Intermountain℠ Healthcare

INTERMOUNTAIN MEDICAL CENTER

CATH LAB #2- BUILDING 4 LEVEL 1

CONSTRUCTION DOCUMENTS

NJRA ARCHITECTS

Intermountain℠ Healthcare

Project No. 20204.00
Project Address: 5121 S Cottonwood Street,
Murray, Utah 84107

Date: July 15, 2020

PROJECT IS LOCATED AT LEVEL 1 OF BUILDING 4.

INTERMOUNTAIN MEDICAL CENTER- AERIAL VIEW

OWNER	**INTERMOUNTAIN HEALTHCARE** 36 SOUTH STATE STREET 23RD FLOOR SALT LAKE CITY, UT 84111
ARCHITECT	**NJRA ARCHITECTS, INC.** 5272 SOUTH COLLEGE DRIVE SUITE 104 MURRAY, UT 84123
MECHANICAL/ PLUMBING ENGINEER	**VAN BOERUM & FRANK ASSOCIATES, INC.** 330 SOUTH 300 EAST SALT LAKE CITY, UT 84111
ELECTRICAL ENGINEER	**SPECTRUM ENGINEERS** 324 SOUTH STATE STREET, SUITE 400 SALT LAKE CITY, UT 84111
STRUCTURAL ENGINEER	**REAVELEY ENGINEERS** 675 EAST 500 SOUTH, SUITE 400 SALT LAKE CITY, UT 84102

ABBREVIATIONS

A/C	AIR CONDITIONING
ACOUS	ACOUSTICAL
AD	AREA DRAIN
AFF	ABOVE FINISH FLOOR
AVE	AVENUE
B/M	BENCH MARK
BC	BOTTOM OF CURB
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BRG	BEARING
BS	BOTH SIDES
BSMT	BASEMENT
C&G	CURB AND GUTTER
CG	CORNER GUARD
CJ	CONTROL OR CONSTRUCTION JOINT
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
CONC	CONCRETE
CONT	CONTINUOUS
DEMO	DEMOLITION
DF	DRINKING FOUNTAIN
DIAG	DIAGONAL
DIAM	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DS	DOWNSPOUT
E	EAST
EA	EACH
EJ	EXPANSION JOINT
ELEC	ELECTRIC(AL)
ENCL	ENCLOSURE
EP	EDGE OF PAVEMENT
EQ	EQUAL
EQPT	EQUIPMENT
ES	EACH SIDE
EWC	ELECTRICAL WATER COOLER
EXT	EXTERIOR
FA	FIRE ALARM
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FL	FLOOR
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FPRF	FIREPROOFING
FS	FLOOR SINK
FSP	FIRE SPRINKLER
FWC	FABRIC WALL COVERING
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GFRC	GLASS FIBER REINFORCED CONCRETE
GLU LAM	GLUE LAMINATED BEAM
GYP	GYPSUM
HB	HOSE BIB
HDCP	HANDICAP (PED)
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT OR HORSEPOWER
HT	HEIGHT
HVAC	HEATING, VENTILATING, AIR CONDITIONING
ID	INSIDE DIMENSION/ DIAMETER
IE	INVERT ELEVATION
IN	INCH
INT	INTERIOR
JT	JOINT
KBD	ARTICULATED KEYBOARD TRAY
KO	KNOCKOUT
KOP	KNOCK OUT PANEL
LAB	LABORATORY
LAM	LAMINATED
LAV	LAVATORY
LB	POUND
LH	LEFT HAND
LIN	LINEAR
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LP	LOW POINT
MAX	MAXIMUM
MC	MEDICINE CABINET
MDL	MEDIUM DENSITY LAMINATE
MECH	MECHANICAL
MEZZ	MEZZANINE
MH	MANHOLE
MM	MILLIMETER
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MLDG	MOLDING
MO	MASONRY OPENING
MON	MONUMENT
MTL	METAL
N	NORTH
NC	NURSE CALL
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE

O/O	OUT TO OUT
O/	OVER
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIMENSION/ DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
ORIG.	ORIGINAL
OZ	OUNCE
PL	PLATE
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
POS	POSITIVE
PR	PAIR
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PTD	PAPER TOWEL DISPENSER
PTR	PAPER TOWEL RECEPTACLE
PTS	PNEUMATIC TUBE STATION
RAD	RADIUS
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCE (MENT)
REQD	REQUIRED
REV	REVISION
RFG	ROOFING
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RV	ROOF VENT
S	SOUTH/SINK
SCHED	SCHEDULE
SD	STORM DRAIN OR SOAP DISPENSER/DISH
SIM	SIMILAR
SM	SHEET METAL
SMS	SHEET METAL SCREW
SPEC	SPECIFICATIONS
SQ YD	SQUARE YARD
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SS	STAINLESS STEEL
ST	STREET
STD	STANDARD
STOR	STORAGE
STRUC	STRUCTURAL
SUSP	SUSPENDED
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TOP OF CURB
TOC	TOP OF CONCRETE/CURB
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOL	TOLERANCE
TOPO	TOPOGRAPHIC
TOS	TOP OF STEEL/SLAB
TOW	TOP OF WALL
TP	TOP OF PAVEMENT
TRANS	TRANSFORMER
TRTD	TREATED
TS	TUBE STEEL
TV	TELEVISION
TYP	TYPICAL
U/S	UNDER SIDE
U/C	UNDER CABINET
UL	UNDERWRITERS LABORATORIES
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VEST	VESTIBULE
VWC	VINYL WALL COVERING
W/O	WITHOUT
W/	WITH
W	WEST/WASTE/WATER
WB	WALLBOARD
WD	WOOD
WG	WIRE GLASS
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YB	YARD BOX
YD	YARD DRAIN
@	AT
℔	PLATE OR PROPERTY LINE
₵	CENTERLINE
&	AND
∠	ANGLE
ϕ	DIAMETER

GENERAL NOTES

1. MECHANICAL AND ELECTRICAL DRAWINGS ARE SUPPLEMENTAL TO THE ARCHITECTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO CHECK WITH THE ARCHITECTURAL DRAWINGS BEFORE THE INSTALLATION OF MECHANICAL OR ELECTRICAL CONSTRUCTION. ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL AND CONSULTING ENGINEERS' DRAWINGS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION. ANY CONSTRUCTION INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY THE GENERAL CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.

2. ALL WORK SHALL COMPLY WITH THE 2010 ADA ACCESSIBILITY GUIDELINES (AMERICANS WITH DISABILITIES ACT).

3. CODES GOVERNING THIS WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: 2018 INTERNATIONAL BUILDING CODE, APPLICABLE OSHA REGULATIONS. REQUIREMENTS OF CODES AND REGULATIONS SHALL BE CONSIDERED AS MINIMUM. WHERE THE CONTRACT DOCUMENTS EXCEED (WITHOUT VIOLATING) CODE AND REGULATION REQUIREMENTS, CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE. WHERE CODES CONFLICT, THE MORE STRINGENT SHALL APPLY.

4. THE CONTRACTOR SHALL PROVIDE ADEQUATE BARRICADES AND PROTECTIVE DEVICES SEPARATING CONSTRUCTION AREAS. TEMPORARY PASSAGES SHALL BE PROVIDED AS REQUIRED. THE CORRIDORS AND OTHER AREAS SHALL BE SEPARATED FROM THE CONSTRUCTION ZONE BY A NON-COMBUSTIBLE BARRIER FASTENED SECURELY TOP AND BOTTOM AND AT EACH END. PRIOR TO DELIVERY OF MATERIALS TO CONSTRUCTION ZONE AND REMOVAL OF WASTE FROM SITE THE CONTRACTOR SHALL CHECK WITH THE OWNER FOR AN ACCEPTABLE ROUTE AND TIME. ALL DOORS IN THE TEMPORARY PASSAGES SHALL HAVE A 44" CLEAR WIDTH AND BE FUNCTIONAL AT ALL TIMES TO SERVE AS THE REQUIRED EXIT FROM THE RATED CORRIDOR.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LOCATION AND SIZE OF OPENINGS FOR ALL TRADES AND SHALL COORDINATE ALL CONSTRUCTION AS INDICATED BY THE CONTRACT DOCUMENTS, INCLUDING SHOP DRAWINGS REVIEWED BY THE ARCHITECT.

6. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.

7. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER ALL MEASURES TO ACCOMPLISH THE WORK WITH THE MINIMUM OF INTERRUPTION TO NORMAL BUILDING PROCEDURES. SYSTEM SHUTDOWNS OF HVAC, PLUMBING, ELECTRICAL, AND NOISY CONSTRUCTION INCLUDING ROTO HAMMER, SAW CUTTING, CONCRETE ANCHORS, ETC. SHALL BE COORDINATED WITH THE OWNER AT LEAST 72 HOURS PRIOR TO COMMENCEMENT.

8. ALL DIMENSIONS ARE SHOWN TO FACE OF FINISH OF NEW CONSTRUCTION AND FACE OF FINISH OF EXISTING CONSTRUCTION, UNLESS NOTED OTHERWISE.

9. ALL DRAWINGS, THOUGH NOTED TO SCALE ARE FOR ILLUSTRATION ONLY. THE CONTRACTOR SHALL NOT SCALE DRAWINGS.

10. WHEN A DETAIL IS IDENTIFIED AS TYPICAL, THE CONTRACTOR IS TO APPLY THIS DETAIL IN ESTIMATING AND CONSTRUCTION TO EVERY LIKE CONDITION WHETHER OR NOT THE REFERENCE IS REPEATED IN EVERY INSTANCE.

11. ALL PENETRATIONS INTO SOUND OR FIRE RATED PARTITIONS, FLOORS OR CEILING ASSEMBLIES SHALL BE SEALED WITH APPROVED PERMANENT RESILIENT SEALANT. REFER TO IBC 2018 FOR REQUIREMENTS FOR OPENINGS IN FIRE RATED WALLS. FOR OPENINGS LESS THAN 16 SQUARE INCHES, THE SPACE BETWEEN THE WALL AND ALLOWED PENETRATIONS MUST BE SEALED TO PREVENT THE MOVEMENT OF HOT FLAME OR GASES. ELECTRICAL DEVICES, RECESSED CABINETS, ETC. SHALL BE SEALED, LINED, INSULATED OR OTHERWISE TREATED TO MAINTAIN THE INTEGRITY OF THE ASSEMBLY. SEE PENETRATION DETAILS.

12. DRAWINGS HAVE BEEN DETAILED IN COMPLIANCE WITH U.L. LISTING REQUIREMENTS AND ICBO REPORTS FOR THE MATERIALS SPECIFIED. IF AN ALTERNATE OR SUBSTITUTED MATERIAL IS ACCEPTED AS AN EQUAL BY THE GENERAL CONTRACTOR, HE/SHE WILL ASSUME THE RESPONSIBILITY FOR WHATEVER CONSTRUCTION MODIFICATION AND/OR ADDITIONAL COSTS ARE REQUIRED

13. ALL TRASH SHALL BE REMOVED DAILY. BUILDING MATERIALS MAY NOT BE STORED IN THE CORRIDORS AT ANY TIME. BLOCKAGE OF ANY REQUIRED EXIT IS PROHIBITED.

14. THE CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF WATER AND DRAIN INSTALLATIONS AND OTHER REQUIRED SERVICES WITH EQUIPMENT MANUFACTURERS.

15. ABBREVIATIONS THROUGHOUT THE PLAN ARE THOSE IN COMMON USE. THE ARCHITECT SHALL DEFINE THE INTENT OF ANY IN QUESTION.

16. INTERIOR FINISHES SHALL CONFORM TO THE REQUIREMENTS OF 2018 I.B.C.

17. CONTRACTOR SHALL REFER TO THE PROJECT MANUAL FOR A COMPLETE LIST OF GENERAL CONDITIONS, SPECIAL CONDITIONS AND OTHER NOTES.

18. INSTALL METAL CORNER BEADS AT ALL EXPOSED WALLBOARD EDGES. INSTALL CASING BEADS WHEREVER WALLBOARD, PLASTER, ETC ABUTS A DISSIMILAR FINISH MATERIAL. ALL DOOR SIZES SHOWN ON DOOR SYMBOLS ARE OPENING SIZES. ALLOWANCE FOR THRESHOLDS, ETC. SHOULD BE CONSIDERED. ALL DOORS AND FRAMES SHALL BE REINFORCED WHERE REQUIRED FOR CLOSERS, STOPS AND HARDWARE.

