



Intermountain Health
Intermountain Health
Intermountain Medical Center
Angio Lab #3 Remodel Project

\$121 South Cottonwood Street
Murray, UT 84107

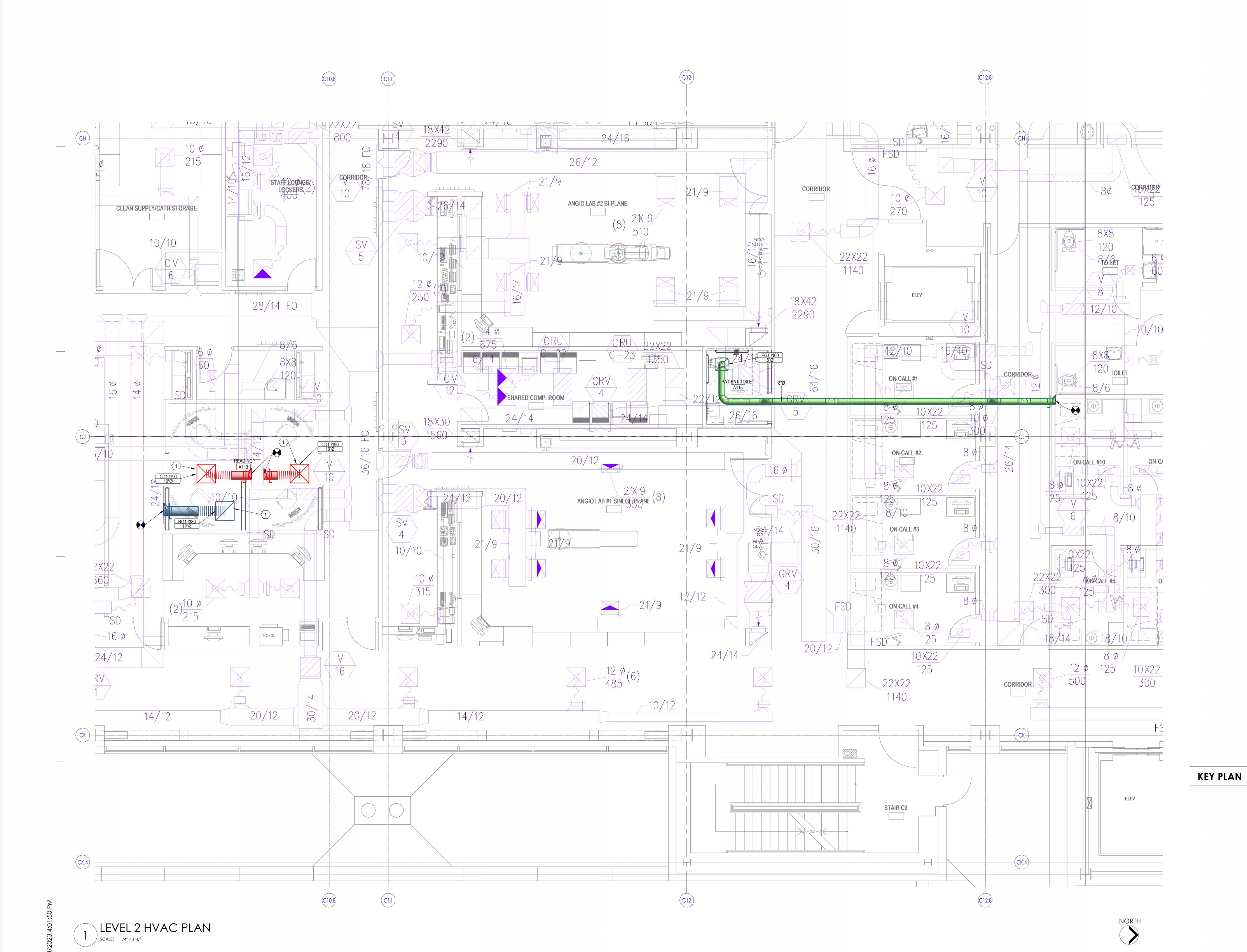
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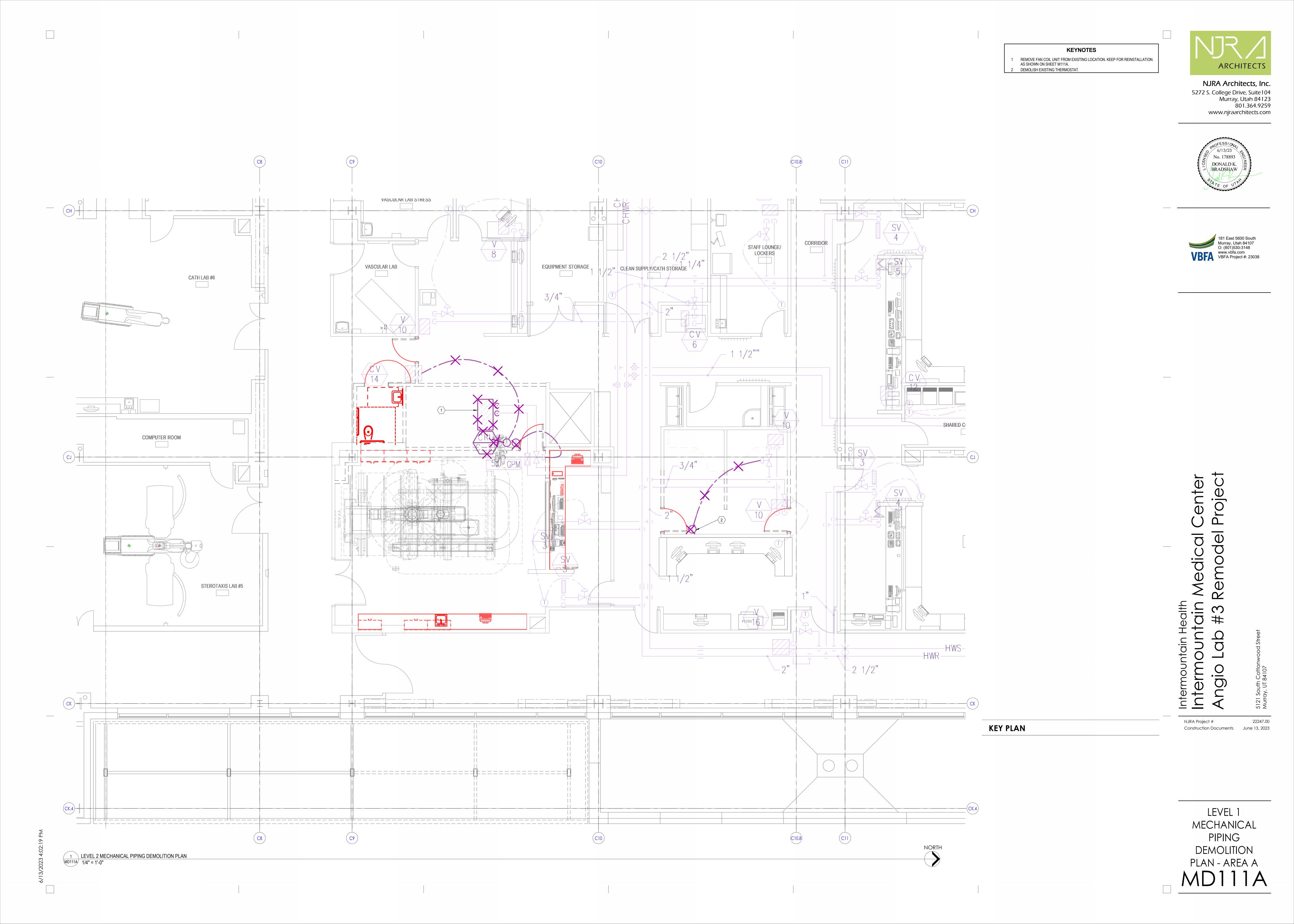
NJRA Project #

