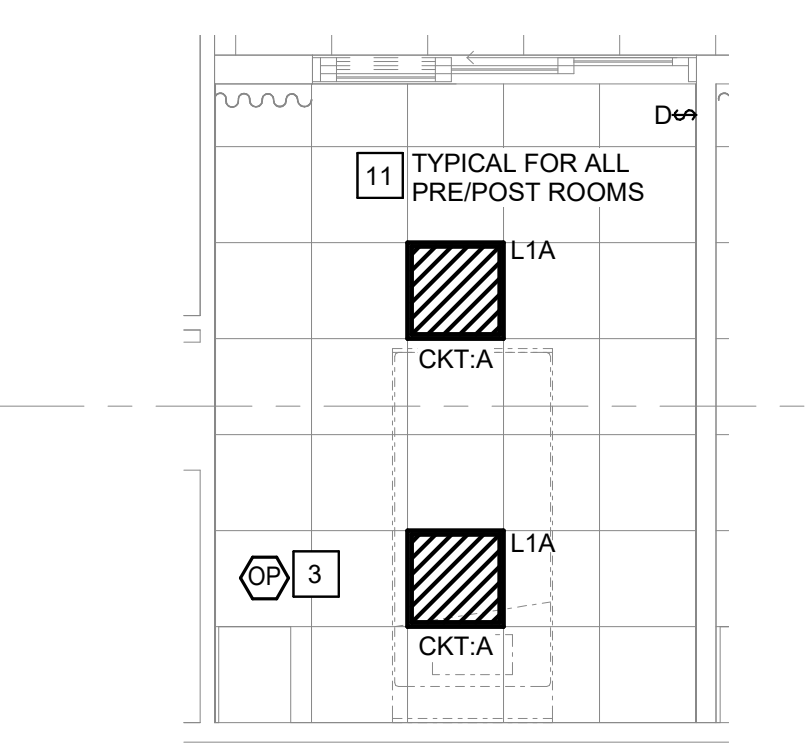
**E102**  
SECOND FLOOR CHPS - POWER & SYSTEMS - NEW WORK



SECOND FLOOR CHPS - LIGHTING - NEW WORK



2 ENLARGED PLAN - TYPICAL CHPS TREATMENT ROOM - LIGHTING  
1/4" = 1'-0"



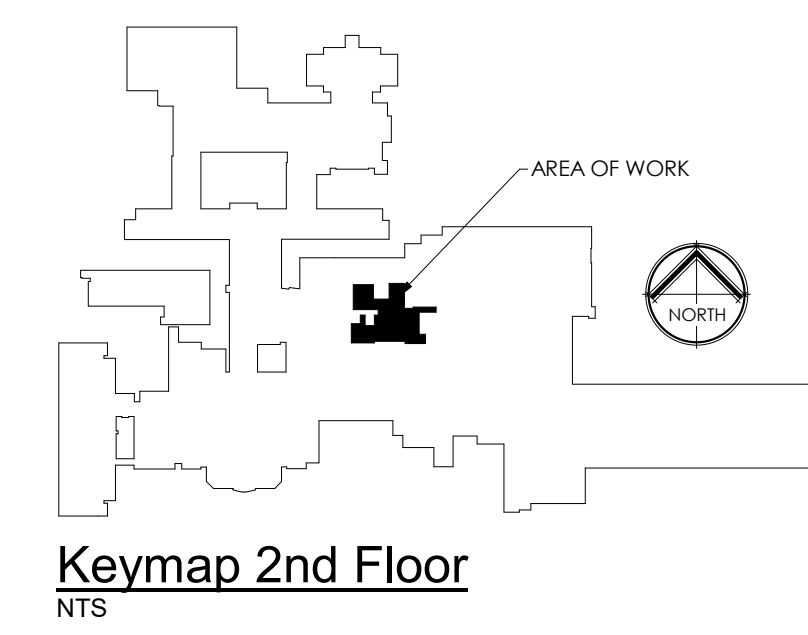
3 ENLARGED PLAN - TYPICAL CHPS PRE/POST ROOM - LIGHTING  
1/4" = 1'-0"

GENERAL SHEET NOTES

- A. ORIENT LUMINAIRE CENTER DIFFUSER RAILS PARALLEL TO WALLS WHERE INSTALLED IN CORRIDORS. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR ADDITIONAL INFORMATION.
- B. IN AREAS WHERE DEMOLITION WORK IS NOT SCHEDULED, DISCONNECT, REMOVE AND SALVAGE EXISTING CEILING MOUNTED DEVICES AND FIXTURES AS REQUIRED TO COMPLETE THE ABOVE CEILING WORK FOR ALL TRADES. UPON COMPLETION OF CONSTRUCTION, REINSTALL EXISTING CEILING MOUNTED DEVICES AND FIXTURES IN ORIGINAL LOCATIONS. DEVICES AND FIXTURES SHALL OPERATE AS THEY DID PRIOR TO CONSTRUCTION.
- C. IN GENERAL, THE USE OF MC CABLE IS NOT PERMITTED ON THIS PROJECT. THE ONE EXCEPTION TO THAT IS FOR THE FINAL CONNECTION TO THE UNDER CABINET LIGHT FIXTURES. CONTRACTOR SHALL ROUTE MC CABLE FROM THE LOCAL WALL SWITCH BOX TO THE UNDER CABINET LIGHT FIXTURE USING HOSPITAL GRADE MC CABLE, INCLUSIVE OF FINAL TERMINATION.
- D. DESIGN INTENT IS TO PROVIDE HVAC SET-BACKS VIA OCCUPANCY SENSORS IN ALL SPACES INCLUDED IN THIS SCOPE OF WORK. REFER TO VAV BOX CONTROL DIAGRAM A4700 FOR INTERCONNECT REQUIREMENTS BETWEEN OCCUPANCY SENSORS AND VAV BOXES. MULTIPLE OCCUPANCY SENSORS MAY BE ASSOCIATED WITH A SINGLE VAV BOX. REFER TO AIR TERMINAL UNIT SCHEDULE ON SHEET M600 FOR ADDITIONAL INFORMATION.
- E. DESIGN INTENT IS TO EXTEND AND UTILIZE EXISTING LOCAL LIFE SAFETY CIRCUIT(S) TO SERVE THE NEW EMERGENCY EGRESS FIXTURES AND EXIT SIGNS SHOWN ON THIS SHEET. MATCH THE TYPE, SIZE AND QUANTITY OF CIRCUITS AND CONDUIT CURRENTLY INSTALLED.

KEYED NOTES

1. ROUTE FIXTURE CIRCUIT THROUGH EMERGENCY LIGHTING INVERTER LOCATED IN ELECTRICAL CLOSET C207A. UPON SENSING LOSS OF POWER, INVERTER SHALL SEAMLESSLY TRANSITION POWER TO FIXTURES FROM BRANCH TO INVERTER BATTERY BACKUP. REFER TO SHEET E102 FOR MORE INFORMATION.
2. INSTALL FIXTURE PREVIOUSLY REMOVED AND SALVAGED DURING DEMOLITION PHASE. THIS FIXTURE SHALL BE CONNECTED TO AND CONTROLLED BY EXISTING POWER CIRCUITS (NORMAL POWER OR LIFE SAFETY AS SHOWN) AND LIGHTING CONTROLS CURRENTLY USED IN CORRIDOR C2010. MATCH THE TYPE, SIZE AND QUANTITY OF CIRCUITS AND CONDUIT CURRENTLY INSTALLED.
3. PROVIDE OCCUPANCY SENSOR AND AUXILIARY RELAY TO CONTROL MECHANICAL EQUIPMENT SET-BACKS WHEN SPACE IS UNOCCUPIED. COORDINATE SET-BACK PROGRAMMING WITH DIVISION 23. THIS OCCUPANCY SENSOR WILL NOT CONTROL THE LIGHTING.
4. EACH L7 LUMINAIRE SHALL BE PROVIDED WITH INTEGRAL ROCKER SWITCH SUPPLIED WITH FIXTURE FOR CONTROL OF EACH INDIVIDUAL FIXTURE. EXTEND 2 #12 AND #12 GND IN 3/4" CONDUIT FROM LOCAL RECEPTACLE NORMAL POWER CIRCUIT TO SERVE THESE FIXTURES.
5. PROVIDE SWITCH FOR CONTROL OF L7 FIXTURE. WHERE MULTIPLE L7 LUMINAIRES ARE SHOWN GROUPED, THEY SHALL BE CIRCUITED TOGETHER TO ALLOW FOR THEM TO BE CONTROLLED BY A SINGLE SWITCH. REFER TO DETAIL 4E501 FOR MORE INFORMATION.
6. ALL LIGHT FIXTURES INSTALLED WITHIN PROCEDURE ROOM SHALL BE GASKETED DUE ROOM PRESSURIZATION REQUIREMENTS. REFER TO LUMINAIRE SCHEDULE FOR MORE INFORMATION.
7. INSTALL NEW KEY SWITCH AND EXTEND EXISTING LIGHTING CONTROL CIRCUITS USED TO CONTROL THE LIGHTING IN CORRIDORS C2010, A & B. TO THIS LOCATION. MATCH THE TYPE, SIZE AND QUANTITY OF EXISTING CIRCUITS AND CONDUIT CURRENTLY INSTALLED. LIGHTING CONTROLS FOR THESE CORRIDORS SHALL OPERATE AS THEY DID PRIOR TO CONSTRUCTION.
8. NEW LIGHT FIXTURES PROVIDED IN THIS CORRIDOR SHALL BE CONNECTED TO AND CONTROLLED BY EXISTING POWER CIRCUITS (NORMAL POWER OR LIFE SAFETY AS SHOWN) AND LIGHTING CONTROLS CURRENTLY USED IN CORRIDOR C2100. MATCH THE TYPE, SIZE AND QUANTITY OF CIRCUITS AND CONDUIT CURRENTLY INSTALLED.
9. UTILIZE AND EXTEND AS REQUIRED EXISTING LIGHTING CONTROL CIRCUITS TO THE NEW SWITCH LOCATION. MATCH THE TYPE, SIZE AND QUANTITY OF EXISTING CIRCUITS AND CONDUIT CURRENTLY INSTALLED. LIGHTING CONTROLS IN THIS ROOM SHALL OPERATE AS THEY DID PRIOR TO CONSTRUCTION.
10. INSTALL NEW FIXTURE AND CONNECT TO EXISTING POWER CIRCUITS/ADJUSLY DISCONNECTED AND PROTECTED IN PLACE FOR THE PURPOSE OF REUSING. CRITICAL BRANCH POWER IS SERVED BY C21-16 AND NORMAL POWER IS SERVED BY N21-6.
11. ENLARGED FLOOR PLANS SHOWN ARE TYPICAL AND REPRESENT MULTIPLE ROOMS WITH SIMILAR CONFIGURATIONS. ROOM ORIENTATION WILL VARY IN REFERENCE TO WHAT ROOM IS SHOWN AS TYPICAL. DEVICE & FIXTURE QUANTITIES WILL REMAIN THE SAME. DEVICES & FIXTURES SHALL BE INSTALLED IN THE RESPECTIVE LOCATION SHOWN BASED ON ROOM ORIENTATION. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
12. INSTALL NEW WALL PACK FIXTURE AT LOCATIONS SHOWN AND CONNECT TO UNSWITCHED LEG OF EXISTING CRITICAL BRANCH LIGHTING CIRCUIT SERVING 2X2 LIGHT FIXTURES IN ROOM.