19. ALL WOOD TRIMS, SPACER, FILLER, ETC. THROUGHOUT JOB SHALL BE FIRE RETARDANT PRESSURE-TREATED, AS PER 2018 I.B.C. CONTRACTOR SHALL LOCATE BACKING PLATES BEHIND ALL WALL MOUNTED EQUIPMENT, CASEWORK, WALL MOUNTED DOOR STOPS AND ACCESSORIES TO ENSURE POSITIVE ATTACHMENT TO THE STRUCTURE. SEE RELEVANT DETAILS.

20. ELEVATIONS ARE WITH RESPECT TO FINISH FLOOR ELEVATION. VERIFY FINISH FLOOR HEIGHT.

GENERAL SYMBOL LEGEND

- RIGID INSULATION
- WOOD FRAMING - CONTINUOUS
- WOOD FRAMING - NON-CONTINUOUS
- GYPSUM BOARD
- STEEL (SECTION OR STUD PARTITION)
- GRAVEL
- CONCRETE (SECTION)
- STUCCO OR CONCRETE (ELEVATION)
- PLYWOOD
- FINISH WOOD
- BRICK
- CONCRETE MASONRY UNIT
- EARTH
- ALUMINUM
- BATT INSULATION
- CORNER GUARD
- ACOUSTICAL CEILING TILE
- ASPHALT PAVING
- STONE
- A — GRID LINE
- 1 — KEYED NOTE
- A1 / A4.0 — DETAIL REFERENCE
- A1 / A4.0 — BUILDING / WALL SECTION
- DIRECTION NORTH
- 1 — WINDOW TAG
- 101A — DOOR TAG
- NAME / 101 — ROOM NAME AND NUMBER
- 1 — WALL TYPES

INTERIM LIFE SAFETY MEASURES

Implementation of ILSM is required in or adjacent to all construction areas and throughout buildings with existing LSC deficiencies. ILSM apply to all personnel, including construction workers, must be implemented upon project development, and continuously enforced through project completion. ILSM are intended to provide a level of life safety comparable to that described in chapters 1 through 7, 31 and the applicable occupancy chapters of the LSC. Each ILSM action must be documented through written policies and procedures. Except as stated below, frequencies for inspection, testing, training, and ILSM consist of the following actions:

a. Ensuring exits provide free and unobstructed egress. Personnel shall receive training if alternative exits must be designated. Buildings or areas under construction must maintain escape facilities for construction workers at all times. Means of egress in construction areas must be inspected daily.

b. Ensuring free and unobstructed access to emergency departments/ services and for emergency forces.

c. Ensure fire alarm, detection, and suppression systems are not impaired. A temporary, but equivalent, system shall be provided when any fire system is impaired. Temporary systems must be inspected and tested monthly.

d. Ensuring temporary construction partitions are smoke tight and built of noncombustible or limited combustible materials that will not contribute to the development or spread of fire.

e. Providing additional fire-fighting equipment and use training of personnel.

f. Prohibiting smoking in accordance with MA.1.3.15 and in or adjacent to all construction areas.

g. Developing and enforcing storage, housekeeping, and debris removal practices that reduce the flammable and combustible fire load of the building to the lowest level necessary for daily operations.

h. Conducting a minimum of two fire drills per shift per quarter.

i. Increasing hazard surveillance of buildings, grounds, and equipment with special attention to excavations, construction areas construction storage, and field offices.

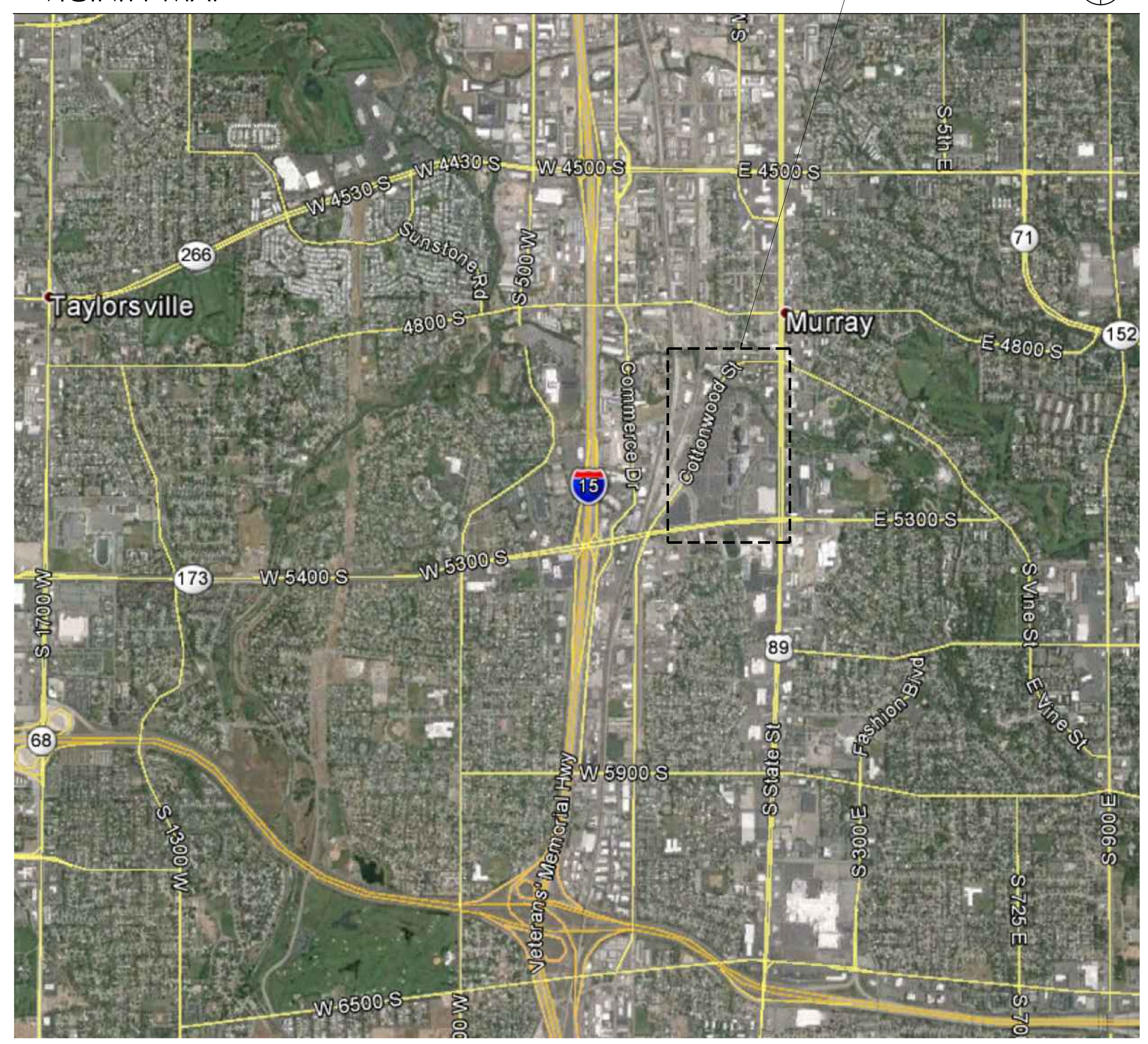
j. Training personnel when structural or compartment features of fire safety are compromised.

k. Conducting organization wide safety education programs to ensure awareness of any LSC deficiencies, construction hazards, and these ILSM.

VICINITY MAP

INTERMOUNTAIN MEDICAL CENTER

NORTH



DRAWING INDEX

NJRA ARCHITECTS

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STATE OF UTAH ★ LICENSED ARCHITECT ★
SELVAM RAJAVELU
267857

Intermountain Healthcare

IMC- Cath Lab 2 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 19205.00

Construction Documents July 15, 2020

General Information

2018 - I B C REVIEW

Main Hospital

Actual Stories: 15 (New Cath Lab at Level 1 of Building 4)

Project Square feet (BGSF): 830

Occupancy: I-2

Construction Type: 1A

Fireproofing: Yes

Highrise: Yes

Automatically Sprinkled: Yes

Structure: Unbonded Brace Frame

Allowable Area
For I-2 Occupancy & Type I-A Const.: Unlimited sq. ft. per floor (Table 503)
Area increase due to frontage: N/A
Total allowable area per floor: Unlimited sq. ft. (Table 503)

Project Remodel Area: 830 sq. ft. (Total area 1056 sq. ft.)

Allowable Stories
For I-2 Occupancy & Type I-A Const.: Unlimited Stories (Table 503)
Actual Stories: 13 above grade and 2 below grade

Common path of egress travel in exit access areas
For I-2 Occupancy - 75 feet (1014.3)

Exit access travel distance
For I-2 Occupancy - 200 feet (with sprinkler system) (Table 1016.1)

Corridor Width
For 1-2 Occupancy - 96 inches in areas where required for bed movement (1018.2)

Construction Type : Type I-A

Fire resistance rating requirements for building elements (Table 601)
Structural frame - 3 Hours
Exterior Bearing walls - 3 Hours
Interior Non-Bearing walls- 0 Hours
Floor Construction - 2 Hours
Roof Construction - $1\frac{1}{2}$ Hours

Sprinkler System
Entire Building is fully equipped with automatic sprinkler system.

Incidental use areas
Waste & linen collection rooms located in I-2 occupancy - 1 hour (IBC Table 509)
Storage rooms larger than 100 sq.ft. and storing combustible material- 1 hour (NFPA 18.3.2.1)
Storage rooms larger than 50 sq.ft and not exceeding 100 sq.ft- provide door closer. (NFPA 18.3.6.3.11)

Occupant Load (Table 1004.1.1)
Inpatient Treatment areas- 240 sq.ft. per person
Total Occupant Load = 5 occupants

Egress width calculation:
Required egress width per IBC sec. 1005.1 = occupant load x 0.3
5 x 0.3= 1.5 inches
Egress width provided = 36 inches

APPLICABLE CODES

International Building Code (IBC)	2018
International Fire Code	2018
International Mechanical Code (IMC)	2018
International Plumbing Code	2018
National Electric Code	2017
NFPA 101 Life Safety Code	2018
ANSI 117.1	2009

LEGEND

- 0-HR SMOKE PARTITION WALL
- 1-HR FIRE RATED SMOKE BARRIER WALL SEPARATING SMOKE ZONES
- 1-HR FIRE RATED WALL
- 2-HR FIRE RATED WALL
- DENOTES PATH OF TRAVEL TO EXIT.
- FEC FIRE EXTINGUISHER CABINET
- EXIT SIGN
- 2 OCCUPANT LOAD