Construction Doc

LEVEL 1 HVAC PLAN - AREA B

M101B





KEYNOTES



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com





Intermountain Medical Center
Angio Lab #3 Remodel Project

NJRA Project # 22247.00
Construction Documents June 13, 2023

LEVEL 1
MECHANICAL
PIPING
DEMOLITION
PLAN - AREA B
MD1118

REF FLAN

ANGIO LAB #2 BI-PLANE

54.0 GPM

ELEV

(C10.8)

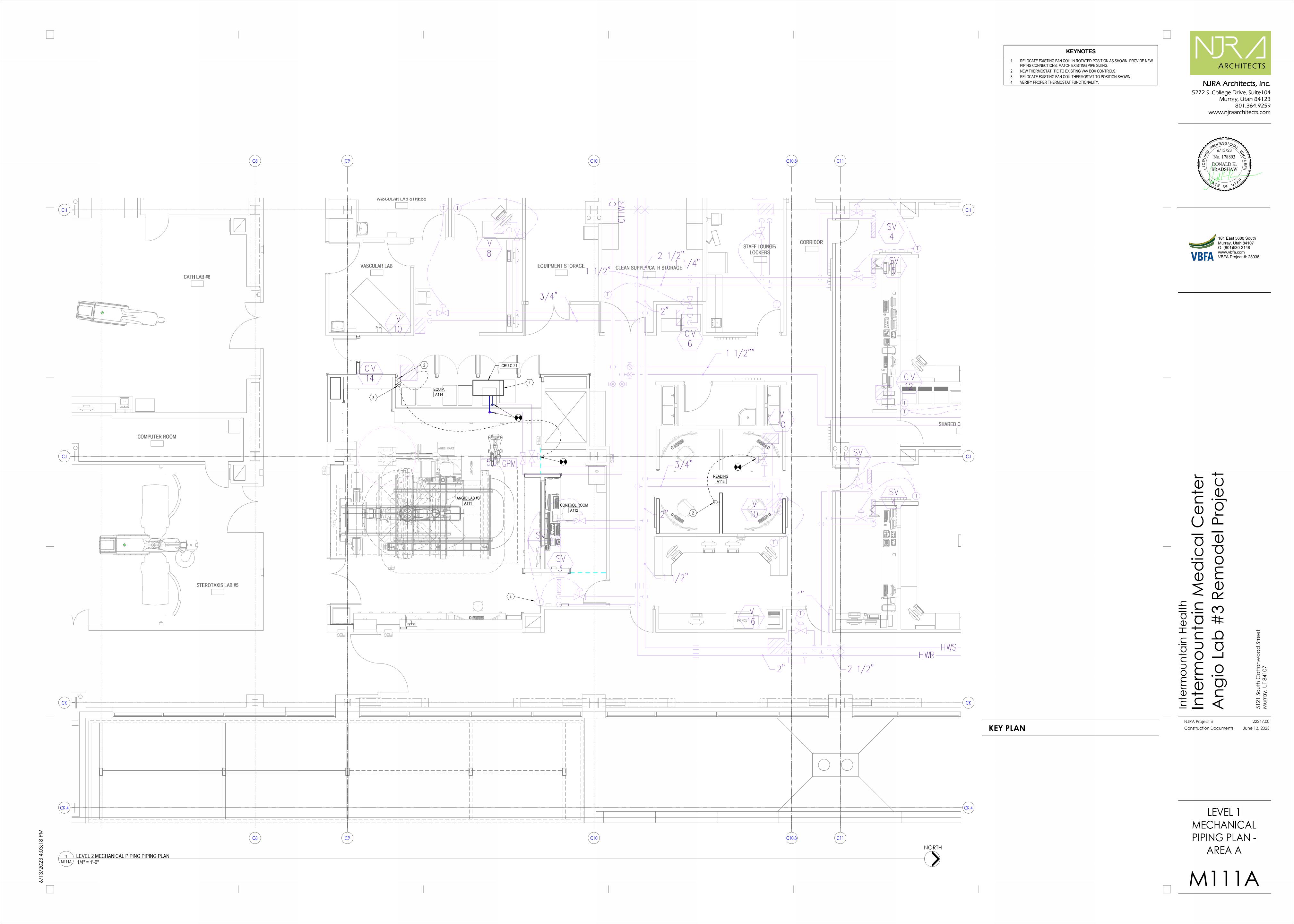
STAFF LOUNGE/ LOCKERS

\_ 1 1/2""

**EQUIPMENT STORAGE** 

1 LEVEL 2 MECHANICAL PIPING DEMOLITION PLAN MD111B 1/4" = 1'-0"

CORRIDOR









KEY PLAN

\_\_\_\_\_CK.4

ANGIO LAB #2 BI-PLANE

/CRU

ANGIO LAB #1 SINLGE PLANE

CORRIDOR

54.0 GPM

ELEV

ON-CALL #1

ON-CALL #2

ON-CALL #3

ON-CALL #4

STAIR C9

-2 1/2"

PATIENT TOILET

CORRIDOR

(C10.8)

STAFF LOUNGE/ LOCKERS

**EQUIPMENT STORAGE** 

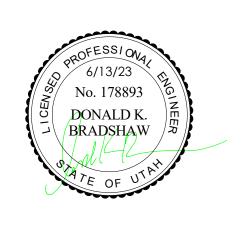
1 LEVEL 2 MECHANICAL PIPING PIPING PLAN
1/4" = 1'-0"

CLEAN SUPPLY/CATH STORAGE

LEVEL 1 MECHANICAL PIPING PLAN -AREA B

M111B









DUCT LINER

TOP AND BOTTOM
SECTION OF LINER
SHALL OVERLAP THE
SIDES

METAL
FASTENERS 12"
O.C. MAX. (TYP.)