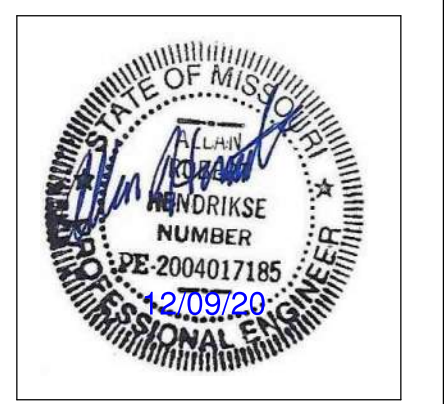
Keymap 2nd Floor  
NTS



bcDESIGN GROUP  
12101 W 110th Street, Suite 100  
Overland Park, KS 66210  
913.232.2123  
MO Certificate of Authority Number  
A-201102790

Project Team:  
ROSS & BARUZZINI, INC.  
314.918.8383  
4 South Old Orchard | St. Louis, MO 63119  
Missouri Certificate of Authority Missouri Certificate of Authority 0001-02

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
UNIVERSITY OF MISSOURI HEALTHCARE

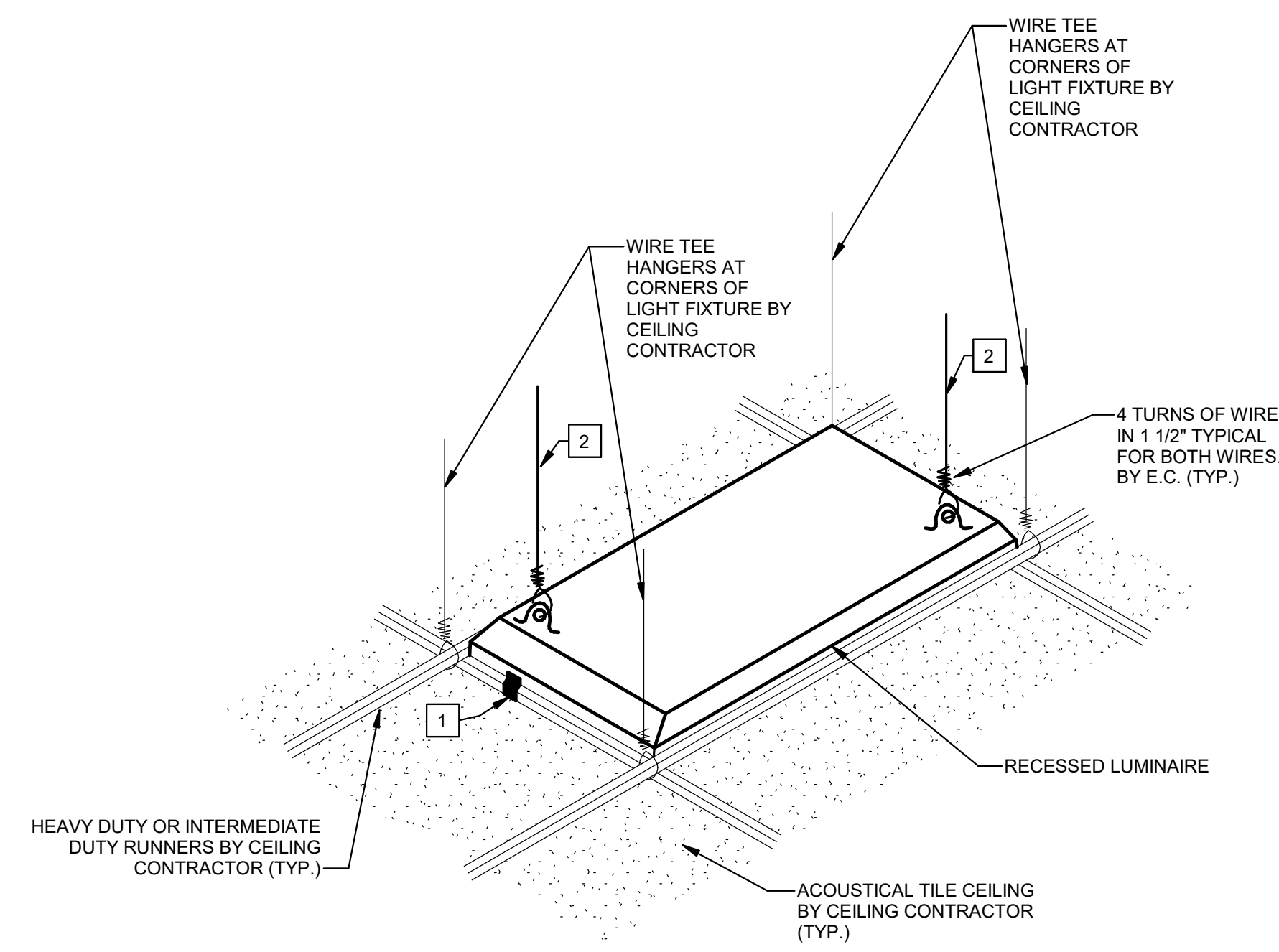


ALLAN ROBERT HENDRIKSE  
PE-2004017185

Issue Date: 12/9/2020  
Date:

Drawn by: MTM  
bcdg Project #: 12275.43  
MU Project #: CP210751

**EL102**  
SECOND FLOOR CHPS - LIGHTING - NEW WORK



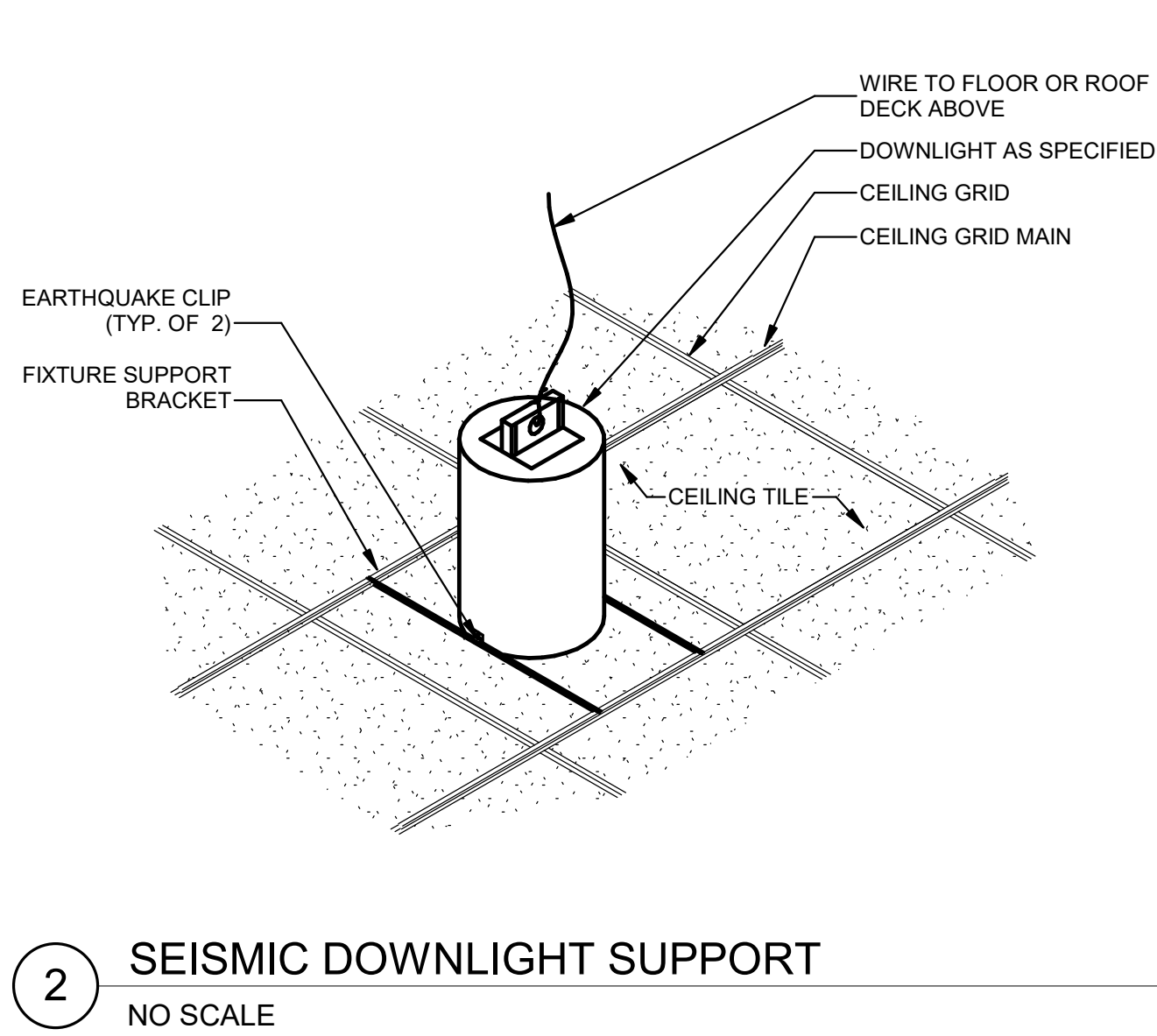
**GENERAL NOTES:**

- LUMINAIRES SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE BY APPROVED HANGERS BY THE E.C.
- COMPLY TO NOTE 8 IN TABLE 16-0 OF CA BUILDING CODE AND UBC STANDARD 25-2 PART III.