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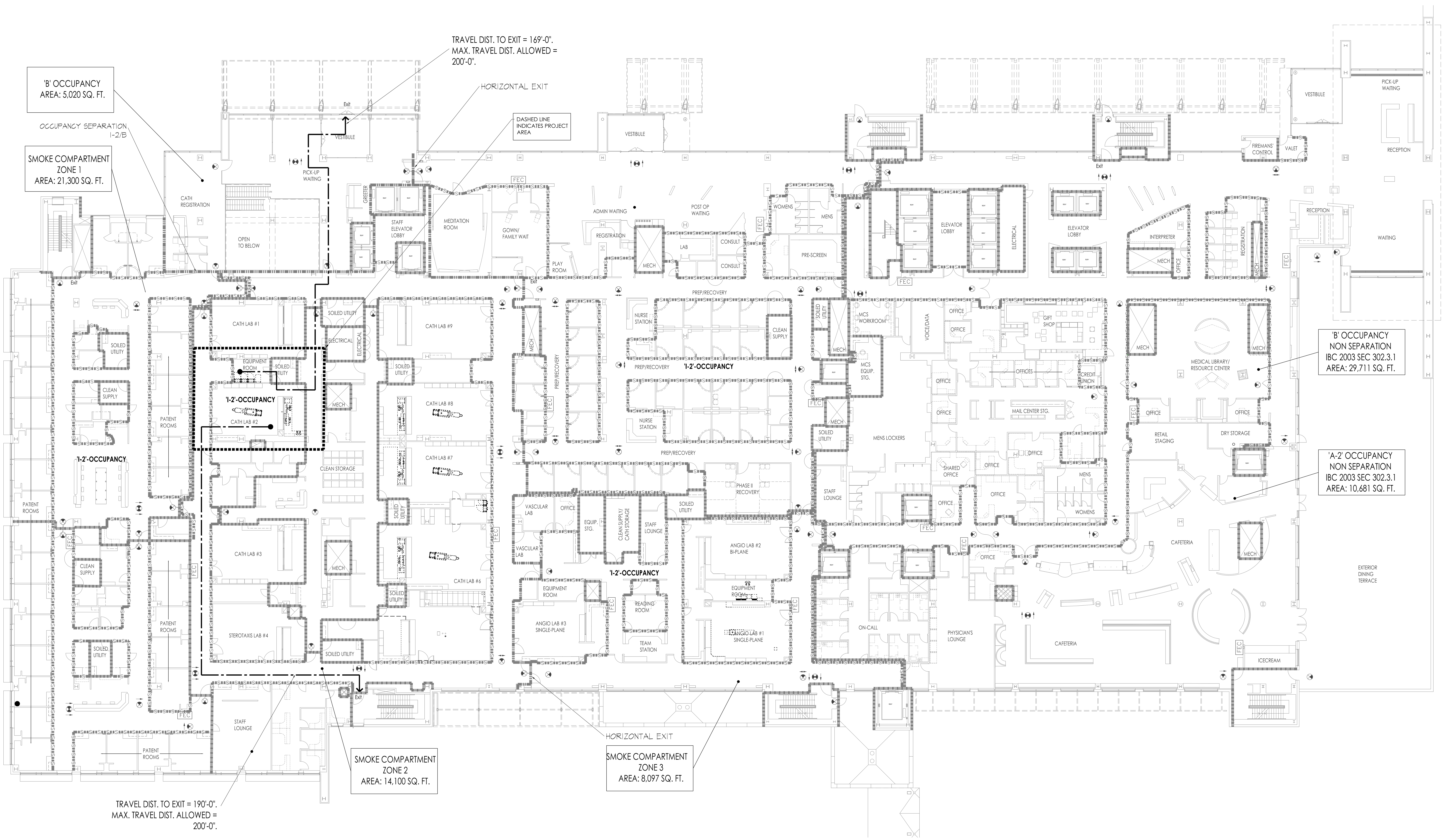

A1 Code Compliance Plan - Building 4 & 5, Level 1
1/16" = 1'-0"

NORTH

Intermountain Healthcare
IMC- Cath Lab 2 Remodel Project
5121 South Cottonwood Street
Murray, UT 84107

NJRA Project #	19205.00
Construction Documents	July 15, 2020

Code Compliance Plan

G003

7/14/2020 2:09:12 PM - Z:\200 IHC\20204.00 IHC - IMC CATH LAB #2\02 BIM - REVIT & AUTOCAD\02 AUTOCAD DWGS\G003 CODE COMPLIANCE PLAN.DWG

1. Design Criteria

1.1. Governing Building Code: 2018 International Building Code (IBC) and 2018 International Existing Building Code (IEBC)
   A. Risk Category: IV

1.2. Earthquake:
   A. Seismic Design Category.. D
   B. Spectral Response Accelerations:
      S_S =1.55 g S_{DS} = 1.035 g
      S_1 = 0.529 g S_{D1} = 0.529 g
   C. Soil Site Class: .... D
      F_a = 1.0 F_v = 1.5
   D. Importance Factor, I_E: 1.5

2. Structural Steel

2.1. Material:
   A. W-Shapes: ASTM A992, (F_y = 50 ksi), except as noted otherwise
   B. All Other Shapes and Plates: ASTM A36 (Fy = 36 ksi), except as noted otherwise
   C. Rectangular and Square Hollow Structural Sections (HSS): ASTM A500, Grade C (Fy = 50 ksi)
   D. Round HSS: ASTM A500, Grade C (Fy = 46 ksi)
   E. Steel Pipe: ASTM A53, Grade B (Fy = 35 ksi)
   F. Deformed Bar Anchors (DBA): ASTM A496
   G. Headed Stud Anchors (HSA): ASTM A108, with dimensions complying with AISC specifications
   H. Anchor Rods: ASTM F1554, Grade 36, unless noted otherwise, with ASTM A563 heavy hex nuts and ASTM F436 hardened washers

2.2. Fabrication and construction shall comply with the following Codes and Standards:
   A. American Institute of Steel Construction (AISC) 360-10, "Specification for Structural Steel Buildings"
   B. AISC 341-10, "Seismic Provisions for Structural Steel Buildings"
   C. AISC 303-10, "Code of Standard Practice for Steel Buildings and Bridges" excluding the following: Section 3.3 (last sentence of first paragraph), Section 4.4, Section 4.4.1, Section 4.4.2, Section 4.5, and Section 7.13.3
      1. The architectural drawings are the prime contract drawings. Consultants' drawings by other disciplines are supplementary to the architectural drawings. The structural drawings shall be used in conjunction with the architectural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in architectural, structural, and/or other consultants' drawings. Refer to the Special Instructions section of the general notes, below.
   D. AISC/RCSC 2009, "Specification for Structural Joints Using ASTM A325 or A490 Bolts"
   E. American Welding Society (AWS) D1.1:2010, "Structural Welding Code – Steel" (specific items do not apply when they conflict with the AISC requirements)
   F. American Welding Society (AWS) D1.8:2009, "Structural Welding Code – Seismic Supplement" (specific items do not apply when they conflict with the AISC requirements)
   G. American Iron and Steel Institute (AISI) 2007, "North American Specification for the Design of Cold-Formed Steel Structural Members"

2.3. Structural shapes and plates shall be fabricated from newly rolled (milled) one-piece sections without splices, unless specifically noted otherwise on the structural drawings. Connections for structural steel shall comply with the structural drawings, unless written approval is given by the structural engineer.

2.4. Welding:
   A. It is recommended the steel erection contractor and steel fabricator contact the Quality Assurance Agency prior to beginning any welds. A program of joint preparation and welding procedures should be worked out between the two parties before the welding is started so that correct welds will be made from the beginning.
   B. Certification of Welders: All shop and field welding shall be executed by AWS certified welders who have been specifically certified for the process of welding being performed. The welder's certification will be considered as being current unless the welder is not engaged in the process of welding being performed for a period exceeding six months or there is a specific reason to question a welder's ability as required by AWS. Certification and records must comply with AWS Standards. Certification and appropriate records must be provided to the architect prior to beginning work.
   C. Electrodes: E-70 XX or as noted otherwise. E60 XX may be used for welding steel floor and roof decks.
   D. Minimum Welds: All intersecting steel shapes that are not bolted shall be connected by a fillet weld all around, unless noted otherwise. Fillet weld sizes that are not shown shall be 1/16" less than the thinnest of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates less than 1/4" shall be of the same size as the thinnest of the connected parts.
   E. Bolts: Do not apply any welds, including "tack" welds to bolts, including anchor bolts, except as specifically detailed in the drawings.
   F. Headed Stud Anchor (HSA) welding and Deformed Bar Anchor (DBA) welding shall conform to the manufacturer's specifications. Welding shall comply with AWS D1.1 Section 7.6 through 7.9 and Annex G.

2.5. Bolted Connections:
   A. Provide snug tightened joints with ASTM A325N Type 1 bolts for steel to steel connections, as noted herein or as noted on the drawings. Snug tightened joints shall be used in connections for simple span framing and beam (or girder) to bearing plate connections. The snug tightened condition is usually attained by a few impacts of an impact wrench or the full effort of a man using an ordinary spud wrench. Bolts shall be tightened until all plies of the joint are in firm contact.
   B. Provide hardened washers beneath the turned element of all bolts or nuts. Provide hardened beveled washers, to compensate for the lack of parallelism, where the outer face of the bolted parts has a slope greater than one in twenty with respect to the plane normal to the bolt axis. Hardened washers or plates installed over oversized holes or slotted holes shall be at least 5/16" thick and shall conform to ASTM F436. Plates or bars installed at slotted holes shall have a size sufficient to completely cover the slot after installation.
   C. Where a steel to steel beam connection is not detailed in the drawings, provide a standard AISC framed connection with the capacity to support one half of the total uniform load capacity of the given shape for the span and for the steel specified.
   D. Bolts, nuts and washers shall not be reused.

2.6. Beam Web Stiffener Plates:
   A. Provide full-height web stiffener plates to each side of all beams above all bearing points. Unless noted otherwise, stiffener plates shall be the thickness indicated in the typical stiffener plate detail.

3. Miscellaneous

3.1. Post-Installed Anchors in Concrete
   A. Anchorage to hardened concrete shall include all mechanical and adhesive anchors and epoxy doweled reinforcing bars of size, quantity, spacing, and embedment as shown on the drawings. Additional anchors shall not be used without approval from the Engineer prior to installation.
   B. Special inspection is required during the installation of all post-installed anchors. Refer to applicable code evaluation reports and the Quality Assurance and Statement of Special Inspections sections of the General Structural Notes.
   C. Anchorage to Concrete:
      1. All post-installed anchors into hardened concrete shall be selected from the following pre-approved products, unless noted otherwise:

Steel Screw Anchor	Evaluation Report (ICC_ES)
Hilti KWIK HUS-EZ	ESR-3027
Powers Wedge-Bolt+	ESR-2526
Simpson Titen HD	ESR-2713

Steel Expansion/Wedge Anchor	Evaluation Report (ICC_ES)
Hilti KWIK Bolt TZ	ESR-1917
ITW Red Head Trubolt+	ESR-2427
Powers Power-Stud+ SD2	ESR-2502
Simpson Strong-Bolt 2	ESR-3037

   D. Alternate anchors or adhesives are permitted with approval of the engineer. The Contractor shall submit the proposed anchor product data and code evaluation report demonstrating the anchor is equivalent or exceeds the capacity of the specified anchor.
   E. Installation of adhesive anchors horizontally or upwardly inclined to support sustained tension loads shall be performed by personnel certified by an applicable certification program. Certification shall include written and performance tests in accordance with the ACI/CRSI Adhesive Anchor Installer Certification program, or equivalent. Proof of current certification shall be submitted to the engineer for approval prior to commencement of installation.
   F. Anchors shall be installed according to the manufacturer's published instructions and applicable code evaluation reports including:
      1. Hole diameter, depth, and cleaning procedure
      2. Adhesive mixing, preparation, and placement
      3. Installation torque
   G. Locate all existing reinforcement and embedded items prior to drilling into concrete or masonry elements. Do not damage rebar or embeds while drilling or installing anchors.
   H. Grout all defective or abandoned holes with non-shrink grout or an injectable epoxy adhesive matching the surrounding concrete compressive strength. Consult the Architect for additional requirements at architecturally exposed concrete.
   I. Carbon steel anchors are limited to use in dry, interior locations.

4. Special Instructions

4.1. The project specifications are not superseded by the General Structural Notes but are intended to be complementary to them. Consult the specifications for additional requirements in each section. Notes and specific details on the drawings shall take precedence over General Structural Notes and typical details.

4.2. The architectural drawings are the prime contract drawings. Consultant drawings by other disciplines are supplementary to the architectural drawings. All omissions or conflicts, including dimensions, between the various elements of the consultants' drawings and/or specifications shall be brought to the attention of the Architect before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the Architect without additional cost to the owner. Any work done by the contractor after discovery of such discrepancy shall be done at the contractor's risk.

4.3. The structural drawings shall be used in conjunction with the architectural drawings. Primary structural elements and overall structural layout are indicated within the structural plans and details. Some secondary elements, architectural layouts, alcoves, elevations, slopes, depressions, curbs, mechanical equipment and electrical equipment, are not indicated within the structural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings.

4.4. Shoring and Bracing Requirements:
   A. Floor and Roof Structures -- The General Contractor is responsible for the method and sequence of all structural erection. He shall provide temporary shoring and bracing as his method of erection requires to provide adequate vertical and lateral support. Shoring and bracing shall remain in place as the chosen method requires until all permanent members are in place and all final connections are completed, including all roof and floor attachments. The building shall not be considered stable until all connections are complete.