NOT MORE
THAN 2" FROM
EDGE OF LINER

BUTTED FIRMLY TOGETHER
AND TAPED OVER.

DUCT LINER TO BE
COATED WITH ADHESIVE.
ENDS OF LINER SHALL BE
BUTTED FIRMLY TOGETHER
AND TAPED OVER.

FLEX DUCT

RECTANGLE TO ROUND TRANSITION

RECTANGULAR DUCT

AIR FLOW

HIGH EFFICIENCY TAKE-OFF DETAIL

MODEL NO SCALE

SUPPORT FLEX — DUCT AND DIFFUSER FROM STRUCTURE ABOVE

NOTE: RETURN SIMILAR BUT WITHOUT DUCT

MODEL NO SCALE

MODEL NO SCALE

DIFFUSER CONNECTION DETAIL

VOLUME DAMPER

FLEX DUCT TO
MIXING BOX - SEE
PLAN FOR SIZE

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MECHANICAL DETAILS

\_\_\_\_M501

GRILLES, REGISTERS AND DIFFUSERS				
ID	MANUFACTURER	MODEL	DESCRIPTION	
CD1	EH PRICE	SPD	FACE STYLE: SQUARE PLAQUE DIFFUSER FACE SIZE: 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE APPLICATION: ENGINEERED VAV SYSTEMS MATERIAL: STEEL FINISH: B12 WHITE POWDERCOAT	MOUNTING-FRAME: SURFACE OR LAY-IN, (C/W CEILING TYPE.) PATTERN: 360° RADIAL HORIZONTAL AIR PATTER! DAMPER: OPPOSED BLADE MAX NC - 30 DAMPER: NONE REMOVABLE FACE
RG1	EH PRICE	PDDR	FACE STYLE: PERFORATED RETURN AIR UNIT FACE SIZE: 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE APPLICATION: AIR RETURN MATERIAL: STEEL FINISH: B12 WHITE POWDERCOAT	MOUNTING-FRAME: SURFACE OR LAY-IN, (C/W CEILING TYPE.) DAMPER: NONE  MAX NC - 30 REMOVABLE FACE & CORE
EG-1	EH PRICE	80	FACE STYLE: CRATE RETURN AIR UNIT FACE SIZE: 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE APPLICATION: PRESSURIZED AIR RETURN MATERIAL: STEEL FINISH: B12 WHITE POWDERCOAT	MOUNTING-FRAME: SURFACE OR LAY-IN, (C/W CEILING TYPE.)  DAMPER: OPPOSED BLADE MAX NC - 30 REMOVABLE FACE & CORE
SWS1	EH PRICE	520S	BLADE ORIENTATION: VERTICAL FRONT WITH	FINISH: B12 WHITE POWDERCOAT FRAME: 1.25" BORDER MOUNTING: SURFACE PATTERN: ADJUSTIBLE DAMPER: NONE MAX NC - 30 CORE: REMOVABLE

MATERIAL: STEEL

FINISH: B12 WHITE POWDERCOAT

SWR1

EH PRICE

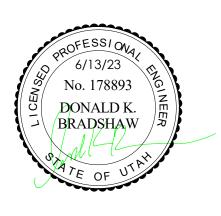
FACE STYLE: SIDE WALL RETURN AIR GRILLE
ARRANGEMENT: STATIONARY HORIZONTAL
BLADE ORIENTATION: 45 DEG DEFLECTION
VANES SPACED AT 1/2 INCH CENTERS.
FRONT BLADES PARALLEL TO SHORT DIMENSION.

FROM 1.25 INCH FLAT / BORDER
MOUNTING: SURFACE
PATTERN: PERMANENT 45 DEGREE DEFLECTION
DAMPER: OPPOSED BLADE
MAX NC - 30

REMOVABLE FACE & CORE



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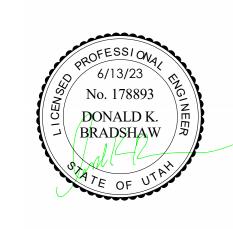
## ntermountain Health Intermountain Medical Center Angio Lab #3 Remodel Project

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MECHANICAL SCHEDULES

M601





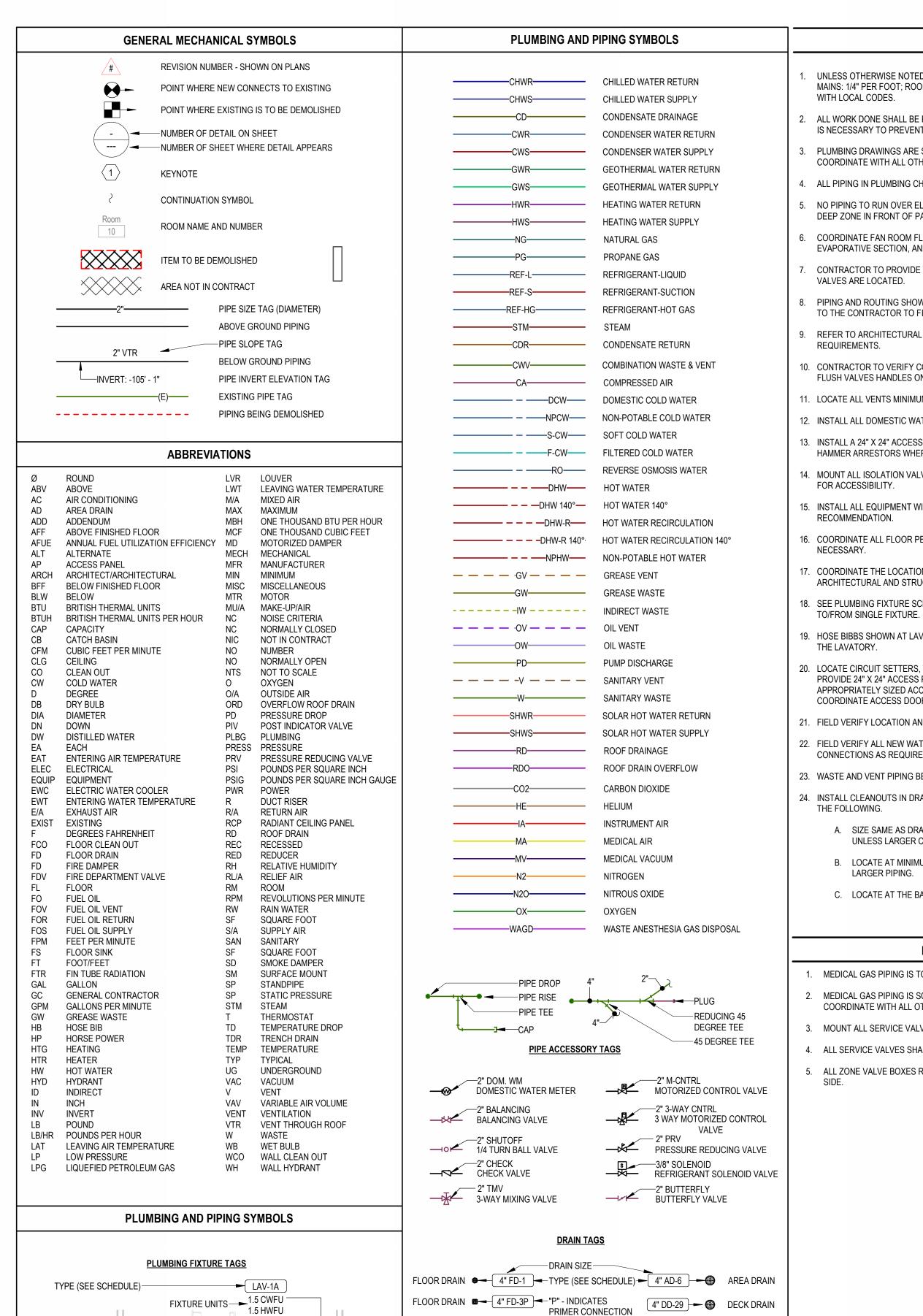
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22247.00 NJRA Project #