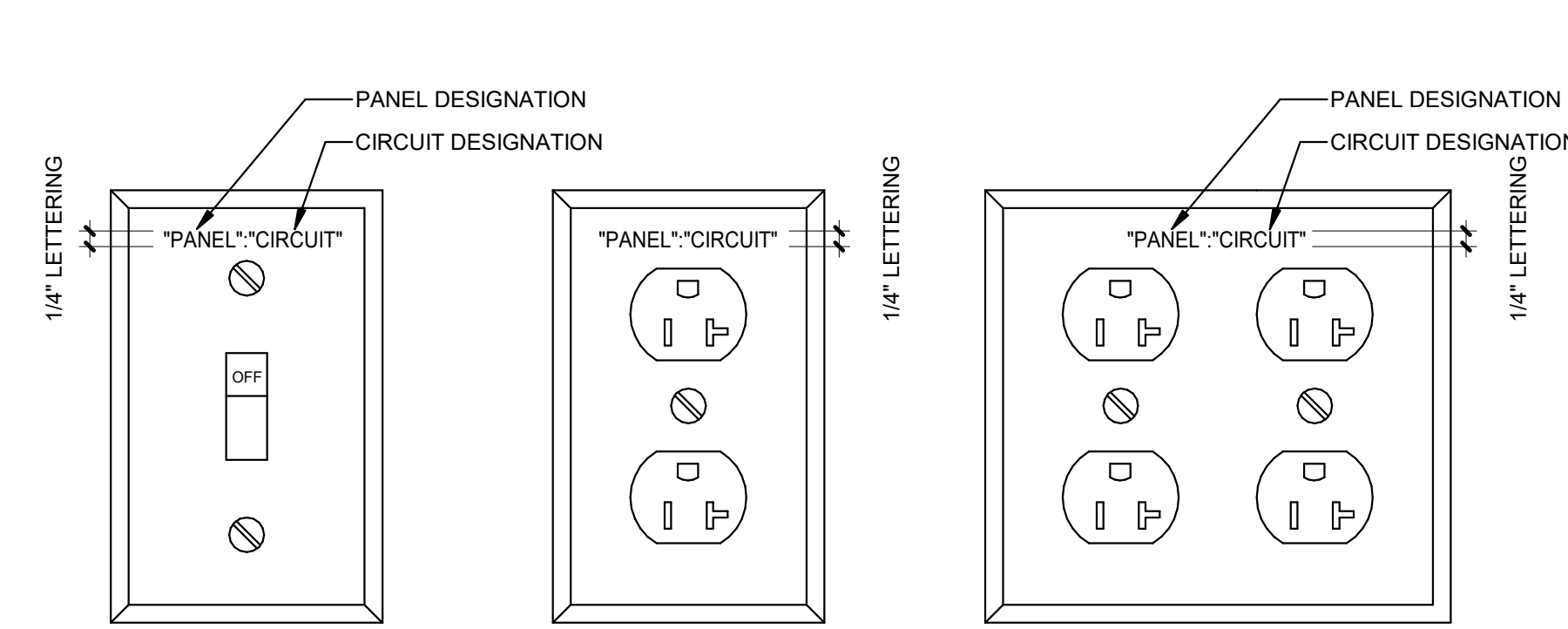
**KEYED NOTES:**

- ATTACH LUMINAIRE TO THE SUSPENDED CEILING TEE WITH DEVICES HAVING A CAPACITY OF 100% OF THE LUMINAIREWEIGHT ACTING IN ANY DIRECTION. USE #10 STS SCREWS WITH HEAD INSIDE LUMINAIRE. TYPICAL FOR ALL LUMINAIRE. PROVIDE MINIMUM OF 2 (ONE AT EACH END).
- E.C. TO PROVIDE TWO NO. 12 GAUGE HANGERS CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE. THESE WIRES NEED NOT BE TAUT. PROVIDE A MINIMUM OF 2 (AT DIAGONALLY-OPPOSITE CORNERS).

**7 TYPICAL MOUNTING DETAIL FOR RECESSED LUMINAIRE IN LAY-IN CEILING**  
NO SCALE



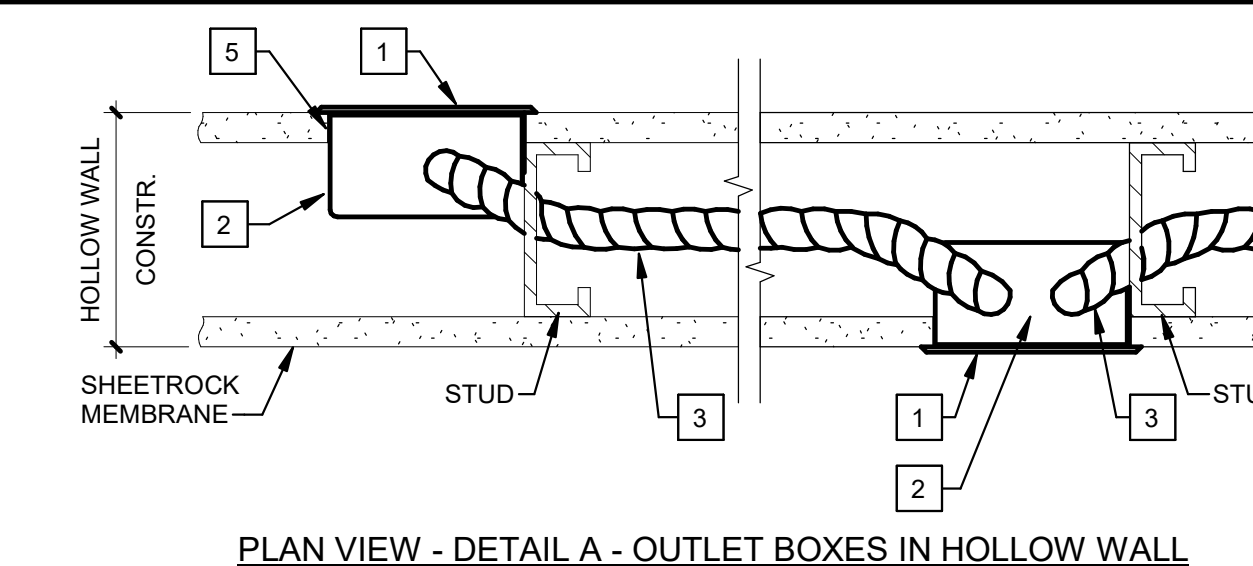
**8 SEISMIC DOWNLIGHT SUPPORT**  
NO SCALE



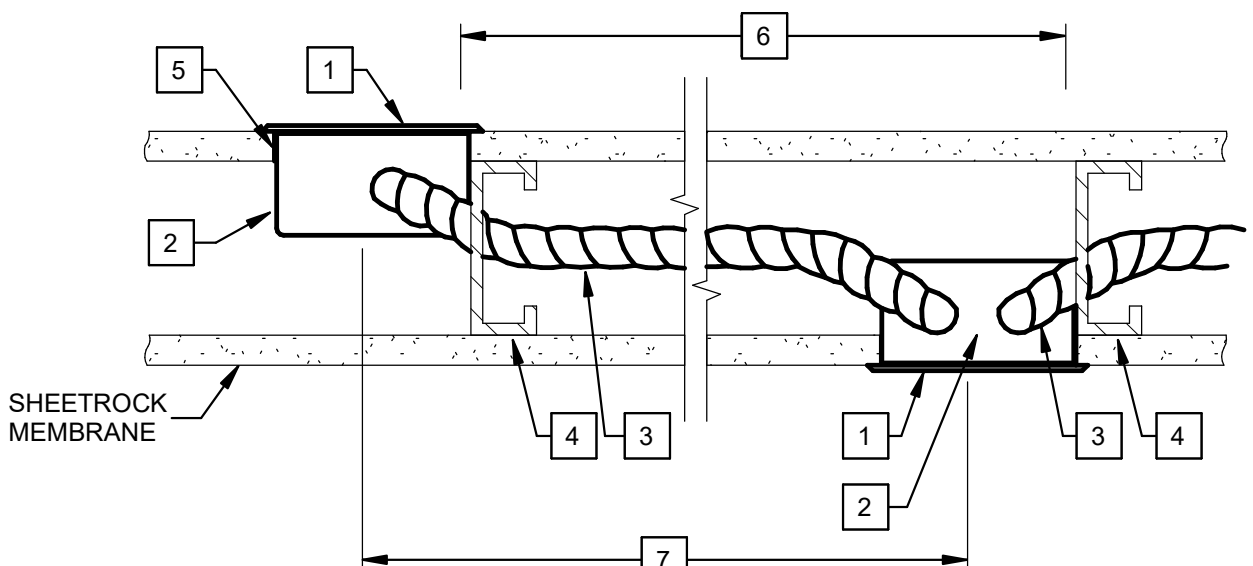
**GENERAL NOTE:**

- TYPICAL OF ALL SWITCH AND RECEPTACLE DEVICE PLATES.
- REFER TO SPECIFICATION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS FOR ADDITIONAL REQUIREMENTS.