4.5. Submittals: A copy of all shop drawings that have been submitted for review must be kept at the construction site for reference. These drawings must bear the appropriate review stamps. The shop drawing review shall not relieve the contractor of the responsibility of completing the project according to the contract documents. The general contractor shall review and mark all shop drawings prior to submitting them to the Architect for his review. Shop Drawings made from reproductions of (these) contract drawings will be rejected.

4.6. Project Coordination: It shall be the responsibility of the general contractor to coordinate with all trades any and all items that are to be integrated into the structural system. Openings or penetrations through, or attachments to the structural system that are not indicated on these drawings shall be the responsibility of the general contractor and shall be coordinated with the Architect/Engineers. The order of construction is the responsibility of the general contractor. It is the contractor's obligation to provide all items necessary for his chosen procedure.

4.7. Contractor shall field verify all dimensions, and conditions. If the contract drawings do not represent actual conditions, contractor shall notify architect/engineer prior to fabrication or construction within that area.

5. Quality Assurance

5.1. Quality Assurance Agency Requirements:
   A. The Owner shall engage a qualified Quality Assurance Agency (QAA) to provide all special inspection and quality assurance testing for the project. The QAA shall provide all information necessary for the building official to determine that the agency meets the applicable requirements
      1. The QAA shall be objective, competent and independent from the contractor responsible for the work being inspected. The agency shall also disclose possible conflicts of interest to confirm objectivity.
      2. The QAA shall have adequate equipment to perform required tests.
      3. The QAA shall employ experienced personnel educated in conducting, supervising and evaluating tests and/or inspections. Experience or training shall be considered relevant when the documented experience or training is related in complexity to the same type of special inspection activities for projects of similar complexity and material qualities.
      4. Prior to the start of construction, the QAA shall submit to the building official, the owner architect and engineer copies of the following:
         a. Current calibration records for all equipment to be used for the work being inspected and/or tested. Response
         b. Current certification and training records for each individual performing the inspections and/or testing.
         c. Sample inspection and testing reports and the distribution list for the records.
         d. Proposed inspection procedures and frequency for each inspection required by the work.
         e. Proposed testing methods and frequency of testing required by the work.
      5. The QAA shall send copies of all inspection and testing reports to the building official, owner, architect, engineer and contractor. Reports shall indicate that the work inspected was or was not completed in conformance to the approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the building official, architect and engineer.
      6. The QAA shall submit a final report documenting required special inspections and correction of any discrepancies noted in the inspections. The final report shall be distributed to the building official, owner, architect and engineer in a timely manner prior to the completion of the project.

5.2. Contractor Responsibilities:
   A. Each contractor responsible for the construction of a system or component requiring special inspections or testing shall submit a written statement of responsibility to the building official, owner, architect and engineer prior to the commencement of the work. The contractor's statement of responsibility shall contain the following:
      1. Acknowledgement of awareness of the special requirements defined in the statement of special inspections.
      2. Acknowledgement that control will be exercised in order to obtain conformance to the approved construction documents.
      3. Contractor's internal quality control procedures, methods and measures to be used in order to obtain conformance to the approved construction documents. Include copies of quality control reports, frequency of reporting and distribution of reports.
      4. Identification and qualifications of the person(s) responsible for quality control and their position(s) within the organization.
   B. Notification of Engineer: The contractor shall notify the engineer twenty-four hours prior to the items listed in the Structural Observations by the Engineer of Record section.
   C. Notification of QAA: The contractor shall notify the QAA in a timely manner so that inspection and testing may be performed as outlined in the statement of special inspections.

5.3. Structural Observations by the Engineer of Record.
   A. The Engineer of Record will perform structural observations at critical phases of the project as listed below. Observations will be made on a periodic basis throughout the construction of the structural system. During this time frame, one site visits will be made. Copies of the engineer's report will be distributed to the architect, contractor, owner, and building official.
      1. Completing the structural steel framing
   B. Observation visits to the site by the Engineer's field representatives shall not be construed as inspection or approval of construction.

6. Statement of Special Inspections

6.1. The following materials, systems and components require special inspection or testing per Chapter 17 of the International Building Code (IBC).

6.2. For items requiring continuous inspection, a special inspector must be present onsite during the performance of that task. In most cases, periodic inspections/tests shall be performed prior to commencing the task, intermittently during the task, and at the completion of the task.

Structural Steel per IBC Section 1705.2.1, 1705.11.1 & 1705.12.2

Item	Frequency	Detailed Instructions
Prior to Welding (Table N5.4-1, AISC 360-10):		
Verify welding procedures (WPS) and consumable certificates	Continuous	
Material identification	Periodic	Verify type and grade of material.
Welder identification	Periodic	A system shall be maintained by which a welder who has welded a joint or member can be identified.
Fit-up groove welds	Periodic	Verify joint preparation, dimensions, cleanliness, tacking, and backing.
Access holes	Periodic	Verify configuration and finish.
Fit-up of fillet welds	Periodic	Verify alignment, gaps at root, cleanliness of steel surfaces, and tack weld quality and location.
During Welding (Table N5.4-2, AISC 360-10):		
Use of qualified welders	Periodic	Verify that welders are appropriately qualified.
Control and handling of welding consumables	Periodic	Verify packaging and exposure control.
Cracked tack welds	Periodic	Verify that welding does not occur over cracked tack welds.
Environmental conditions	Periodic	Verify win speed is within limits as well as precipitation and temperature.
WPS followed	Periodic	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position.
Welding techniques	Periodic	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.
After Welding (Table N5.4-3, AISC 360-10):		
Welds cleaned	Periodic	Verify that welds have been propyl cleaned.
Size, length, and location of welds	Continuous	
Welds meet visual acceptance criteria	Continuous	
Arc strikes	Continuous	
k-area	Continuous	
Backing & weld tabs removed	Continuous	
Repair activities	Continuous	
Document acceptance or rejection of welded joint/member	Continuous	
Nondestructive Testing (Section N5.5, AISC 360-10):		
CJP welds (Risk Cat. II)	Periodic	Ultrasonic testing shall be performed on 10% of CJP groove welds in butt, T- and corner joints subject to transversely applied tension loading in materials 5/16-inch thick or greater. Testing rate must be increased if > 5% of welds tested have unacceptable defects.
CJP welds (Risk Cat. III or IV)	Continuous	A reduction in the rate of ultrasonic testing is allowed per Section N5.5e.
Prior to Bolting (Table N5.6-1, AISC 360-10):		
Certifications of fasteners	Continuous	
Fasteners marked	Periodic	Verify that fasteners have been marked in accordance with ASTM requirements.
Proper fasteners for joint	Periodic	Verify grade, type, and bolt length if threads are excluded from the shear plane.
Proper bolting procedure	Periodic	Verify proper procedure is used for the joint detail.
Connecting elements	Periodic	Verify appropriate faying surface condition and hole preparation, if specified, meet requirements.
Pre-installation verification testing	Periodic	Observe and document verification testing by installation personnel for fastener assemblies and methods used.
Item	Frequency	Detailed Instructions
Proper storage	Periodic	Verify proper storage of bolts, nuts, washers, and other fastener components.
During Bolting (Table N5.6-2, AISC 360-10):		
Fastener assemblies	Periodic	Verify that fastener assemblies are of suitable condition, paced in all holes, and washers are positioned as required.
Snug-tight prior to pretensioning	Periodic	Verify that joints are brought to snug-tight condition prior to pretensioning operation.
Fastener component	Periodic	Verify that fastener component is not turned by wrench prevented from rotating.
Pretensioned fasteners	Periodic	Verify that fasteners are Pretensioned in accordance with RCSC Specification, progressing systematically from the most rigid point toward the free edges.
After Bolting (Table N5.6-3, AISC 360-10):		
Document acceptance or rejection of bolted connections	Continuous	
Other Steel Inspections (Section N5.7, AISC 360-10: Table J8-1, J10-1, AISC 341-10):		
Structural steel details	Periodic	All fabricated steel or steel frames shall be inspected to verify compliance with the details shown in the construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection.

Concrete Construction per IBC Sections 1705.3 & 1705.12.1

Item	Frequency	Detailed Instructions
Post-installed anchors or dowels	Continuous	All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report. ACI 318: 17.8.2

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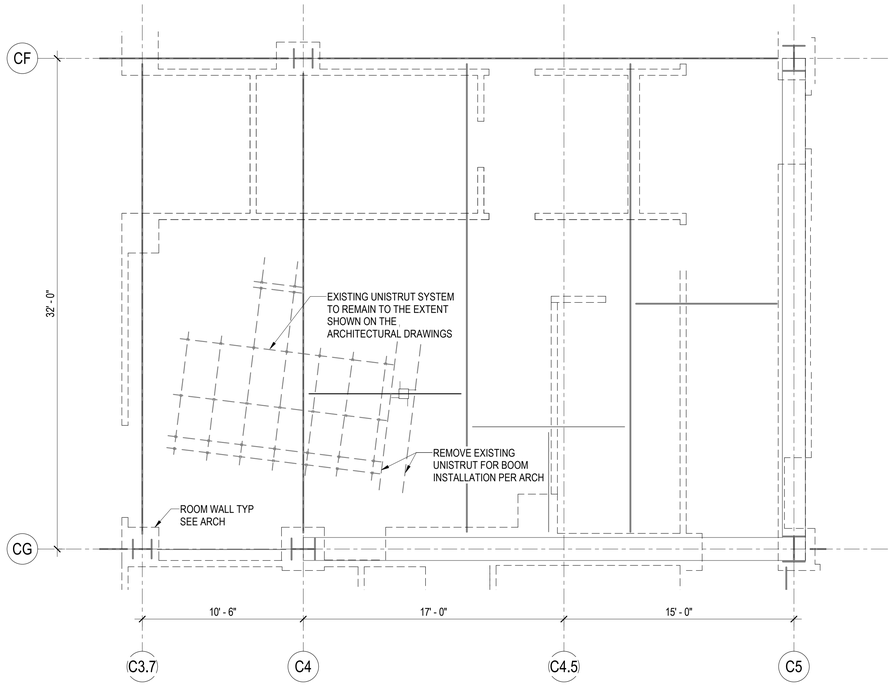
NJRA Project # 19205.00
Construction Documents JULY 15, 2020