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PLUMBING TITLE SHEET

P000



FLOOR SINK 4" FS-4

8 WFU <del>─</del>FIXTURE UNITS

ROOF AREA

SERVED BY DRAIN → 4000 SF

LAV-1A

1 WFU

WATER CLOSET -

PIPE ACCESORY-

WALL HUNG - ADA

WC-1A

4" WCO

- UNLESS OTHERWISE NOTED, SLOPE PIPE AS FOLLOWS: WASTE BRANCHES: 1/4" PER FOOT; WASTE MAINS: 1/4" PER FOOT; ROOF DRAIN/ROOF DRAIN OVERFLOW: 1/8" PER FOOT. VERIFY ALL SLOPING
- ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING AREAS ON FLOORS BELOW.

PLUMBING GENERAL NOTES

- PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OTHER TRADES.
- ALL PIPING IN PLUMBING CHASES SHALL BE ARRANGED TO ALLOW MAINTENANCE ACCESS.
- NO PIPING TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S, AND MCC'S.
- COORDINATE FAN ROOM FLOOR DRAIN AND FLOOR SINK LOCATIONS WITH COOLING COIL, EVAPORATIVE SECTION, AND HEATING COIL LOCATIONS.
- CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE
- PIPING AND ROUTING SHOWN, INCLUDING ALL BELOW FLOOR DECK PIPING IS APPROXIMATE. IT IS UP TO THE CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND SIZE OF ALL PIPING.
- REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS, DIMENSIONS AND OTHER REQUIREMENTS.
- 0. CONTRACTOR TO VERIFY CONNECTION SIDE OF ADA FIXTURES AND ADJUST ACCORDINGLY. INSTALL FLUSH VALVES HANDLES ON WIDE SIDE OF ALL FIXTURES.
- 1. LOCATE ALL VENTS MINIMUM 25' AWAY FROM AIR INTAKES.
- 2. INSTALL ALL DOMESTIC WATER LINES BELOW DUCTWORK.
- 3. INSTALL A 24" X 24" ACCESS DOOR BELOW ALL ISOLATION VALVES, BALANCING VALVES AND WATER HAMMER ARRESTORS WHERE MOUNTED ABOVE HARD CEILINGS.
- 4. MOUNT ALL ISOLATION VALVES, CONTROL VALVES, BALANCING VALVES, ETC. NEAR CEILING HEIGHT FOR ACCESSIBILITY.
- 5. INSTALL ALL EQUIPMENT WITH SUFFICIENT CLEARANCE FOR MAINTENANCE PER MANUFACTURERS
- 6. COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL AND PROVIDE SLEEVES AS
- 17. COORDINATE THE LOCATION OF THE FLOOR DRAIN, SHOWER DRAIN, OR FLOOR SINK WITH
- ARCHITECTURAL AND STRUCTURAL, TYPICAL. 8. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES OF WASTE, VENT AND DOMESTIC WATER
- 19. HOSE BIBBS SHOWN AT LAVATORIES ARE TO BE MOUNTED AT AN ACCESSIBLE LOCATION UNDER
- THE LAVATORY. 20. LOCATE CIRCUIT SETTERS, VALVES, WATER HAMMER ARRESTORS, ETC. IN ACCESSIBLE LOCATIONS.
- PROVIDE 24" X 24" ACCESS PANEL WHERE ITEM IS LOCATED ABOVE A HARD CEILING. PROVIDE APPROPRIATELY SIZED ACCESS DOORS TO ANY OF THESE ITEMS INSTALLED IN A WALL. COORDINATE ACCESS DOOR SIZE, LOCATION, AND STYLE WITH ARCHITECT.
- 21. FIELD VERIFY LOCATION AND INVERTS OF SITE UTILITIES PRIOR TO INSTALLATION.
- 22. FIELD VERIFY ALL NEW WATER, WASTE AND VENT PIPING CONNECTIONS AND PROVIDE NEW CONNECTIONS AS REQUIRED FOR PROPERLY OPERATING SYSTEMS.
- 23. WASTE AND VENT PIPING BELOW FLOOR AND THROUGH FLOOR TO BE 2" MINIMUM.
- 24. INSTALL CLEANOUTS IN DRAIN PIPING AS INDICATED, AND WHERE NOT INDICATED, ACCORDING TO THE FOLLOWING.
  - A. SIZE SAME AS DRAINAGE PIPING UP TO 4" NPS. USE 4" NPS FOR LARGER. DRAINAGE PIPING UNLESS LARGER CLEANOUT IS INDICATED.
  - B. LOCATE AT MINIMUM INTERVALS OF 50 FT FOR PIPING 4" NPS AND SMALLER AND 100 FT FOR LARGER PIPING.
  - C. LOCATE AT THE BASE OF EACH VERTICAL STACK.

## MEDICAL GAS GENERAL NOTES

- MEDICAL GAS PIPING IS TO BE RUN ABOVE THE CEILING, UNLESS NOTED OTHERWISE. MEDICAL GAS PIPING IS SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND
- COORDINATE WITH ALL OTHER TRADES.
- 3. MOUNT ALL SERVICE VALVES NEAR CEILING HEIGHT FOR ACCESSIBILITY.