**9 ELECTRICAL DEVICE PLATE LABELING (ENGRAVING)**  
NO SCALE



**PLAN VIEW - DETAIL A - OUTLET BOXES IN HOLLOW WALL**



**PLAN VIEW - DETAIL B - OUTLET BOXES IN FIRE RATED HOLLOW WALL**

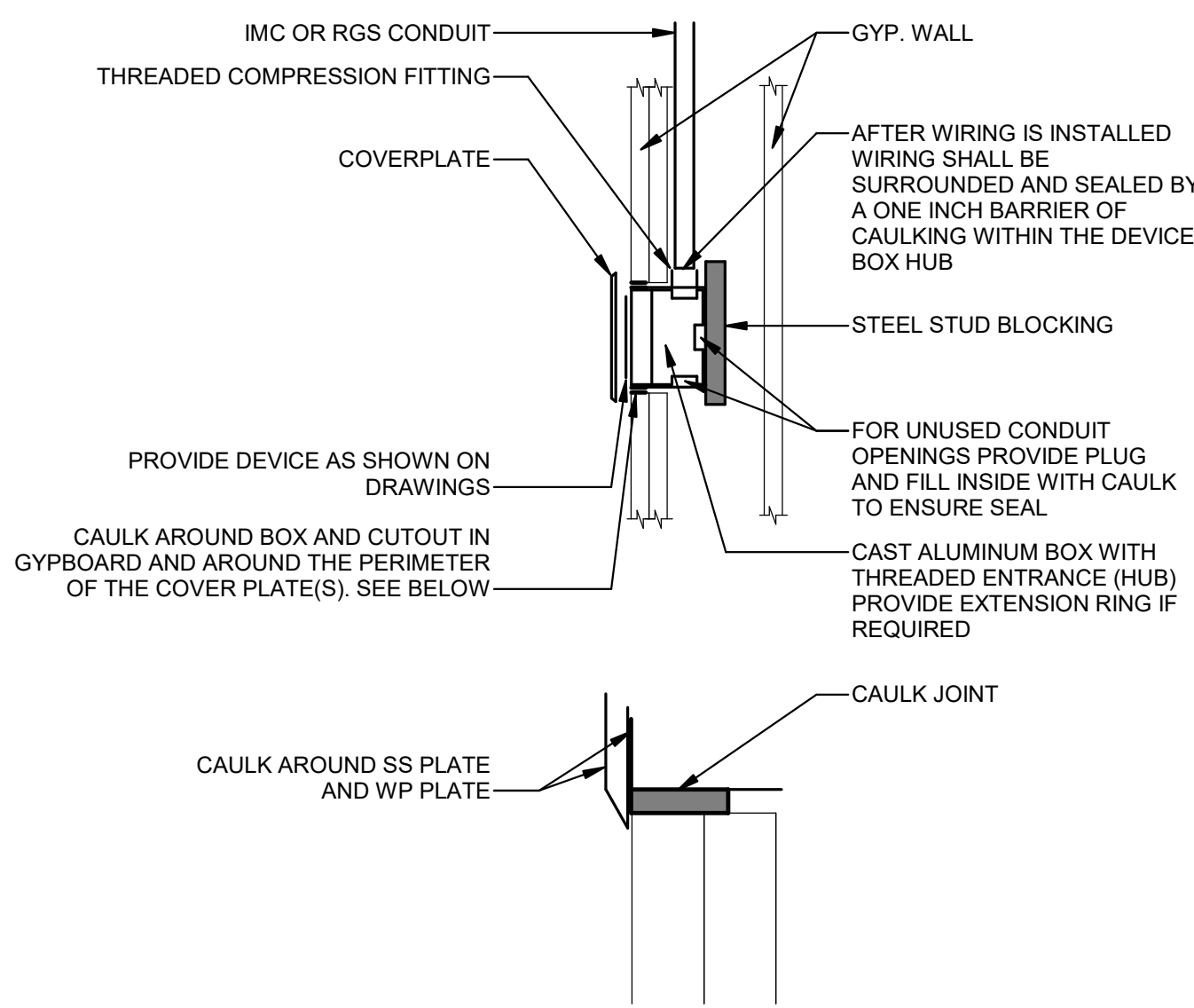
**GENERAL NOTES:**

- COORDINATE LOCATIONS OF FIRE RATE WALLS AND THICKNESS OF ALL WALLS WITH G.C. AND ARCHITECTURAL DRAWINGS.
- DETAIL A IS APPLICABLE TO ALL HOLLOW WALLS ON THIS PROJECT. DETAIL B IS APPLICABLE TO ALL FIRE RATED HOLLOW WALLS ON THIS PROJECT.

**KEYED NOTES:**

- PLATE OR COVER ON FOR OUTLET, BOX OR WIREWAY.
- NON-FIRE RATED WALL (DETAIL A): OUTLET, SWITCH, RECEPTACLE, TEL., DATA, ETC. OR OTHER BOX SPECIFIED. FIRE RATED WALL (DETAIL B): SAME AS ABOVE EXCEPT BOX MUST BE STEEL WITH NOMINAL AREA NOT TO EXCEED 16 SQ. IN.
- RACEWAY AS ALLOWED BY SPECIFICATIONS.
- METAL STUD (NO HOLES). IF STUDS HAVE HOLES, BOXES MAY BE LESS THAN 24" APART AND FIRE RATED PUTTY PADS USED ON BOTH BOXES.
- BOXES SHALL BE SET BACK FROM FINISHED SURFACE NO MORE THAN 1/4" IN ACCORD WITH NEC. BOXES SHALL BE SET AND THE WALL SHALL BE REPAIRED AS REQUIRED SO THAT THE SPACE BETWEEN THE WALL AND THE EDGE OF THE BOX SHALL BE NO GREATER THAN 1/8" IN ACCORD WITH NEC. FIRE RATED WALLS MAY HAVE MORE THAN ONE LAYER OF SHEETROCK IN ORDER TO OBTAIN FIRE RATING. COORDINATE WITH G.C. AND ARCHITECTURAL DRAWINGS PRIOR TO SETTING BOXES.
- TYPICAL 24" STUD SPACING. COORDINATE WITH G.C.
- BOXES IN OPPOSITE SIDES OF A FIRE RATED HOLLOW WALL SHALL BE SEPARATED BY A MINIMUM OF 24" AND THERE SHALL BE A STUD BETWEEN THE 2 BOXES. SEE KEYED NOTE 4 ON THIS SHEET.

**10 OUTLETS IN HOLLOW WALLS-TYPICAL DETAILS**  
NO SCALE



**GENERAL NOTES:**

- THIS DETAIL SHALL BE ADHERED TO FOR THE INSTALLATION AND SEALING OF ALL ELECTRICAL AND SYSTEMS OUTLETS IN THE PROCEDURE ROOMS.
- THIS DETAIL APPLIES TO ALL BOXES INCLUDING BUT NOT LIMITED TO ELECTRICAL RECEPTACLES, LIGHTING OUTLET BOXES, DATA OUTLETS, ETC.
- FOLLOW SIMILAR METHODS FOR CEILING MOUNTED DEVICES BASED ON THE WHAT IS SHOWN FOR THE WALL MOUNTED DEVICE ABOVE.
- ALL CAULK SHALL BE SILICONE.
- THIS CONTRACTOR IS RESPONSIBLE FOR THE SEALING OF ALL BOXES AND CONDUIT PENETRATING INTO THE PROCEDURE ROOMS, INCLUDING BOXES THAT HAVE CABLES INSTALLED BY OTHERS. THIS CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS AND VENDORS AND SHALL RETURN AFTER SUCH CABLES ARE INSTALLED AND SEAL AROUND ALL CABLES THAT WERE INSTALLED BY OTHERS.

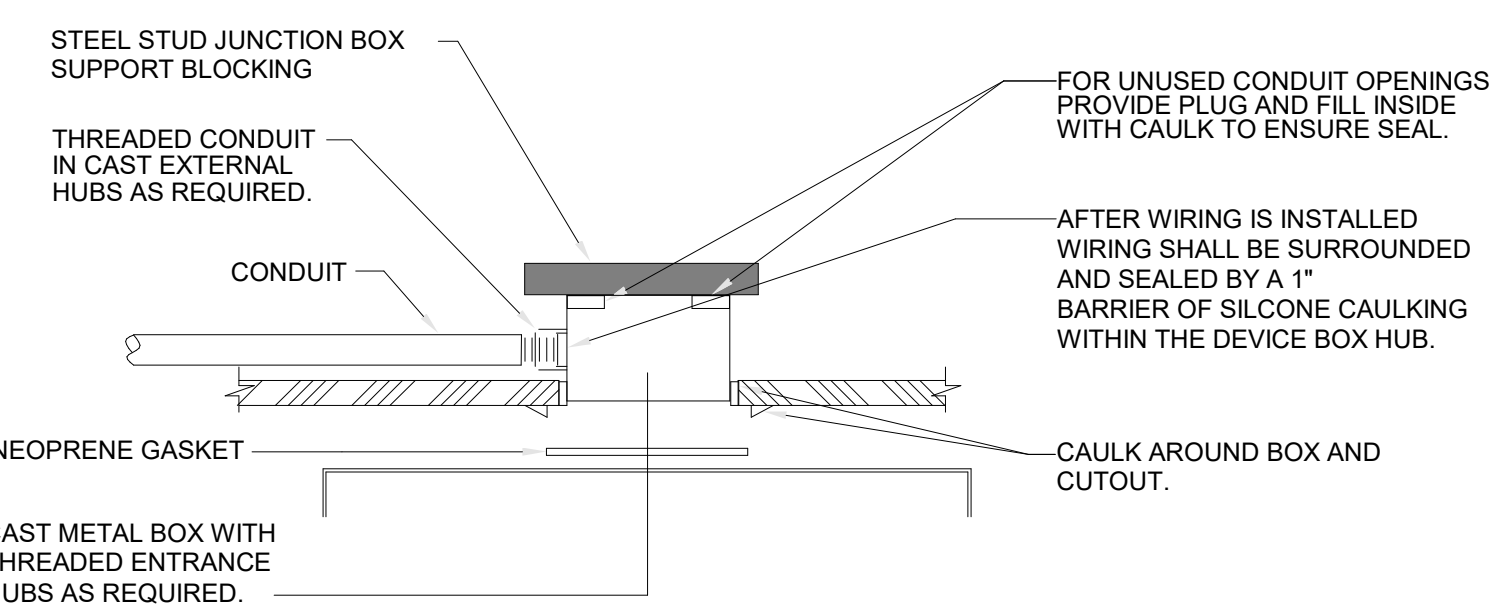
**11 WALL BOX SEALING DETAIL**  
NOT TO SCALE

PLAN MARK	SYSTEM INPUT	SEQUENCE OF OPERATION						
		ACTIVATE ALARM INDICATION	ACTIVATE SUPERVISORY INDICATION	ACTIVATE TROUBLE INDICATION	ACTIVATE AUDIBLE AND VISUAL ALARMS	DOOR HOLD RELEASE	SMOKE DAMPER CONTROL	MATCH EXISTING OUTPUT SEQUENCE
F	FAILURE OR COMMUNICATION ERROR							
	MANUAL PULL STATION							
SD	SMOKE DETECTOR							
DS	SMOKE DETECTOR (SMOKE DAMPER)							

**GENERAL NOTES:**

- REFER TO FLOOR PLANS FOR DEVICE LOCATIONS AND ADDITIONAL INFORMATION.
- REFER TO SPECIFICATION SECTION 28 31 11 FOR DESCRIPTION OF FIRE ALARM SEQUENCE OF OPERATIONS.
- FACILITY PARTIALLY EVACUATES AND RELOCATES OCCUPANTS UPON FIRE ALARM INITIATION. REFER TO SPECIFICATIONS FOR SPECIFIC OPERATION SEQUENCE REQUIREMENTS.
- THIS SCOPE OF WORK INCLUDES REMOVING EXISTING DEVICES, REPLACING WITH NEW AND EXTENDING THE EXISTING SYSTEM AS REQUIRED IN THESE AREAS.