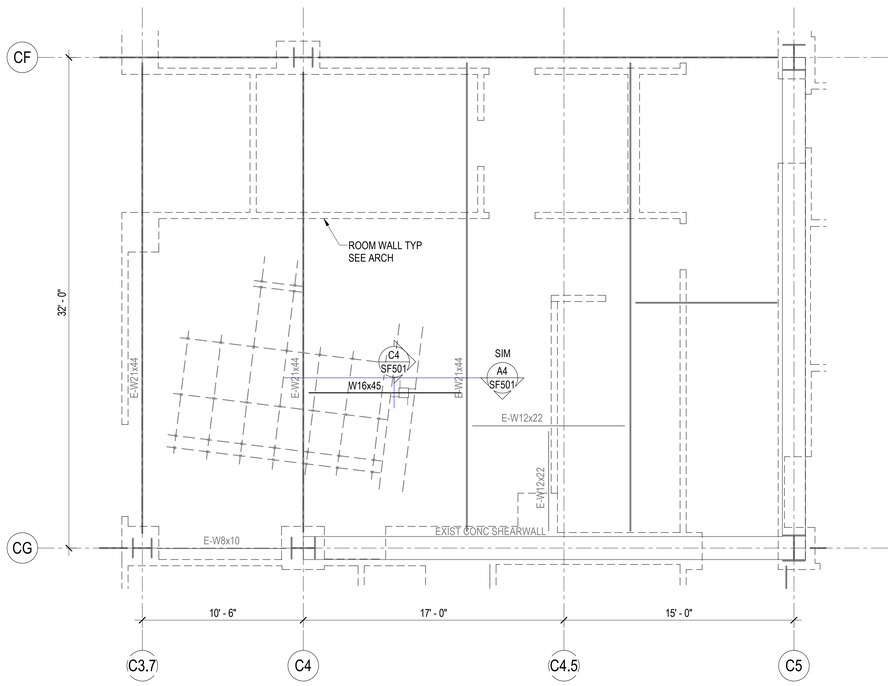
GENERAL STRUCTURAL NOTES

SE001



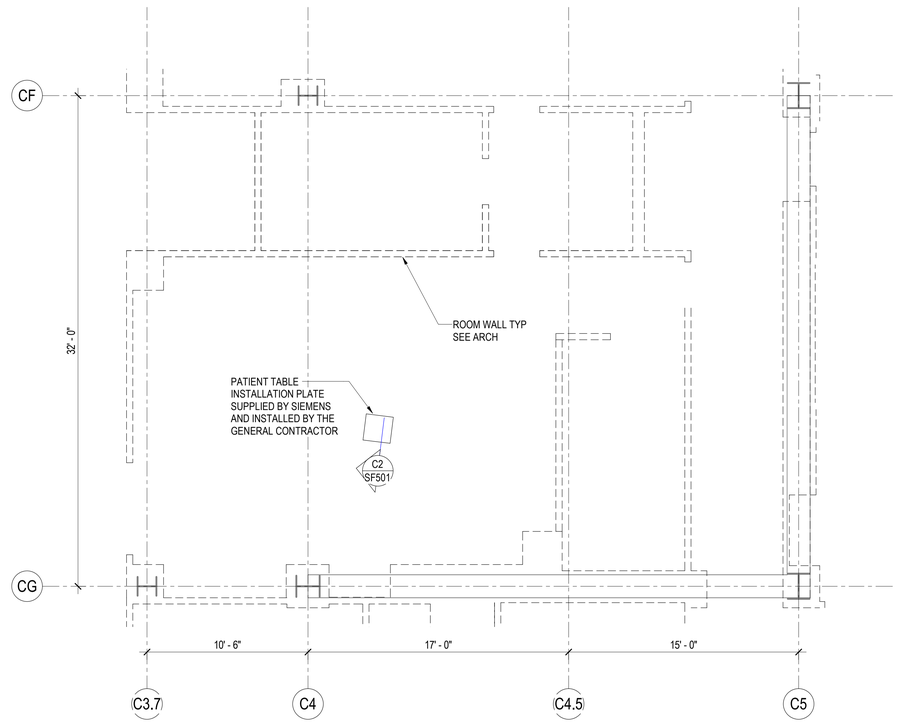
C1 / SF101 PARTIAL MEDICAL UNISTRUT PLAN LEVEL 1

SCALE: 1/4" = 1'-0"



A1 / SF101 PARTIAL MEDICAL SKYTRON MEDICAL BOOMS PLAN LEVEL 1

SCALE: 1/4" = 1'-0"



A4 / SF101 PATIENT TABLE PLATE PLAN LEVEL 1

SCALE: 1/4" = 1'-0"

PLAN NOTES

1. Once the ceiling are partially removed to install new medical Boom, contact engineer, with 72 hours' notice, to examine existing unistrut system.

PLAN LEGEND

- EXISTING STEEL COLUMN - WIDE FLANGE
- EXISTING STEEL BEAM OR GIRDER
- EXISTING STEEL JOIST OR PURLIN
- STEEL BEAM OR GIRDER
- STEEL JOIST OR PURLIN

MEDICAL EQUIPMENT LEGEND

- EQUIPMENT SUPPORT

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MEDICAL EQUIPMENT SUPPORT PLANS

SF101

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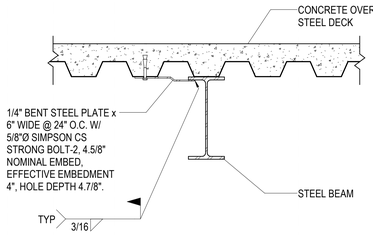
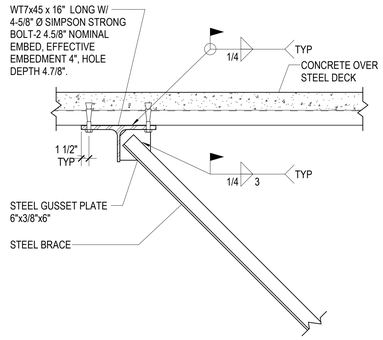


D2 / SF501 — TYPICAL EQUIPMENT SUPPORT BEAM CONNECTION TO CONCRETE OVER STEEL DECK

NO SCALE



D3 / SF501 — BRACE CONNECTION TO WT (PERPENDICULAR)

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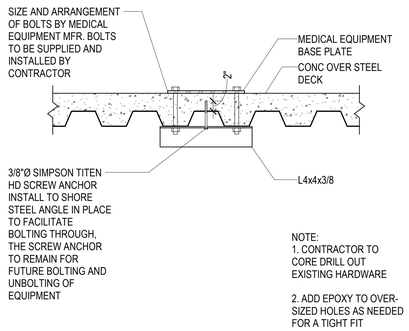
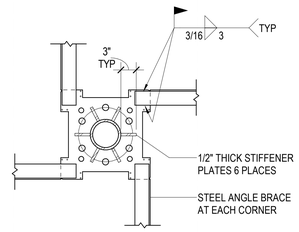


NOTE:
1. CONTRACTOR TO CORE DRILL OUT EXISTING HARDWARE

2. ADD EPOXY TO OVER-SIZED HOLES AS NEEDED FOR A TIGHT FIT

C2 / SF501 — MEDICAL EQUIPMENT ANCHORAGE TO CONCRETE OVER STEEL DECK

NO SCALE



C3 / SF501 — SKYTRON BOOM MOUNTING PLATE

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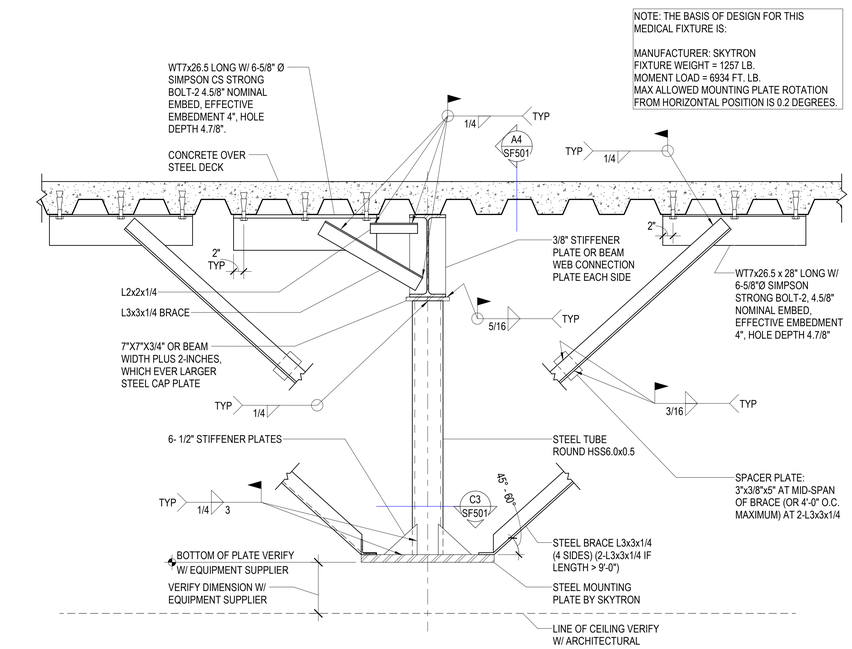
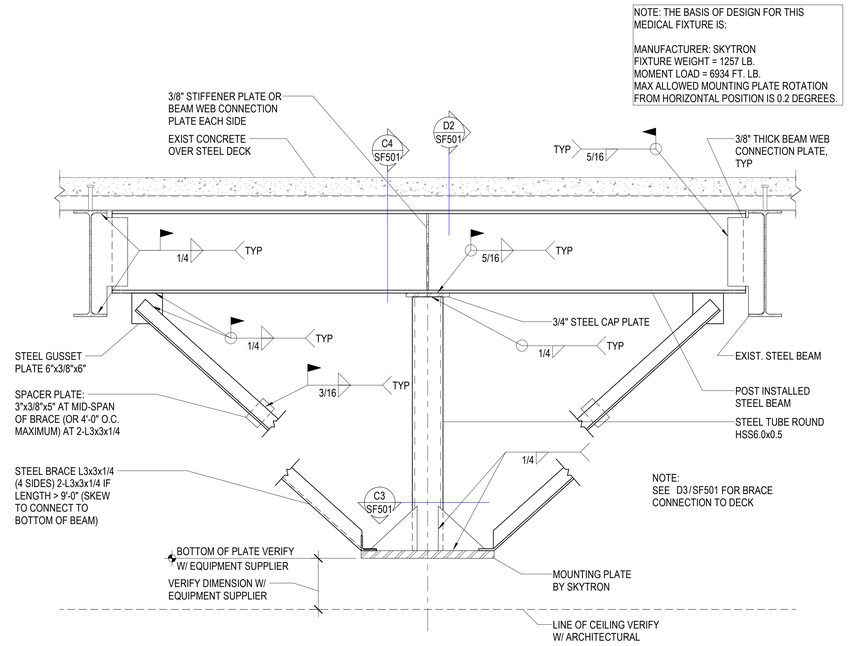


C4 / SF501 — SKYTRON MEDICAL EQUIPMENT MOUNT SUPPORT DETAIL

NO SCALE

NOTE: ALL FLOOR POST INSTALLED ANCHORS ARE PROVIDED AND INSTALLED BY THE CONTRACTOR



Detail Name

A4 / SF501 — SKYTRON MEDICAL EQUIPMENT MOUNT SUPPORT DETAIL

NO SCALE

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MEDICAL EQUIPMENT SUPPORT DETAILS

SF501

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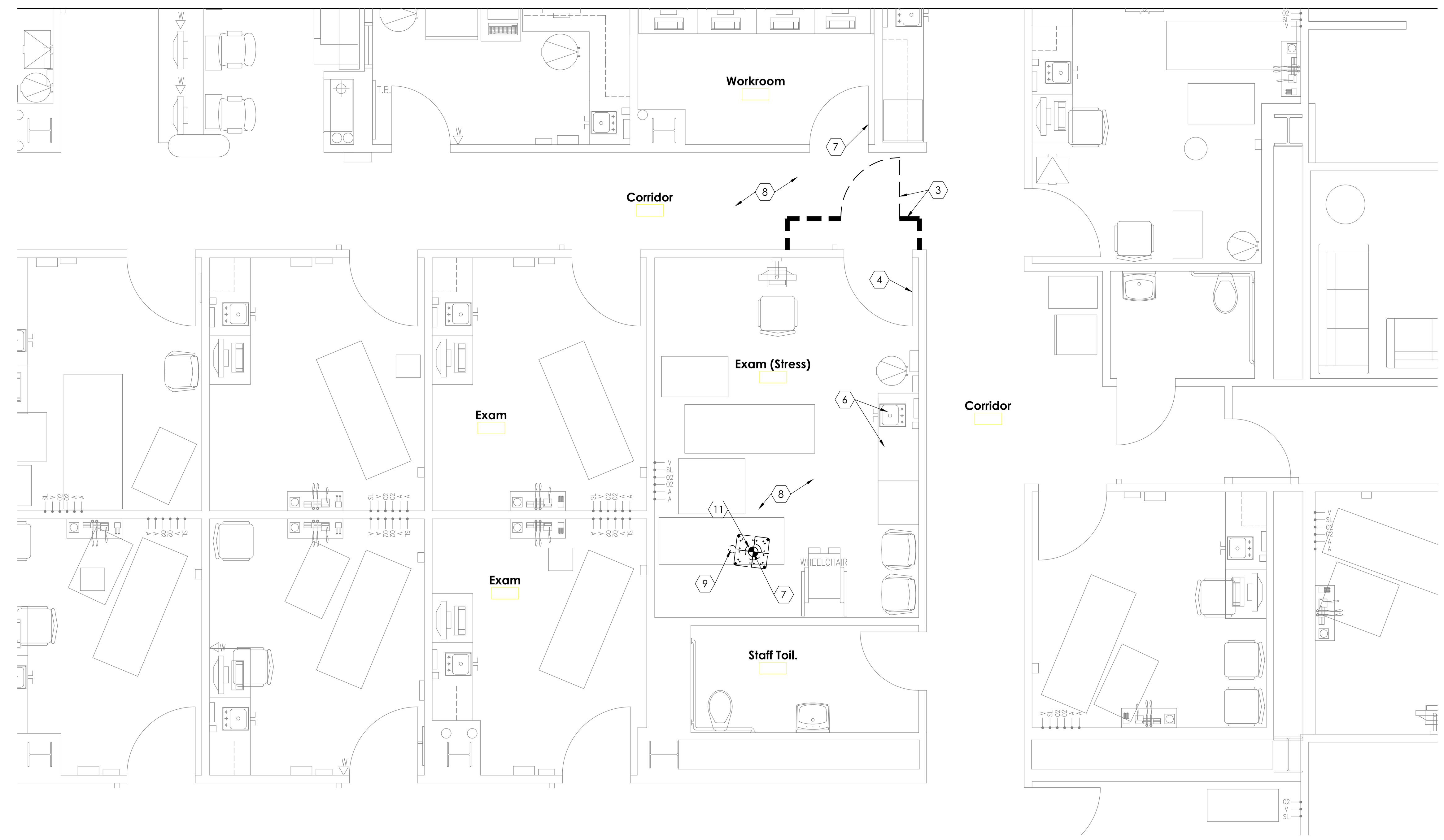