4" RD-12 FLOW CONTROL

4" RD-15 ROOF DRAIN

COMBINATION

DRAINS

4. ALL SERVICE VALVES SHALL BE LOCKABLE. PROVIDE FRANGIBLE LOCK FOR ALL SERVICE VALVES. 5. ALL ZONE VALVE BOXES REQUIRE SOURCE AIR FROM LEFT SIDE AND CONTROLLED AIR FROM RIGHT

- 1. THE PROJECT GENERAL NOTES APPLY TO ALL DISCIPLINES.
- 2. REMOVE ALL UNUSED PIPING, DUCTWORK, EQUIPMENT, AND ACCESSORIES.
- 3. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS WITHIN THE TENANT SPACE AND WITHIN CLOSE PROXIMITY TO THE TENANT SPACE. THE CONTRACTOR WILL FIELD VERIFY AS MUCH AS IS REASONABLE BEFORE THE FINAL BID. AFTER THE FINAL BID THE CONTRACTOR WILL NOTIFY THE OWNER, ARCHITECT, AND MECHANICAL DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF EXISTING CONDITIONS THAT MAY AFFECT THE DESIGN.

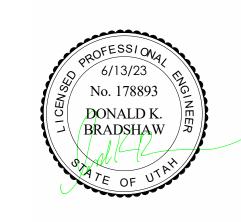
PROJECT GENERAL NOTES

- 4. THE MECHANICAL CONTRACTOR SHALL PERFORM SERVICE AND REPAIR ON THE EXISTING EQUIPMENT AND ITS ACCESSORIES AS FOLLOWS: CLEAN ALL COILS, REPLACE THE FILTERS AND BELTS, INSPECT, REPAIR, OR REPLACE THE ECONOMIZERS, DRIVERS AND FAN BEARINGS, MOTORS, CONTROL COMPONENTS, VALVES, AND ANY OTHER ITEM NECESSARY FOR A COMPLETE AND PROPER OPERATING SYSTEM, THIS CONTRACTOR SHALL ALSO VISIT THE SITE, PRIOR TO FINAL BIDDING, AND VERIFY ALL EXISTING SITE CONDITIONS. PROVIDE ALL MATERIAL AND COMPONENTS AS NEEDED TO BRING THE UNITS TO FULL COMPLIANCE OF THE LANDLORD'S CRITERIA AND LOCAL AUTHORITY HAVING JURISDICTION.
- 5. WHERE FLOOR DRAINS OCCUR WITH THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.
- COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, EQUIPMENT, CEILINGS, ARCHITECTURAL COMPONENTS, AND ANYTHING ELSE PERTAINING TO THE PROJECT TO PREVENT CONFLICTS.
- 7. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AND THOSE OF OTHER DISCIPLINES, INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, CIVIL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS PROJECT.
- 8. FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATION BUILDING CODE, INTERNATIONAL MECHANICAL CODE, AND INTERNATIONAL PLUMBING CODE.
- 9. LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
- 10. ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.
- 11. COORDINATE INSTALLATION OF DUCTWORK, PIPING AND MECHANICAL EQUIPMENT WITH NEC CLEARANCES INCLUDING THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT. NO PIPING OR DUCTWORK TO RUN OVER ELECTRICAL PANELS. VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S AND MCC'S. PROVIDE PANS IF REQUIRED UNDER PIPING.
- 12. FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS, THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CAULKING AND SEALING ALL PENETRATIONS IN FIRE AND SMOKE RATED PARTITIONS TO MAINTAIN RATINGS. REFER TO SPECIFICATION.
- 13. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS,
- 14. TRANSITION PIPING AND DUCTWORK SIZES TO MATCH THE SIZE OF EQUIPMENT CONNECTION.
- 15. REFER TO PLUMBING SERIES DRAWINGS FOR GAS PIPING.
- 16. ALL PIPE AND DUCT SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
- 17. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
- 18. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- 19. MECHANICAL CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT IS PROVIDED AND INSTALLED WITH CLEARANCES PER MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL MAINTAIN
- PROPER SERVICE SPACE FOR COIL PULLS, BAS DEVICES, MAINTENANCE ACCESS, ETC. 20. INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.
- 21. LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD, INCLUDING, BUT NOT LIMITED TO, OFFSETS AND TRANSITIONS. NEW DUCTWORK, PIPING AND EQUIPMENT SHALL BE COORDINATED WITH STRUCTURE, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUIT, PLUMBING, MECHANICAL AND FIRE PROTECTION PIPING, MEDICAL GASES, ALL OTHER TRADES AND
- 22. THE CONTRACTOR SHALL INFORM THE DESIGNER OF ANY PROPOSED DEVIATIONS FROM THE CONTRACT DOCUMENTS.
- 23. IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS, IMMEDIATELY STOP WORK IN THIS AREA AND NOTIFY THE OWNER.

ALL OTHER EXISTING CONDITIONS TO AVOID INTERFERENCE IN THE FIELD.

- 24. DETAILS REFERENCE ALL SHEETS.
- 25. INSTALL ALL PIPING AND DUCTWORK WITHOUT FORCING OR SPRINGING.
- 26. ROUTE DOMESTIC WATER, FIRE PROTECTION, SANITARY WASTE, ROOF DRAIN, CAMPUS CHILLED OR HOT WATER, AND ANY OTHER UTILITY SERVICES TO SITE UTILITIES 5'-0" FROM BUILDING UNLESS NOTED OTHERWISE. REFER TO CIVIL PLANS.
- 27. LOCATE VALVING, ACCESSORIES, AND EQUIPMENT IN ACCESSIBLE LOCATIONS. WHERE LOCATED ABOVE HARD CEILING PROVIDE AN ACCESS DOOR IN CEILING. MINIMUM ACCESS DOOR SIZE OF 24" X 24". COORDINATE EXACT LOCATION AND STYLE WITH ARCHITECT. EQUIPMENT SHALL BE LOCATED IN THE CEILING CAVITY SO IT CAN BE SAFELY SERVICED FROM SOMEONE STAND ON A LADDER PLACED BELOW THE CEILING ACCESS.
- 28. WHERE VALVING, ACCESSORIES, OR EQUIPMENT IS LOCATED IN A WALL, PROVIDE AN APPROPRIATELY SIZED ACCESS DOOR. COORDINATE ACCESS DOOR SIZE, LOCATION, AND STYLE
- 29. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.