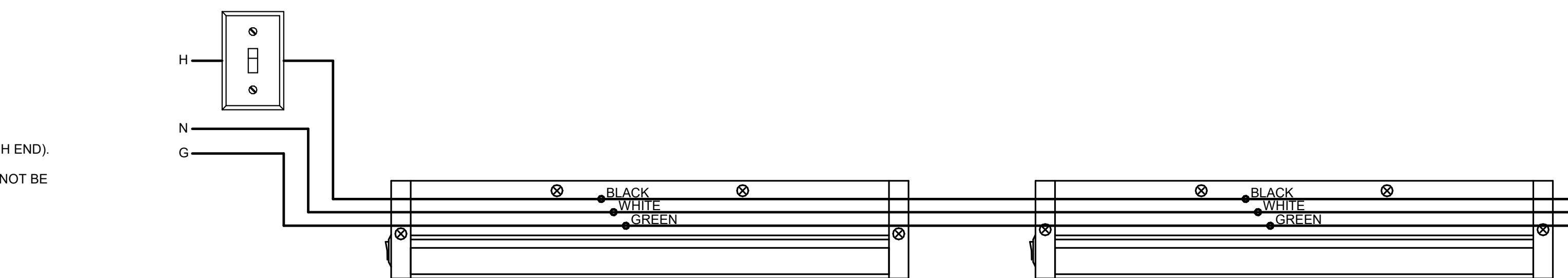
**12 FIRE ALARM MATRIX**  
NOT TO SCALE



**NOTES:**

- THIS DETAIL SHALL BE ADHERED TO FOR THE INSTALLATION AND SEALING OF ALL ELECTRICAL AND SYSTEMS OUTLETS IN THE PROCEDURE ROOMS.
- THIS DETAIL APPLIES TO ALL BOXES INCLUDING BUT NOT LIMITED TO ELECTRICAL RECEPTACLES, LIGHTING OUTLET BOXES, DATA OUTLETS, ETC.
- ALL CAULK SHALL BE SILICONE.
- THIS CONTRACTOR IS RESPONSIBLE FOR THE SEALING OF ALL BOXES AND CONDUIT PENETRATING INTO THE PROCEDURE ROOMS, INCLUDING BOXES THAT HAVE CABLES INSTALLED BY OTHERS. THIS CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS AND VENDORS AND SHALL RETURN AFTER SUCH CABLES ARE INSTALLED AND SEAL AROUND ALL CABLES THAT WERE INSTALLED BY OTHERS.

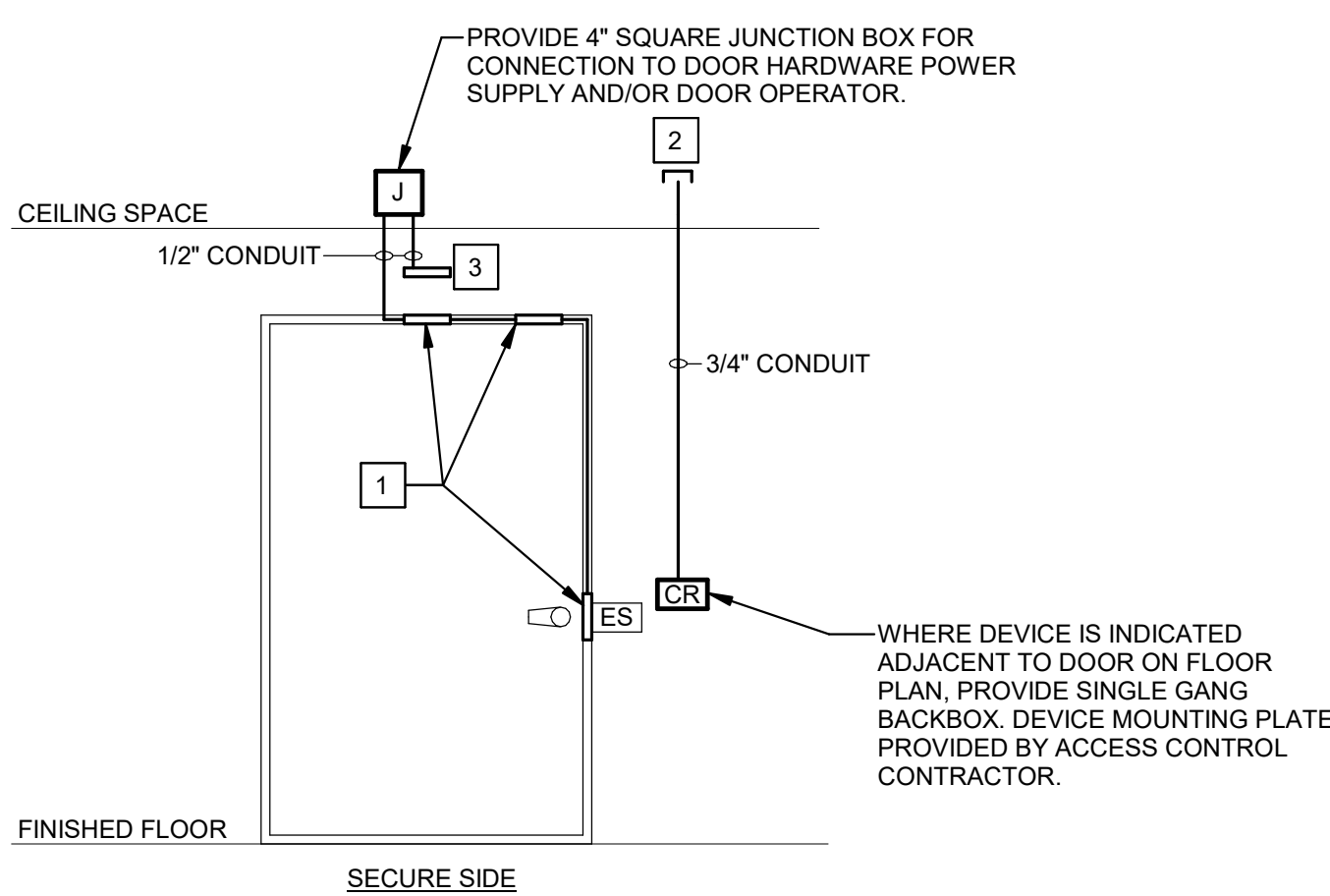
**13 CEILING BOX SEALING DETAIL**  
NOT TO SCALE



**GENERAL NOTES:**

- ONLY HOSPITAL TYPE MC CABLE SHALL BE UTILIZED UP TO 6'-0" MAX. AND SHALL CONTAIN A SEPARATE, INSULATED EQUIPMENT GROUNDING CONDUCTOR TO CONNECT UNDER CABINET FIXTURES.
- INSTALL FLEXIBLE METAL CONDUIT CONNECTIONS PER FIXTURE MANUFACTURER REQUIREMENTS TO SERVE THE UNDER CABINET LIGHT FIXTURES.
- CONTRACTOR SHALL FIELD VERIFY THE QUANTITY AND LOCATION OF CONNECTIONS NEEDED AND ROUTING OF FMC WITH ACTUAL CABINETS AND CASEWORK INSTALLED.
- MC CABLE CONNECTIONS SHALL BE DEDICATED. DAISY CHAINED CONNECTIONS ARE NOT PERMITTED.

**14 UNDER CABINET FIXTURE POWER DETAIL**  
NO SCALE



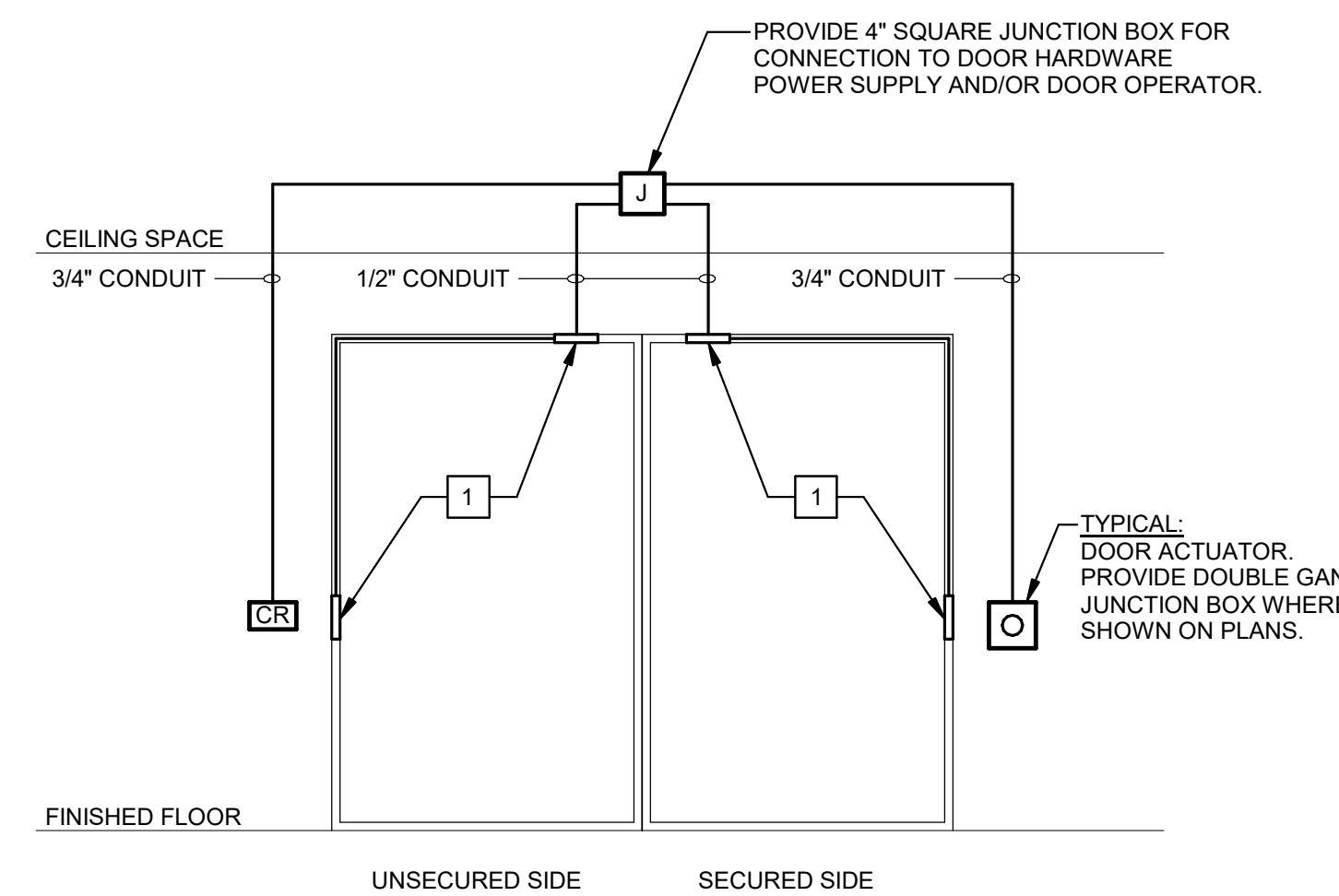
**GENERAL NOTES:**

- DETAIL IS DIAGRAMMATIC ONLY AND MAY NOT REPRESENT ACTUAL DEVICES / QUANTITY OF DEVICES REQUIRED. COORDINATE ALL REQUIREMENTS WITH FINAL DOOR HARDWARE PROVIDED AND AS CALLED OUT ON ARCHITECTURAL DRAWINGS.