2 Demolition Floor Plan- Lower Level 1
SCALE: 1/4" = 1'-0"
NORTH

1 Demolition Reflected Ceiling Plan- Lower Level 1
SCALE: 1/4" = 1'-0"
NORTH

KEY NOTES - FLOOR PLAN

1. DASHED LINE INDICATES REMOVAL OF PORTIONS OF EXISTING GYPSUM BOARD CEILING, LAY IN CEILING, GRID SYSTEM, LIGHTING, DIFFUSERS ETC. FOR INSTALLATION OF THE NEW STRUCTURAL SUPPORT AT THE BOTTOM OF THE FLOOR DECK ABOVE FOR THE NEW CATH LAB EQUIPMENT AS REQUIRED. GENERAL CONTRACTOR SHALL COORDINATE WORK WITH SIEMENS TO DETERMINE THE EXTENT OF CEILING REMOVAL. SEE STRUCTURAL MECHANICAL, ELECTRICAL DRAWINGS FORE MORE INFORMATION.
2. RE-INSTALL REMOVED GYPSUM BOARD AND LAY IN CEILING TO ORIGINAL CONDITION AFTER WORK IS COMPLETED ABOVE CEILING. PATCH, REPAIR, REFINISH AND REPAINT TO MATCH WITH ADJACENT EXISTING. REMOVE AND REINSTALL ELECTRICAL AND MECHANICAL ITEMS ALSO AS REQUIRED IN ORDER TO COMPLETE WORK IN THIS AREA TO ORIGINAL CONDITION.
3. DASHED LINE INDICATES FLOOR TO CEILING TEMPORARY DUST PROOF CONSTRUCTION BARRIER TO PREVENT DUST & DIRT MIGRATION AND TO SEPARATE AREAS OCCUPIED BY OWNER FROM FUMES AND NOISE. CONSTRUCTION BARRIER TO BE ERECTED WITH 3 5/8" 20 GA. MTL. STUDS @16" O.C. FRAMING WITH 5/8" TYPE 'X' ABUSE RESISTANT GYPSUM BOARD ON BOTH SIDES. TAPE AND SEAL ALL JOINTS AND OPENINGS. SEAL JOINTS AT PERIMETER. PARTITION TO BE EQUIPPED WITH 4'-0" LOCKABLE MAN DOOR WITH STICKY MATS ON BOTH SIDES OF DOOR. COORDINATE WITH OWNER AND FIELD VERIFY FOR EXACT LOCATION OF CONSTRUCTION BARRIER.EXISTING GYPSUM BOARD CEILING ALONG WITH EXISTING CEILING LIGHTS, MECHANICAL DIFFUSERS ETC. IN THIS AREA TO REMAIN. PROTECT DURING CONSTRUCTION. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION.
4. EXISTING DOORS TO REMAIN. PROTECT DURING CONSTRUCTION.
5. NOT USED.
6. EXISTING CABINET, COUNTERTOP, PLUMBING FIXTURE, ETC. TO REMAIN. PROTECT DURING CONSTRUCTION.
7. EXISTING 4" DIA. HOLE ON FLOOR TO REMAIN AND RE-USED FOR THE NEW CATH LAB EQUIPMENT BY SIEMENS. THIS IS IDENTIFIED AS THE ORIENTATION POINT FOR THE PATIENT TABLE. FIELD VERIFY TO ESTABLISH ACTUAL LOCATION AND EXISTING CONDITIONS. SEE STRUCTURAL DRAWINGS FOR DETAILS ON ANCHORAGE. ALL EXPOSED STEEL TO BE SPRAY APPLIED FIRE PROOFED TO RETAIN FIRE RATINGS OF THE ADJACENT EXISTING AFTER ALL WORK IS COMPLETED.
8. EXISTING FLOORING TO REMAIN. PROTECT DURING CONSTRUCTION.
9. EXISTING 4" DIA. HOLE & CONDUIT TO REMAIN AND CONTINUE TO FUNCTION WITH THE NEW EQUIPMENT REPLACED BY SIEMENS, IDENTIFIED AS "B10" ON SIEMENS PLANS. FIELD VERIFY EXACT LOCATION.
10. EXISTING CEILING, LIGHTING, MECHANICAL DIFFUSER ETC TO REMAIN. PROTECT DURING CONSTRUCTION.
11. DASHED LINES INDICATE CATH LAB EQUIPMENT ANCHOR PLATES TO BE INSTALLED UNDER THE FLOOR DECK ABOVE THE CEILING. FIELD VERIFY EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK. RELOCATE AND OR RE-ROUTE EXISTING HVAC DUCT DIFFUSER, PLUMBING PIPING, ELECTRICAL ETC. AS REQUIRED TO COMPLETE THE WORK. NOTE THAT REMOVAL OF EXISTING ANCHOR THROUGH BOLTS AND INSTALLATION OF THE NEW ANCHOR THROUGH BOLTS IS RESPONSIBILITY OF THE GENERAL CONTRACTOR. SEE STRUCTURAL DRAWINGS AND COORDINATE WITH OWNER'S VENDOR SIEMENS FOR MORE INFORMATION.

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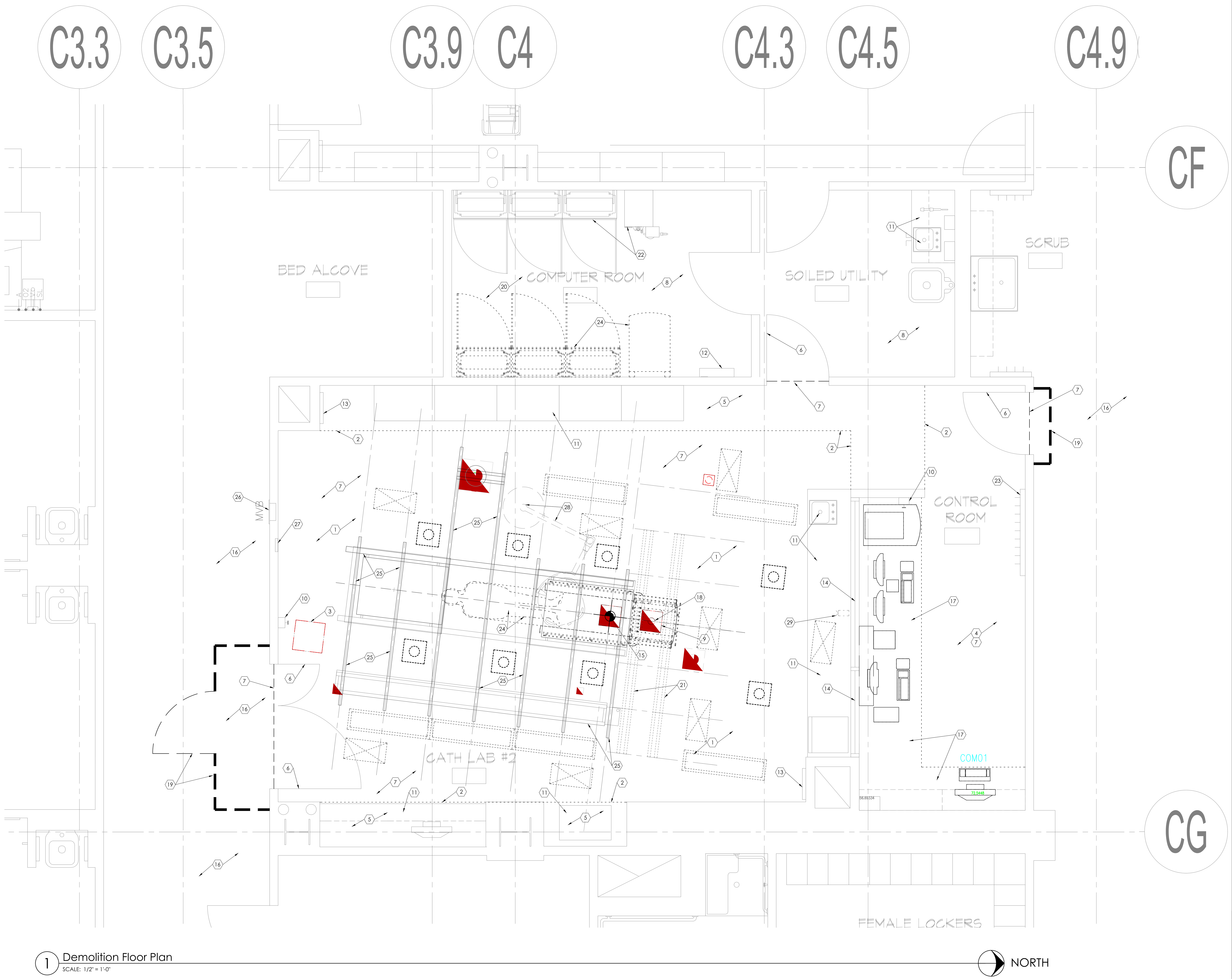
Demolition Plan- Lower Level 1