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The intermountain Medical Center

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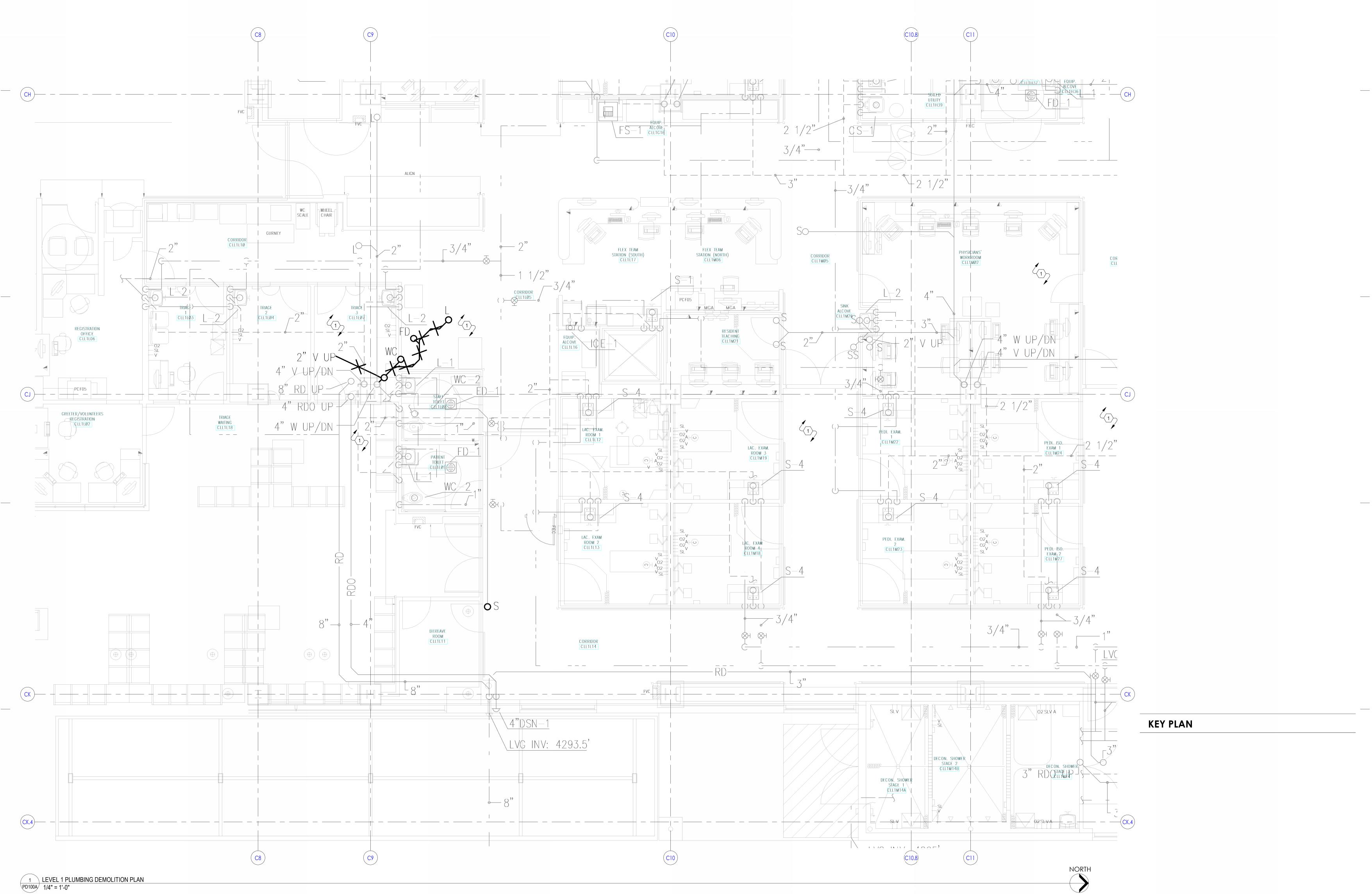
Angio Lab #3 Remodel Project