**KEYNOTES:**

- PROVIDE JUNCTION BOXES FLUSH WITHIN THE DOOR FRAME WITH 1/2" FLEXIBLE CONDUIT BETWEEN BOXES AS REQUIRED FOR ROUTING ACCESS CONTROL WIRING WITHIN DOOR FRAME.
- STUB CONDUIT 6" ABOVE ACCESSIBLE CEILING.
- PROVIDE SINGLE GANG BACKBOX (HORIZONTAL) FOR REQUEST TO EXIT DEVICE. COORDINATE FINAL LOCATED WITH ACCESS CONTROL VENDOR PRIOR TO ROUGH-IN.

**15 ACCESS CONTROL DETAILS - ROUGH-IN DIAGRAM**  
NOT TO SCALE



**GENERAL NOTES:**

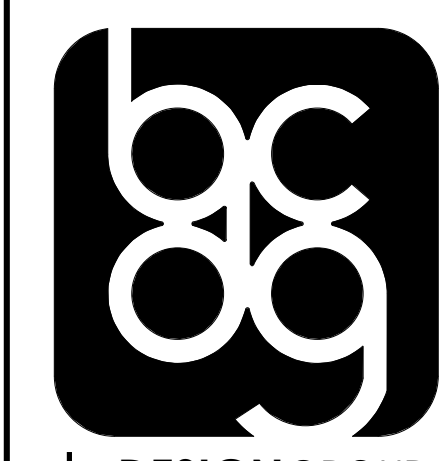
- DETAIL IS DIAGRAMMATIC ONLY AND MAY NOT REPRESENT ACTUAL DEVICES / QUANTITY OF DEVICES REQUIRED. COORDINATE ALL REQUIREMENTS WITH FINAL DOOR HARDWARE PROVIDED AND AS CALLED OUT ON ARCHITECTURAL DRAWINGS.
- THIS DETAIL APPLIES TO SINGLE AND DOUBLE DOOR APPLICATIONS WHERE ACTUATORS ARE UTILIZED TO ACTIVATE POWER DOORS.

**KEYNOTES:**

- PROVIDE JUNCTION BOXES FLUSH WITHIN THE DOOR FRAME WITH 1/2" FLEXIBLE CONDUIT BETWEEN BOXES AS REQUIRED FOR ROUTING ACCESS CONTROL WIRING WITHIN DOOR FRAME.

**16 POWER DOOR DETAIL**  
NO SCALE

**17 WALL BOX SEALING DETAIL**  
NOT TO SCALE



bcDESIGN GROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

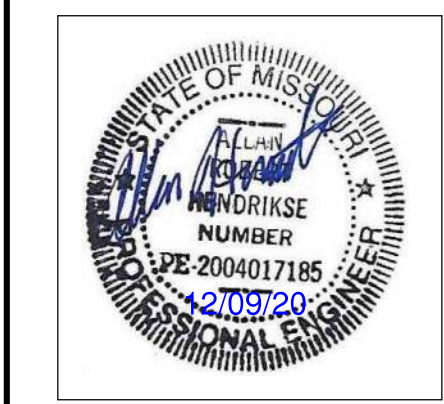
913.232.2123

MO Certificate of Authority Number  
A-201102790

Project Team:

ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.918.8383  
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ALLAN ROBERT HENDRIKSE  
PE-2004017185

Issue Date: 12/19/2020

Drawn by: MTM

bcdg Project #: 12275.43  
MU Project #: CP210751

**E501**  
ELECTRICAL DETAILS  
BID DOCUMENT PACKAGE



**LOW VOLTAGE RESPONSIBILITY MATRIX**

	OWNER RESPONSIBILITY	CONTRACTOR RESPONSIBILITY
<b>GENERAL LOW VOLTAGE ITEMS</b>		
EZ-PATH FOR LOW VOLTAGE CABLING		F, I
GROUNDING AND BONDING (GROUND BARS, CONDUCTORS, TERMINATIONS, ETC.)		F, I
CABLE PATHWAYS, CABLE TRAY, LADDER TRAY		F, I
FIRESTOPPING FOR LOW VOLTAGE SYSTEMS		F, I
EQUIPMENT, CABLE, AND OUTLET FACEPLATE LABELING	F	I
CORE DRILLING FLOOR/WALL SLEEVES		F, I
<b>TELECOMMUNICATIONS SYSTEMS</b>		
EQUIPMENT (SEVERS, SWITCHES, UPS, PDU, ETC)		F, I
PATCH CABLES		F, I
HORIZONTAL CABLING	F	I
CABLING TERMINATIONS, LABELING		F, I
BACKBOXES AND CONDUITS		F, I
OUTLET FACEPLATES		F, I
WIRELESS ACCESS POINTS		F, I
<b>COMMUNITY ACCESS TELEVISION SYSTEM</b>		
SERVICE CABLE FROM HOSPITAL		F, I
AMPLIFIERS		F, I
SPLITTERS		F, I
EQUIPMENT: HEAD-END ELECTRONICS		F, I
HORIZONTAL CABLING	F	I
CABLING TERMINATIONS		F, I
BACKBOXES AND CONDUITS		F, I
OUTLET FACEPLATES		F, I
TV MOUNTING BRACKET		F, I
TV	F	I
<b>ACCESS CONTROL</b>		
HEAD-END EQUIPMENT		F, I
BACKBOXES AND CONDUITS		F, I
DEVICES (CARD READERS, KEYPADS, ETC.)		F, I
INTERCONNECTION WIRING AND TERMINATIONS		F, I
<b>VIDEO SURVEILLANCE</b>		
HEAD-END EQUIPMENT (HARDWARE, SOFTWARE, DISPLAYS, ETC.)		F, I
CAMERAS AND SUPPORTS		F, I
HORIZONTAL CABLING AND TERMINATIONS	F	I
BACKBOXES AND CONDUITS		F, I
<b>NURSE CALL</b>		
HEAD-END EQUIPMENT		F, I
HORIZONTAL CABLING AND TERMINATIONS		F, I
BACKBOXES AND CONDUITS		F, I
DEVICES		F, I
INTERCONNECTION WIRING AND TERMINATIONS		F, I
<b>PUBLIC ADDRESS SYSTEM</b>		
HEAD-END EQUIPMENT		F, I
HORIZONTAL CABLING AND TERMINATIONS	F	I
BACKBOXES AND CONDUITS		F, I
SPEAKERS		F, I

LEGEND:  
F: FURNISHED  
I: INSTALLED

**NOTES:**

- THE PARTY RESPONSIBLE FOR INSTALLING THE RESPECTIVE EQUIPMENT SHALL ALSO BE RESPONSIBLE FOR CONNECTING, PROGRAMMING AND TESTING THE SYSTEM UNLESS OTHERWISE SPECIFICALLY NOTED. CONTRACTOR TO COORDINATE TESTING WITH ALL THIRD PARTY VENDORS.
- ITEMS INDICATED AS FURNISHED AND/OR INSTALLED BY THE OWNER MAY BE PROVIDED BY A THIRD-PARTY VENDOR. CONTRACTOR IS REQUIRED TO COORDINATE ALL INSTALLATIONS.
- ALL LINE VOLTAGE RECEPTACLE AND HARD-WIRED CONNECTIONS WILL BE PROVIDED BY THE CONTRACTOR.
- FIRESTOPPING TO BE PROVIDED BY A SINGLE ENTITY. REFER TO DIVISION 07 SPECIFICATIONS FOR REQUIREMENTS.