A100



1 Demolition Floor Plan
SCALE: 1/2" = 1'-0"
NORTH

KEY NOTES - FLOOR PLAN

1. REMOVE EXISTING GYPSUM BOARD CEILING. CAREFULLY REMOVE AND STORE HVAC DIFFUSERS AND LIGHTS SHOWN DASHED FOR REINSTALLATION. SEE NEW FLOOR PLANS, STRUCTURAL MECHANICAL, ELECTRICAL DRAWINGS FOR MORE INFORMATION.
2. DASHED LINE INDICATES EXTENT OF DEMOLITION OF THE EXISTING GYPSUM BOARD CEILING . SEE REFLECTED CEILING PLAN A131 FOR NEW CEILING TO BE INSTALLED AFTER STRUCTURAL, MECHANICAL AND ELECTRICAL WORK IS COMPLETED ABOVE CEILING.
3. EXISTING MEDGAS COLUMN TO REMAIN ALONG WITH ASSOCIATED STRUCTURAL SUPPORTS ABOVE. SEE MECHANICAL AND PLUMBING DRAWINGS FOR EXISTING GAS LINES. COORDINATE WITH OWNER'S VENDOR SKYTRON FOR MORE INFORMATION.
4. PATCH, REPAIR AND PAINT CEILING FOR ANY ABOVE CEILING WORK IN THIS AREA AFTER ALL WORK IS COMPLETE. REMOVE AND REINSTALL MECHANICAL DIFFUSERS AND LIGHTS IF REQUIRED. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION.
5. EXISTING GYPSUM BOARD SOFFIT AND WALL SCONCES AT SOFFIT TO REMAIN. PROTECT DURING CONSTRUCTION. REPLACE TO MATCH EXISTING IF DAMAGED DURING CONSTRUCTION. REPAINT ENTIRE SOFFIT. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
6. EXISTING LEAD LINED DOORS & HARDWARE TO REMAIN. PROTECT DURING CONSTRUCTION.
7. REMOVE EXISTING SHEET VINYL FLOORING & COVED BASE. DASHED LINE INDICATES EXTENT OF REMOVAL. SEE FINISH FLOOR PLAN A151 FOR MORE INFORMATION ON NEW FINISHES.
8. REMOVE EXISTING ACOUSTICAL CEILING TILES, GRID SYSTEM, LIGHTS, DIFFUSERS ETC. AS REQUIRED FOR ALL ABOVE CEILING M/E/P WORK. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION. CLEAN AND RE-INSTALL CEILING TILES, LIGHTS & DIFFUSERS BACK AFTER WORK IS COMPLETED. SEE REFLECTED CEILING PLAN ON SHEET A131 AND ELECTRICAL DRAWINGS.
9. CAREFULLY REMOVE EXISTING MED GAS PEDESTAL FOR RE-INSTALLATION. CLEAN INTERIORS AND RE-INSTALL AFTER ALL FLOORING WORK IS COMPLETE. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION.
10. EXISTING EPO (EMERGENCY POWER OFF) SWITCH. SEE ELECTRICAL DRAWINGS FOR MORE INFO.
11. EXISTING CABINET, COUNTERTOP, PLUMBING FIXTURE, ETC. TO REMAIN. PROTECT DURING CONSTRUCTION.
12. ELECTRICAL PANELS. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
13. EXISTING WALL MOUNTED MECHANICAL GRILL TO REMAIN. PROTECT DURING CONSTRUCTION.
14. EXISTING LEAD SHIELDED GLASS TO REMAIN. PROTECT DURING CONSTRUCTION.
15. EXISTING 4" DIA. HOLE ON FLOOR TO REMAIN AND RE-USED FOR THE NEW CATH LAB EQUIPMENT BY SIEMENS. THIS IS IDENTIFIED AS THE ORIENTATION POINT FOR THE PATIENT TABLE. FIELD VERIFY TO ESTABLISH ACTUAL LOCATION AND EXISTING CONDITIONS. EXISTING TABLE BASE PLATE TO BE REMOVED TO INSTALL NEW FLOORING. NEW PLATE TO BE THROUGH-BOLTED THROUGH CONCRETE FLOOR. SEE SHEET A100 FOR LOWER LEVEL CONDITION AND ALSO SEE STRUCTURAL DRAWINGS FOR THROUGH BOLTING. REMOVE EXISTING BOLTS FROM FLOOR.
16. EXISTING SHEET VINYL FLOORING AND COVED BASE TO REMAIN. PROTECT DURING CONSTRUCTION. SEE FINISH FLOOR PLAN.
17. REMOVE EXISTING PLASTIC LAMINATE COUNTERTOP. REPLACE WITH NEW COUNTERTOP AS INDICATED IN THE NEW FLOOR PLAN. SUPPORTS AND BRACKETS SHALL BE RE-USED. PROVIDE TWO ADDITIONAL METAL SUPPORT LEGS UNDER THE COUNTERTOP. BASIS OF DESIGN: COUNTER 34- BRUSHED STEEL SET-NO-CUT.
18. EXISTING 4" DIA. HOLE AND CONDUIT ON FLOOR TO REMAIN AND RE-USED FOR THE NEW CATH LAB EQUIPMENT. THIS IS IDENTIFIED AS HOLE "B10" ON SIEMENS PLANS. FIELD VERIFY TO ESTABLISH ACTUAL LOCATION AND EXISTING CONDITIONS.
19. DASHED LINE INDICATES FLOOR TO CEILING TEMPORARY DUST PROOF CONSTRUCTION BARRIER TO PREVENT DUST & DIRT MIGRATION AND TO SEPARATE AREAS OCCUPIED BY OWNER FROM FUMES AND NOISE. CONSTRUCTION BARRIER TO BE ERECTED WITH 1 5/8" 20 GA. MTL. STUDS @16" O.C. FRAMING WITH 5/8" TYPE 'X' ABUSE RESISTANT GYPSUM BOARD ON BOTH SIDES. TAPE AND SEAL ALL JOINTS AND OPENINGS. SEAL JOINTS AT PERIMETER. PARTITION TO BE EQUIPPED WITH 4'-0" LOCKABLE MAN DOOR WITH STICKY MATS ON BOTH SIDES OF DOOR. COORDINATE WITH OWNER AND FIELD VERIFY FOR EXACT LOCATION OF CONSTRUCTION BARRIER.
20. EXISTING VCT FLOORING TO REMAIN. PROTECT DURING CONSTRUCTION. PATCH AND REPAIR FLOORING AS REQUIRED IN ORDER TO ACCOMPLISH THE WORK OUTLINED IN THE CONSTRUCTION DOCUMENTS.
21. REMOVE UNISTRUTS SHOWN DASHED AND ASSOCIATED STRUCTURAL SUPPORT FROM CEILING. MAINTAIN STRUCTURAL INTEGRITY OF THE UNISTRUT PORTION THAT IS STAYING. CONTACT STRUCTURAL ENGINEER FOR EVALUATION BEFORE PROCEEDING WITH THE WORK. REPLACE AND REPAIR GYPSUM CEILING AS REQUIRED TO MATCH ADJACENT AFTER DEMOLITION WORK IS COMPLETED.
22. EXISTING SIEMENS EQUIPMENT & CABINET FOR ADJACENT CATH LAB #1 SHALL REMAIN. PROTECT DURING CONSTRUCTION.
23. REMOVE UPPER APRON RACK AS REQUIRED AND PREP WALL FOR NEW LOCATION OF SKYTRON LIGHTING CONTROL PANEL. PATCH AND REPAIR LEAD SHIELDED WALL TO MAINTAIN SHIELDING.
24. EXISTING SIEMENS CATH LAB EQUIPMENT AND PATIENT TABLE TO BE REMOVED BY OWNERS VENDOR SIEMENS. SCHEDULE WORK WITH SIEMENS MANAGER CHRIS THOMAS.
25. EXISTING CEILING MOUNTED UNISTUTS AND RAIL SYSTEM TO REMAIN. PROTECT DURING CONSTRUCTION. NOTIFY STRUCTURAL ENGINEER FOR EXAMINATION AFTER REMOVAL OF GYP. BD. CEILING BEFORE PROCEEDING WITH NEW WORK.
26. EXISTING MED GAS SHUT OFF VALVE TO REMAIN. SEE MECHANICAL DRAWINGS FOR MORE INFO.
27. EXISTING MED GAS CONTROL VALVE TO REMAIN. PROTECT DURING CONSTRUCTION. SEE MECHANICAL DRAWINGS FOR MORE INFO.
28. EXISTING CEILING MOUNTED SURGICAL LIGHT AND BOOM TO REMAIN. PROTECT DURING CONSTRUCTION.
29. CAREFULLY REMOVE EXISTING CEILING MOUNTED CAMERA FOR REINSTALLATION AT THE SAME LOCATION AFTER ALL CEILING WORK IS COMPLETE.

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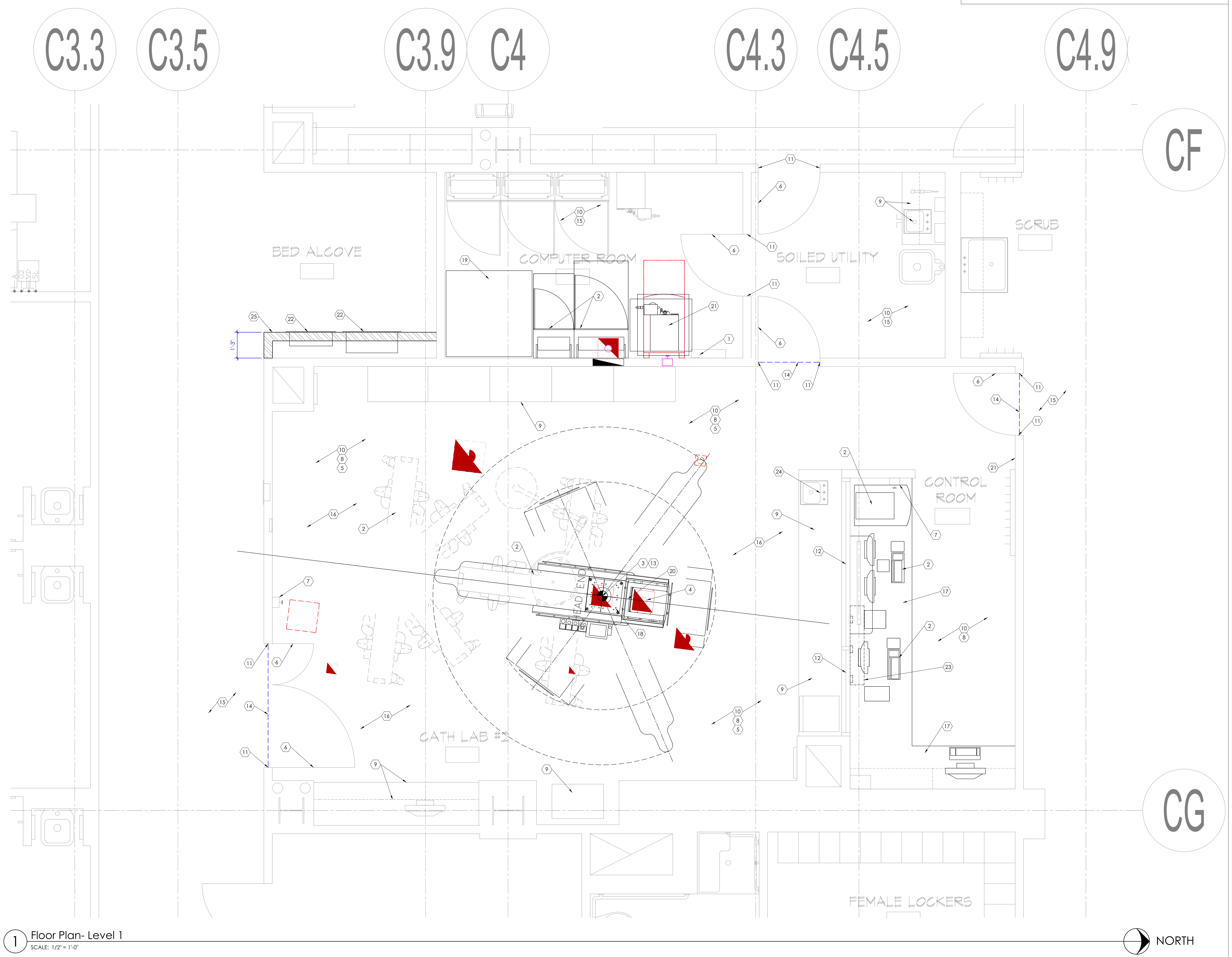
Intermountain Healthcare IMC- Cath Lab 2 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

Demolition Floor and Ceiling Plan - Level 1

A101



1 Floor Plan- Level 1
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. COORDINATE WITH SIEMENS REPRESENTATIVE TO ENSURE REQUIRED CEILING HEIGHT OF 8' -11" IS ACHIEVED FROM FINISHED FLOOR TO THE FACE OF THE UNISTRUT INSTALLED AT THE CEILING. SEE SIEMENS EQUIPMENT DRAWINGS FOR ACCEPTABLE FLOOR SLOPE TOLERANCES AND FOR MORE INFORMATION. FIELD VERIFY AND COORDINATE WORK BEFORE PROCEEDING.
2. ALL EXPOSED STEEL IN THE WALLS, ABOVE CEILING ETC. ARE REQUIRED TO BE SPRAY APPLIED FIRE PROOFED. SEE CODE COMPLIANCE PLANS FOR FIRE RATINGS THAT IS REQUIRED TO BE MAINTAINED THROUGHOUT THE PROJECT. ANY DAMAGE TO THE EXISTING FIRE PROOFING IS REQUIRED TO BE PATCHED AND REPAIRED WITH COMPATIBLE FIRE PROOFING PRODUCT.
3. ALL EXISTING MAGNETIC AND LEAD SHIELDING IN THE EXISTING WALLS, FLOOR AND ROOF DECK IS REQUIRED TO BE RETAINED. REPLACE TO MAINTAIN SHIELDING WITH EQUIVALENT SHIELDING TO MATCH ORIGINAL CONDITIONS. IF DAMAGED DURING CONSTRUCTION.