The intermountain Medical Center

Angio Lab #3 Remodel Project

UNDERFLOOR
PLUMBING
DEMOLITION
PLAN - AREA A

PD100A

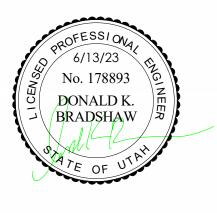


KEYNOTES

1 EXISTING SHOWN LIGHT TO REMAIN. ITEMS SHOWN DARK AND CROSSED OUT TO BE REMOVED. TYPICAL.



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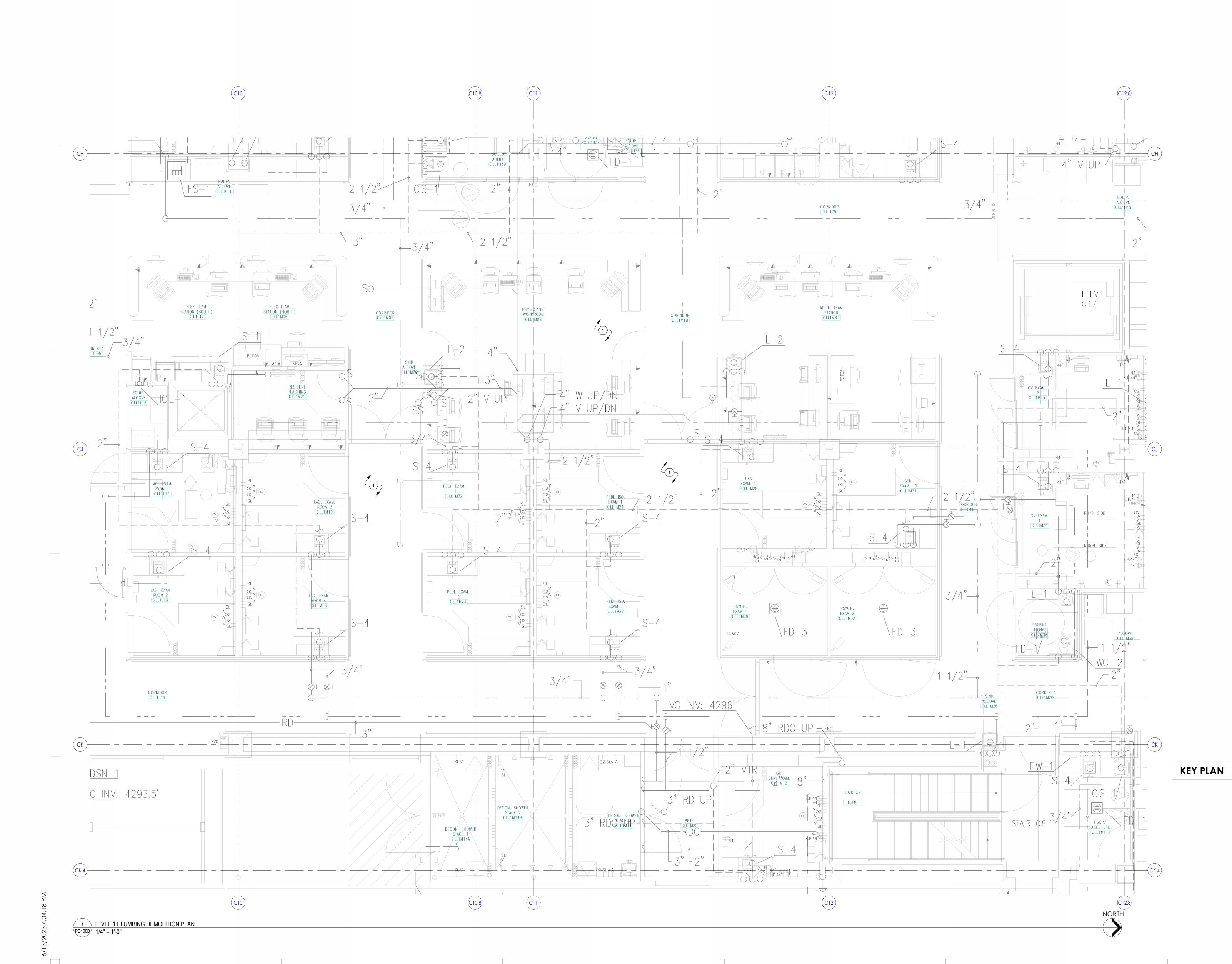
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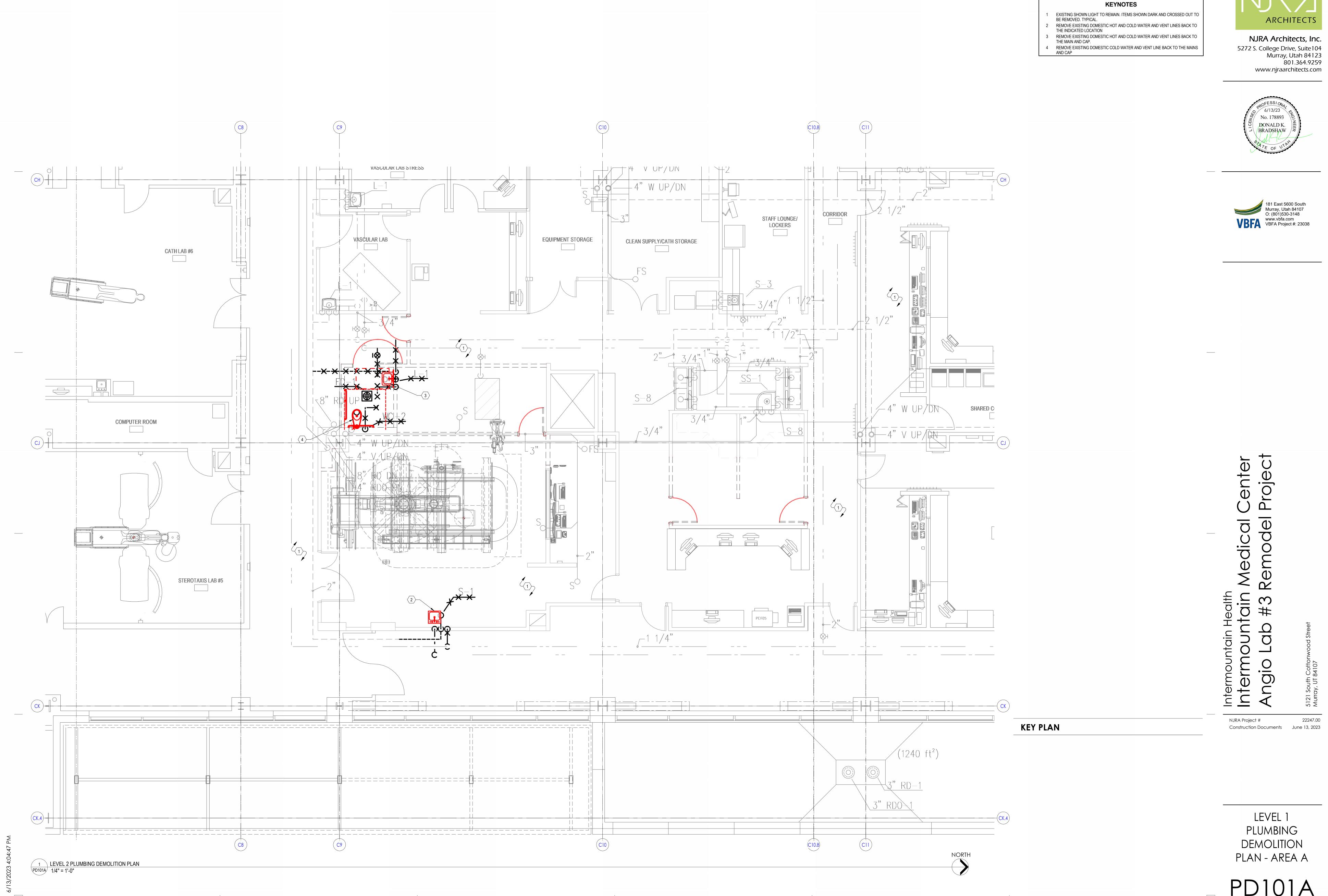
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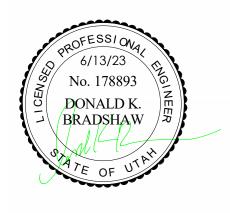
UNDERFLOOR
PLUMBING
DEMOLITION
PLAN - AREA B