**1 LOW VOLTAGE RESPONSIBILITY MATRIX**  
NOT TO SCALE

**LUMINAIRE SCHEDULE**

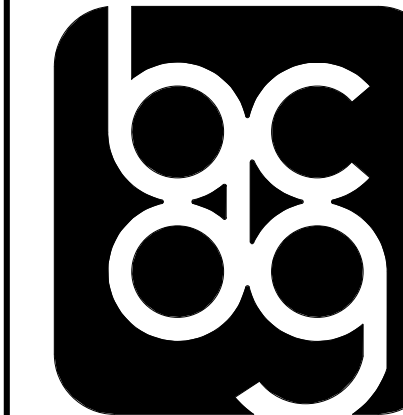
- LUMINAIRE SCHEDULE GENERAL NOTES:**
- ALL LUMINAIRES SHOWN ON THIS SCHEDULE MAY NOT BE USED ON THE VARIOUS PLANS. ALSO, THE USE OF ONLY CERTAIN NUMERICAL SUBSCRIPTS FOR LUMINAIRE TYPES (e.g. H2, H3, A2, A3, etc.) ON THIS PROJECT DOES NOT NECESSARILY MEAN THAT ON H1 OR A1 IS USED OR MISSING.
  - CONTRACTOR IS RESPONSIBLE FOR ALL MISCELLANEOUS HARDWARE, CLIPS, ANGLES, FRAMES, ETC. AS REQUIRED TO MOUNT THE LUMINAIRES IN OR ON THE SURFACES THEY ARE TO BE INSTALLED.
  - REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT MOUNTING LOCATIONS OF LUMINAIRES AND CEILING TYPES.
  - WHEN INSTALLING LUMINAIRES, THE CONTRACTOR SHALL USE THE LUMINAIRE MANUFACTURER'S MOUNTING HARDWARE AND FOLLOW ALL MANUFACTURER'S INSTALLATION DIRECTIONS.
  - ALL RECESSED DOWNLIGHTS SHALL HAVE SELF-FLANGED REFLECTORS U.O.N. AND SHALL BE INSTALLED SO THAT THE BOTTOM OF THE THROAT IS EVEN WITH THE FINISHED CEILING PLANE. THE OVERLAPPING FLANGE MUST THEN FIT FLUSH TO THE CEILING PLANE/THROAT. NO LIGHT LEAK MUST BE VISIBLE. ALL MISCELLANEOUS HARDWARE ABOVE THE CEILING PLANE TO ACCOMPLISH THE ABOVE SHALL BE INCLUDED IN THE BASE BID.
  - ALL LUMINAIRES SHALL HAVE A U.L. LABEL.
  - ALL LUMINAIRES SHOWN TO BE INSTALLED IN A PROCEDURE ROOM SHALL BE GASKETED DUE TO THE PRESSURIZATION REQUIREMENTS.
  - ALL LUMINAIRES SHALL OPERATE AT 120 OR 277 VOLTS OR OTHER VOLTAGE AS REQUIRED BY THE CIRCUITS AND/OR PANELS TO WHICH THEY ARE CONNECTED.
  - WHEN LUMINAIRES ARE INSTALLED IN CONTINUOUS ROWS TWO (2) OR MORE, LUMINAIRES SHALL BE APPROVED FOR USE AS WIREWAY.
  - REFER TO SPECIFICATION SECTION 265100 LIGHTING FOR ADDITIONAL INFORMATION CONCERNING LUMINAIRES, FINISHES, DRIVERS, LED LAMPS, ETC.
  - COMPLETE CATALOG NUMBER MAY NOT BE LISTED. ORDER LUMINAIRE BASED ON DESCRIPTION, PARTIAL CATALOG NUMBER AND SPECIFICATIONS. THE FIRST MANUFACTURER LISTED IS THE BASIS-OF-DESIGN.
  - WHEN VARYING FROM BASIS-OF-DESIGN LUMINAIRE, PROVIDE A LUMINAIRE UTILIZING ±10% OF THE LED LUMENS INDICATED IN LUMINAIRE SCHEDULE.
  - VERIFY COMPATIBILITY OF ALL DIMMING DRIVERS WITH SPECIFIED DIMMING CONTROLS PRIOR TO ORDERING AND PROVIDE APPROPRIATE COMPONENTS TO CREATE A COMPLETE AND FULLY FUNCTIONAL INSTALLATION.
  - PROVIDE AND INSTALL ALL LED LAMP TYPES INDICATED IN LUMINAIRE SCHEDULE. LEDS SHALL HAVE A MINIMUM COLOR RENDERING INDEX (CRI) OF 80 AND SHALL HAVE COLOR TEMPERATURE OF 3500K, U.O.N.

- (1) DRIVER LEGEND:  
DIM - DIMMING DRIVER (10-100%)  
EM - EMERGENCY DRIVER

PLAN MARK	DESCRIPTION	MANUFACTURER	REMARKS	# OF LAMPS	LAMP TYPE	LED LUMENS	DRIVER	WATTAGE	VOLTAGE
L1A	2'X2', 3-1/4" TALL, RECESSED LED LUMINAIRE, EXTRUDED ALUMINUM HOUSING WITH INJECTED MOLDED COMPOSITE END PLATES, GRID-LOCK FEATURE, HIGH OPTICAL GRADE ACRYLIC LENS, HIGH REFLECTANCE BAKED WHITE ENAMEL FINISH, DAMP LOCATION LISTED.	METALUX 22EN SERIES OR APPROVED EQUAL.	--	1	LED	4478	DIM, EM	38 W	MVOLT
L1B	SAME AS L1A, BUT WITH DECREASED LUMEN PACKAGE.	METALUX 22EN SERIES OR APPROVED EQUAL.	--	1	LED	3471	DIM, EM	29 W	MVOLT
L2	2'X4', 3-1/4" TALL, RECESSED LED LUMINAIRE, COLD ROLLED STEEL HOUSING, END PLATES WITH GRID-LOCK FEATURE, FROSTED #12 PATTERN ACRYLIC PRISMATIC LENS, DAMP LOCATION LISTED.	METALUX GRLED SERIES OR APPROVED EQUAL.	--	1	LED	3459	DIM, EM	27 W	MVOLT
L3	2'X2' TALL, RECESSED LED LUMINAIRE, ONE-PIECE 24 GAUGE STEEL HOUSING AND REFLECTOR, CENTER DIFFUSER FROSTED WHITE WITH OPAL ACRYLIC LENS, STEEL REFLECTOR MATTE SATIN WHITE POWDER COAT FINISH, UL LISTED FOR DAMP LOCATIONS.	FOCAL POINT EQUATION SERIES	--	1	LED	4000	DIM, EM	37 W	MVOLT
L4	2'X4' 4" TALL, RECESSED LED LUMINAIRE, ONE-PIECE 24 GAUGE STEEL HOUSING AND REFLECTOR, CENTER DIFFUSER FROSTED WHITE WITH OPAL ACRYLIC LENS, STEEL REFLECTOR MATTE SATIN WHITE POWDER COAT FINISH, UL LISTED FOR DAMP LOCATIONS.	FOCAL POINT EQUATION SERIES	--	1	LED	4000	DIM, EM	44 W	MVOLT
L5	2'X4' RECESSED LED PATIENT BED LIGHT WITH INDEPENDENTLY CONTROLLED AMBIENT AND EXAM FUNCTION, ONE-PIECE DIE-FORMED 20 GAUGE STEEL, SEALED OPTICAL COMPARTMENT, PERFORATED METAL ACRYLIC DIFFUSER, POWDER COAT WITH ANTI-MICROBIAL FINISH, UL LISTED.	FAIL SAFE MAE LED SERIES	--	2	LED	AMBIENT: 4278 LUMENS EXAM: 5712 LUMENS	DIM, EM	128 W	MVOLT
L6	4" ROUND, 5-1/2" TALL LED DOWNLIGHT, MEDIUM BEAM DISTRIBUTION, SPUN ALUMINUM REFLECTOR, DIE-CAST ALUMINUM 1-1/2" DEEP COLLAR, ALUMINUM HEAT SINK, WHITE POLYMER TRIM RING, SPECULAR CLEAR FINISH.	PORTFOLIO LD48 OR APPROVED EQUAL.	--	1	LED	1000	DIM, EM	11 W	MVOLT
L7	75"H X 4.37" DEEP X 24" LOW PROFILE LED UNDERCABINET TASK LIGHT, ALUMINUM HOUSING, WHITE FINISH, LENGTH AS SHOWN ON DRAWINGS, PROVIDE HARDWIRE CONNECTION AND ROCKER SWITCH, COORDINATE ACTUAL LENGTH WITH CABINETS PROVIDED.	HALO HU10 SERIES OR APPROVED EQUAL.	COORDINATE TOTAL FIXTURES REQUIRED & FIXTURE LENGTH WITH CABINET LENGTHS.	1	LED	330 LUMENS PER 12-INCHES	--	11 W	120 V
L8	2'X4', 2" TALL, RECESSED LED LUMINAIRE, ALUMINUM HOUSING WITH STEEL BACK PLATE, ACRYLIC LIGHT GUIDE WITH WHITE FROST LENS, UL LISTED FOR DAMP LOCATIONS.	METALUX FLAT PANEL FP SERIES	--	1	LED	--	DIM, EM	41 W	MVOLT
L9	2'X2' LED VOLUMETRIC LUMINAIRE WITH CENTER DIFFUSER, ONE-PIECE 20 GAUGE STEEL REFLECTOR AND HOUSING, FROSTED WHITE ACRYLIC DIFFUSER AND 0.125" MINIATURE PRISM ACRYLIC LENS, WHITE PAINTED SIDE RAILS, MATTE SATIN WHITE FINISH.	METALUX 22RNL SERIES OR APPROVED EQUAL.	--	1	LED	3558	DIM, EM	31 W	MVOLT
L10	6" OPEN LED DOWNLIGHT, ALUMINUM HOUSING, CLEAR DIFFUSE REFLECTOR, OVERLAPPING WHITE TRIM, WET LOCATION LISTED, U.L. LISTED.	FOCAL POINT FLD60 SERIES OR APPROVED EQUAL.	--	1	LED	1500	DIM	17 W	277V
L11	LED EMERGENCY LIGHTING UNIT WITH MIN. 90 MIN BATTERY BACKUP, FLAME- AND IMPACT- RESISTANT, WHITE POLYCARBONATE HOUSING, WITH MAINTENANCE FREE NI-CAD BATTERY AND SOLID STATE CHARGING SYSTEM, MOUNT 6" BELOW FINISHED CEILING.	SURE-LITES APEL SERIES, KENALL METEL SERIES OR APPROVED EQUAL.	UNSWITCHED EMERGENCY WALL-PACK	1	LED	--	EM	3 W	MVOLT
X1	CEILING MOUNT LED EXIT SIGN, DIE CAST AND EXTRUDED ALUMINUM HOUSING WITH BRUSHED ALUMINUM FINISH, HIGH IMPACT ACRYLIC CLEAR PANEL, EDGE LIT WITH RED LETTERS, SINGLE SIDED, DIRECTIONAL CHEVRONS PER PLANS.	SURE-LITES EUX SERIES	--	1	LED	--	EM	1 W	MVOLT
X2	SAME AS X1, BUT DOUBLE SIDED.	SURE-LITES EUX SERIES	--	1	LED	--	EM	1 W	MVOLT