PD100B







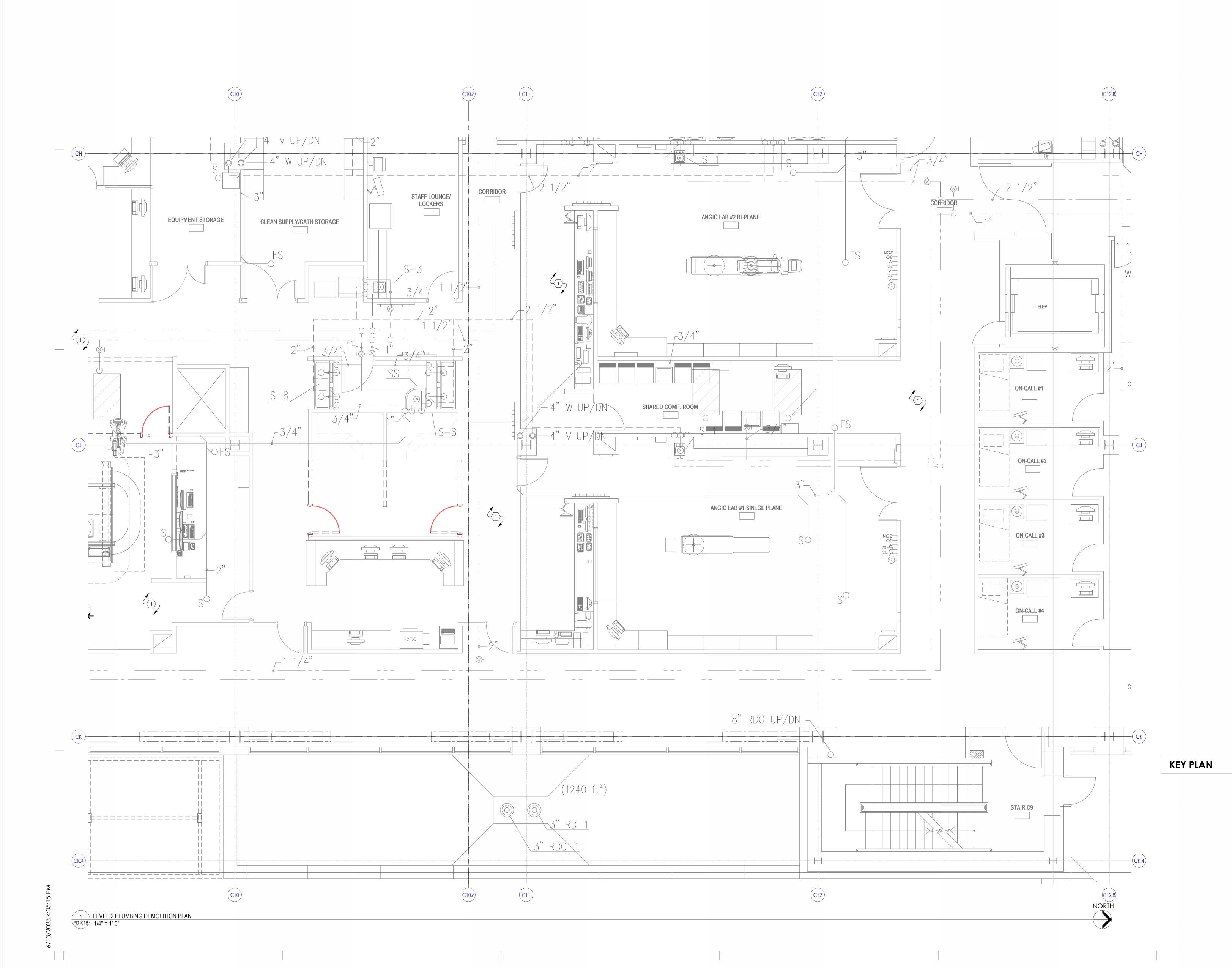






LEVEL 1
PLUMBING
DEMOLITION
PLAN - AREA B

PD101B









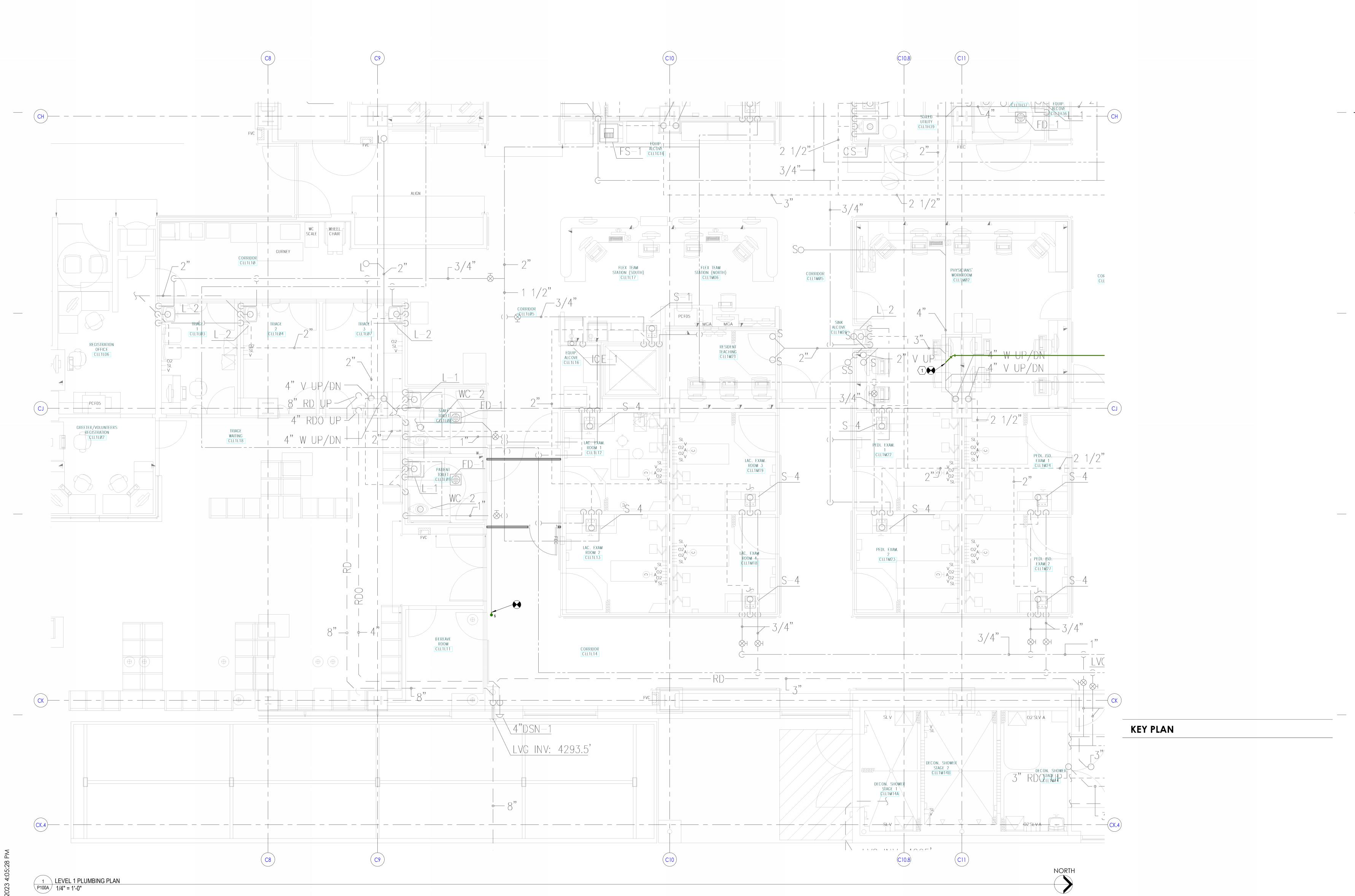
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UNDERFLOOR PLUMBING PLAN

P100A



KEYNOTES

1 CONNECT INTO EXISTING WASTE LINE



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