**LIGHTING CONTROL SEQUENCES**

SEQUENCE ID	DESCRIPTION	ON OPERATION	OFF OPERATION	ADJUST	REMARKS
LC1	STORAGE, CLEAN, SOILED, CAPSULE ROOM, MED ROOM, STAFF LACTATION ROOMS	LUMINAIRES AUTOMATICALLY TURNED ON TO 50% OUTPUT VIA OCCUPANCY SENSOR.	AFTER THE SPACE HAS BEEN VACANT FOR 20 MINUTES, THE LUMINAIRES WILL AUTOMATICALLY TURN OFF. THE LUMINAIRES CAN ALSO BE MANUALLY TURNED OFF BY WALL MOUNTED TWO PUSH BUTTON OCCUPANCY SENSOR.	PROVIDE PADDLE OR SLIDE DIMMER AT LOCATIONS INDICATED.	--
LC2	TOILETS	LUMINAIRES AUTOMATICALLY TURNED ON TO 50% OUTPUT VIA OCCUPANCY SENSOR.	AFTER THE SPACE HAS BEEN VACANT FOR 20 MINUTES, THE LUMINAIRES WILL AUTOMATICALLY TURN OFF. THE LUMINAIRES CAN ALSO BE MANUALLY TURNED OFF BY WALL MOUNTED TWO PUSH BUTTON OCCUPANCY SENSOR.	--	--
LC3	PROCEDURE, TREATMENT, PRE/POST ROOMS	LUMINAIRES TURNED ON BY MANUAL TOGGLE SWITCH.	LUMINAIRES TURNED OFF BY MANUAL TOGGLE SWITCH.	PROVIDE PADDLE OR SLIDE DIMMER AT LOCATIONS INDICATED. LUMINAIRES DIM TO ONE-PERCENT (1%-100%).	COORDINATE DRIVER WITH TYPE WITH LUMINAIRES WITHIN SPACE TO ENSURE THEY'RE CAPABLE OF 0-10V DIMMING DOWN TO 1%.
LC4	NURSE STATION, REGISTRATION, WAITING, OFFICE, WORK ROOMS	MANUAL ON VIA WALL MOUNT OCCUPANCY SENSOR/PUSH BUTTON.	AUTO OFF AFTER 20 MIN. OF VACANCY.	PROVIDE PADDLE OR SLIDE DIMMER AT LOCATIONS INDICATED.	WHERE SHOWN, EACH SWITCH/LEG SHALL BE CAPABLE OF BEING RAISED/LOWERED INDEPENDENTLY.
LC5	BREAK ROOM	AUTO PARTIAL ON TO 50% OUTPUT VIA CEILING OCCUPANCY SENSOR.	AUTO OFF AFTER 20 MIN. OF VACANCY.	PROVIDE PADDLE OR SLIDE DIMMER AT LOCATION INDICATED.	--
LC6	CORRIDORS	AUTO ON VIA OCCUPANCY SENSORS.	REDUCE LIGHT TO 50% AFTER 20 MINUTES OF VACANCY, FULLY OFF AFTER 45 MINUTES OF VACANCY.	--	--



bcDESIGNGROUP

12101 W 110th Street, Suite 100  
Overland Park, KS 66210

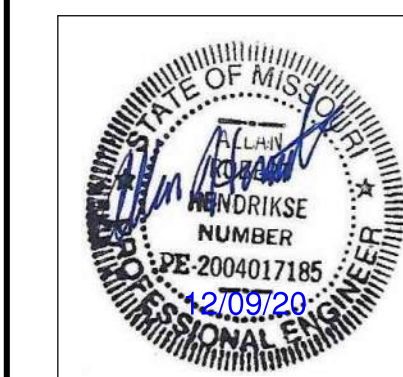
913.232.2123

MO Certificate of Authority Number  
A-201102790

Project Team:

ROSS & BARUZZINI, INC.  
4 South Old Orchard | St. Louis, MO 63119  
314.818.8383  
Missouri Certificate of Authority Missouri Certificate of Authority #332-01

Project Title:  
**MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU**  
 UNIVERSITY OF MISSOURI HEALTHCARE



ALLAN ROBERT HENDRIKSE  
PE-2004017185

Issue Date: 12/9/2020

Date

Drawn by: MTM

bcdg Project #: 12275.43  
MU Project #: CP210751

**E601**

ELECTRICAL SCHEDULES

BID DOCUMENT PACKAGE



Existing Branch Panel: N21(CCA)

Location: C2020E
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 480Y/277V
Phases: 3
Wires: 4

A.I.C. Rating: 42KA
Mains Type:
Mains Rating: 225 A
MCB Rating:

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes a 'Panel Totals' section at the bottom.

Existing Branch Panel: AE2A

Location: C2020E
Supply From: AEDP-1 IN C0005
Mounting: Surface
Enclosure: Type 1

Volts: 208Y/120V
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes a 'Panel Totals' section at the bottom.

Existing Branch Panel: C2C

Location: ELEC C2027A
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 208Y/120V
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type:
Mains Rating: 225 A
MCB Rating:

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes a 'Panel Totals' section at the bottom.

Existing Branch Panel: C2A

Location: C2020E
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 208Y/120V
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 225 A

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes a 'Panel Totals' section at the bottom.

GENERAL SHEET NOTES

A. UPON COMPLETION OF CONSTRUCTION, PROVIDE RED-LINED PANEL SCHEDULE DEPICTING THE ACTUAL CIRCUITS MODIFIED OR ADDED AS PART OF THIS PROJECT TO UMHC. PROVIDE NEW TYPED PANELBOARD SCHEDULES WITHIN EACH PANEL ENCLOSURE FOR ALL PANELS MODIFIED AS PART OF THIS PROJECT.

Existing Branch Panel: N2C

Location: ELEC C2027A
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 208Y/120V
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type:
Mains Rating: 225 A
MCB Rating:

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes a 'Panel Totals' section at the bottom.

Existing Branch Panel: N2A

Location: C2020E
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 208Y/120V
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 225 A

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes a 'Panel Totals' section at the bottom.

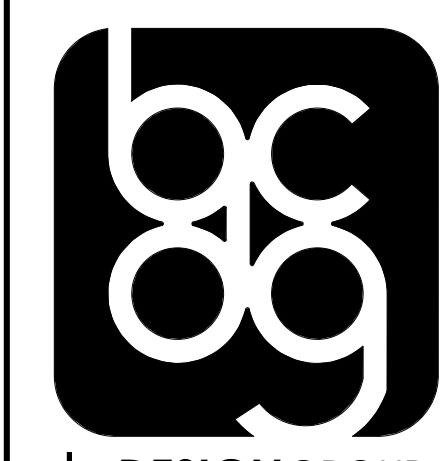
Existing Branch Panel: C21(CCA)

Location: C2020E
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 480Y/277V
Phases: 3
Wires: 4

A.I.C. Rating: 42KA
Mains Type:
Mains Rating: 225 A
MCB Rating:

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes a 'Panel Totals' section at the bottom.



bcDESIGN GROUP

12101 W 110th Street, Suite 100
Overland Park, KS 66210

913.232.2123

MO Certificate of Authority Number: A-201102790

Project Team:

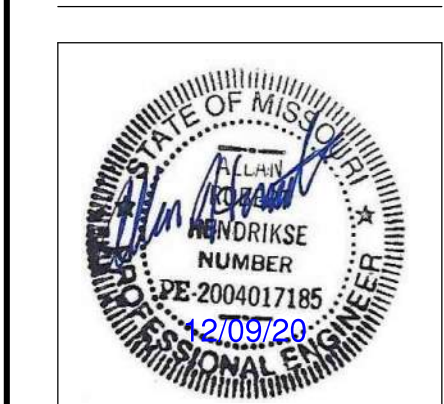
ROSS & BARUZZINI, INC.

5 South Old Orchard | St. Louis, MO 63119

314.818.8888

Missouri Certificate of Authority Missouri Certificate of Authority #032-02

MUHC - VARIOUS LOCATIONS - RENOVATE AREAS IN PCT AND CCA FOR CHPS AND CBCU UNIVERSITY OF MISSOURI HEALTHCARE



ALLAN ROBERT HENDRIKSE

PE-2004017185

Issue Date: 12/9/2020

Date:

Drawn by: MTM

bcgd Project #: 12275.43

MU Project #: CP210751

E603

PANEL SCHEDULES - CHPS

BID DOCUMENT PACKAGE

Existing Branch Panel: L2A

Location: C2057
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 208Y120V
Phases: 3
Wires: 4
A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes circuit details for existing loads and spares, and a Panel Totals section.

Existing Branch Panel: C2A

Location: T2104
Supply From: C21 VIA T-C21 IN T0040
Mounting: Surface
Enclosure: Type 1

Volts: 208Y120V
Phases: 3
Wires: 4
A.I.C. Rating:
Mains Type: MCB
Mains Rating: 400 A
MCB Rating: 225 A

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes circuit details for existing loads and spares, and a Panel Totals section.

Existing Branch Panel: N2A

Location: T2104
Supply From: N21 VIA T-N21 IN SAME ROOM
Mounting: Surface
Enclosure: Type 1

Volts: 208Y120V
Phases: 3
Wires: 4
A.I.C. Rating:
Mains Type: MCB
Mains Rating: 400 A
MCB Rating:

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes circuit details for existing loads and spares, and a Panel Totals section.

Existing Branch Panel: C21(PCT)

Location: T2104
Supply From: CDP-1 IN T0041
Mounting: Surface
Enclosure: Type 1

Volts: 480Y277V
Phases: 3
Wires: 4
A.I.C. Rating: 42KA
Mains Type: MLO
Mains Rating: 250 A
MCB Rating: N/A

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes circuit details for existing loads and spares, and a Panel Totals section.

Existing Branch Panel: N21(PCT)

Location: T2104
Supply From: NDP-1 IN T0040
Mounting: Surface
Enclosure: Type 1

Volts: 480Y277V
Phases: 3
Wires: 4
A.I.C. Rating:
Mains Type: MLO
Mains Rating: 225 A
MCB Rating: NA

Table with columns: CKT, Circuit Description, Trip, Poles, A, B, C, Poles, Trip, Circuit Description, CKT. Includes circuit details for existing loads and spares, and a Panel Totals section.

GENERAL SHEET NOTES

UPON COMPLETION OF CONSTRUCTION, PROVIDE RED-LINED PANEL SCHEDULE DEPICTING THE ACTUAL CIRCUITS MODIFIED OR ADDED AS PART OF THIS PROJECT TO UHHC. PROVIDE NEW TYPED PANELBOARD SCHEDULES WITHIN EACH PANEL ENCLOSURE FOR ALL PANELS MODIFIED AS PART OF THIS PROJECT.



bcDESIGN GROUP

12101 W 110th Street, Suite 100
Overland Park, KS 66210
913.232.2123

Project Team:

ROSS & BARUZZINI, INC.
4 South Old Orchard | St. Louis, MO 63119
314.918.8383
Missouri Certificate of Authority Missouri Certificate of Authority #032-02

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ALLAN ROBERT HENDRIKSE
PE-2004017185

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MU Project #: CP210751

E604

PANEL SCHEDULES - CHPS

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