KEY NOTES - FLOOR PLAN

1. ELECTRICAL PANEL. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
2. NEW CATHLAB EQUIPMENT & PATIENT TABLE, PROVIDED & INSTALLED BY OWNERS VENDOR SIEMENS. SEE VENDOR DRAWINGS FOR MORE INFORMATION.
3. ISO-CENTER LOCATION OF THE CATH-LAB EQUIPMENT. FIELD VERIFY AND COORDINATE WITH OWNER'S VENDOR (SIEMENS) FOR MORE INFORMATION.
4. CAREFULLY REMOVE EXISTING STAINLESS STEEL MED GAS PEDESTAL FOR REINSTALLATION AFTER FLOORING IS COMPLETE.
5. REPLACE ALL EXISTING DUPLEX EMERGENCY POWER OUTLETS TO FOUR PLEX ON THE WALLS. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION. NOTE THAT ALL EXISTING WALLS HAVE 4 LB LEAD SHIELDING UP TO 7'-0" HIGH. INTEGRATION OF ALL SHIELDING SHALL NEED TO BE RETAINED AND REPAIRED TO ORIGINAL CONDITION AFTER ALL WORK IS COMPLETED, TYPICAL THROUGHOUT THE PROJECT.
6. EXISTING LEAD LINED DOORS, FRAME & HARDWARE TO REMAIN. PROTECT DURING CONSTRUCTION.
7. EXISTING EMERGENCY POWER OFF SWITCH TO REMAIN. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
8. NEW SHEET VINYL FLOORING WITH 4" COVED BASE. COORDINATE WITH OWNERS VENDOR SIEMENS REGARDING ACCEPTABLE SLOPE TOLERANCES ON THE FLOOR BEFORE PROCEEDING WITH THE WORK. SEE FINISH FLOOR PLANS AND SIEMENS DRAWINGS FOR MORE INFORMATION. COVED BASE SHALL FULLY ADHERE TO WALL.
9. EXISTING CABINETS, COUNTERTOP, PLUMING FIXTURES, ETC. TO REMAIN. PROTECT DURING CONSTRUCTION.
10. REFINISH AND PAINT EXISTING GYPSUM BOARD WALL. SEE FINISH FLOOR PLAN FOR MORE INFORMATION.
11. REPAINT EXISTING H.M. DOOR FRAME, TYP. SEE FINISH FLOOR PLAN.
12. EXISTING LEAD SHIELDED WINDOW & GLAZING TO REMAIN. PROTECT DURING CONSTRUCTION.
13. ORIENTATION POINT OF THE PATIENT TABLE SHALL ALIGN WITH THE EXISTING 4" DIA. HOLE ON THE FLOOR AT THIS LOCATION. FIELD VERIFY EXACT LOCATION AND COORDINATE WITH OWNER'S VENDOR (SIEMENS) FOR MORE INFORMATION.
14. DASHED LINE SHOWS EXTENT OF NEW FLOORING. SEE FINISH FLOOR PLAN FOR MORE INFORMATION.
15. EXISTING FLOOR FINISH TO REMAIN AT THIS LOCATION. PROTECT DURING CONSTRUCTION.
16. VERIFY FLOOR LEVELNESS. FLOOR SHOULD BE ±1/8" IN 10'-0" THROUGH THE ROOM. IF FLOOR IS UNEVEN, POUR SELF LEVELING EPOXY COMPOUND (ARDEX OR EQUAL) TO ACHIEVE THE REQUIRED FLOOR LEVELNESS. UNISTRUTS FOR SIEMENS EQUIPMENT RAILS SHALL BE INSTALLED AFTER FLOOR IS LEVELED. MEASURE HEIGHT TO THE BOTTOM OF THE UNISTRUTS ABOVE FINISHED FLOOR PER SIEMENS DRAWINGS. PREP FLOOR FOR NEW FINISHES. SEE SIEMENS DRAWINGS FOR ACCEPTABLE TOLERENCE LEVEL.
17. NEW PLASTIC LAMINATE COUNTERTOP WITH BULL-NOSED EDGE. SEE DETAIL A6/A-501 AND FINISH FLOOR PLAN FOR LAMINATE COLOR REQUIRED TO MATCH ADJACENT EXISTING & MORE INFORMATION. HEIGHT OF COUNTERTOP SHALL MATCH WITH THE ADJACENT EXISTING. PROVIDE 4'-0" W X 1'-1" D OPENING IN COUNTERTOP FOR INSTALLATION OF LARGE DISPLAY MONITOR BY OWNER. PROVIDE 2" RADIUS AT ALL INSIDE CORNERS. EXISTING SUPPORTS AND METAL BRACKETS MAY BE RE-USED. THE MONITOR OPENINGS ON THE COUNTERTOP MAY REQUIRE EXISTING BRACKETS TO BE MOVED OR ADJUSTED. PROVIDE BACKING IN THE WALL FOR INSTALLATION OF THE OWNER PROVIDED MONITOR. FIELD VERIFY EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK.INSTALL TWO ADJUSTABLE HEIGHT STEEL LEGS FOR SUPPORT OF DEEP COUNTERTOP. BASIS OF DESIGN: COUNTER 34 BRUSHED STEEL SET-NO-CUT.
18. SIEMENS EQUIPMENT BASE PLATES TO BE ANCHORED TO THE EXISTING CONCRETE FLOOR. SEE SHEET A100 FOR REMOVAL OF CEILING AT LOWER LEVEL FOR INSTALLATION OF THE METAL PLATES. SEE STRUCTURAL & SIEMENS DRAWINGS FOR MORE INFORMATION.
19. NEW DATA RACK. PROVIDED AND INSTALLED BY OWNER'S VENDOR. PROVIDE REQUIRED ELECTRICAL & DATA CONNECTION AS SHOWN IN THE ELECTRICAL DRAWINGS. COORDINATE WORK & EXACT LOCATION WITH THE OWNER AND ALL VENDORS INVOLVED BEFORE PROCEEDING.
20. RE-USE EXISTING 4" DIA. HOLE AND CONDUIT AS REQUIRED. THIS IS IDENTIFIED AS HOLE "B10" IN SIEMENS DRAWINGS.
21. SKYTRON LIGHTING CONTROL PANEL. SEE DRAWINGS FROM SKYTRON AND ALSO SEE ELECTRICAL DRAWINGS. CONTROL PANEL TO BE WRAPPED IN LEAD TO MAINTAIN INTEGRITY OF SHIELDING.
22. NEW ISOLATION DISTRIBUTION PANEL INSTALLED IN THE BOXED STUD FRAMED WALL. PROTECT DURING CONSTRUCTION. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION. INSTALL HNEW REMOTE ISOLATION ANNUNCIATOR IN THE LAB.
23. SIEMENS CATH LAB EQUIPMENT INSTALLED UNDER COUNTER. ADJUST LOCATION OF THE COUNTERTOP BRACKET AS REQUIRED TO MAKE ROOM FOR THE EQUIPMENT. COORDINATE WORK WITH LARGE DISPLAY PROVIDED BY OWNER.
24. EXISTING PLUMBING FIXTURE, SINK TO REMAIN. PROTECT DURING CONSTRUCTION. PROVIDE LOCK AT THE CABINETS UNDER THE SINK.
25. 3-5/8" THICK METAL STUD FRAMED BOXED WALL WITH $\frac{5}{8}$" THICK TYPE-X PAINTED GYPSUM BOARD SHEATHING ON ONE SIDE FROM THE FLOOR TO CEILING ABOVE TO HOUSE NEW ISOLATION PANELS. PAINT AND FINISH WALL TO MATCH WITH ADJACENT EXISTING HALLWAY. PROVIDE WALL PROTECTION AND CORNER GUARD TO MATCH ADJACENT EXISTING.

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Intermountain Healthcare
IMC- Cath Lab 2 Remodel Project
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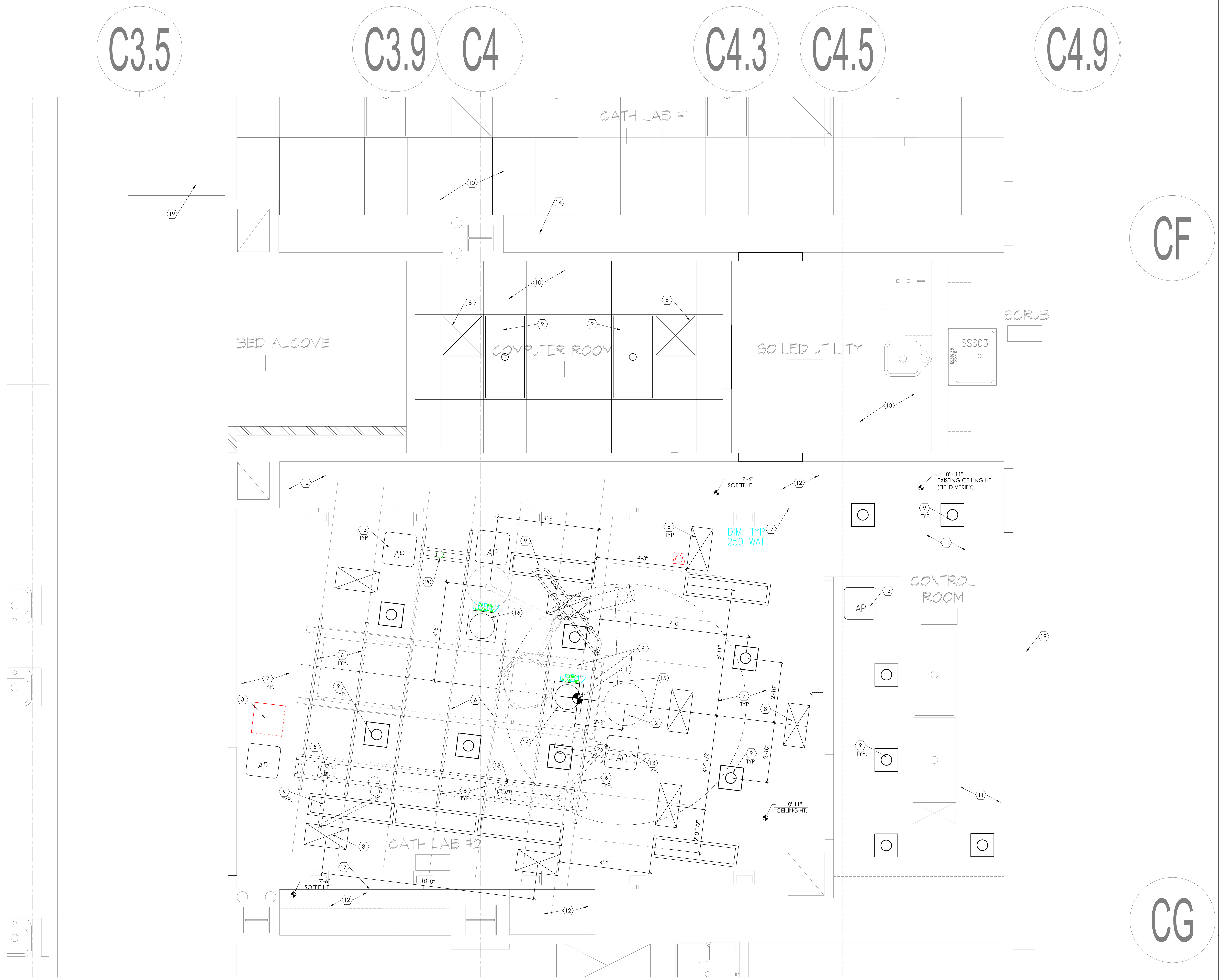
NJRA Project # 19205.00
Construction Documents July 15, 2020

New Floor Plan- Level 1

A111



1 Reflected Ceiling Plan
SCALE: 1/2" = 1'-0"

NORTH

KEY NOTES - FLOOR PLAN

1. LOCATION OF THE CATH LAB EQUIPMENT ISO-CENTER. COORDINATE WITH THE OWNER'S VENDOR SIEMENS FOR MORE INFORMATION.
2. NEW SKYTRON LARGE DISPLAY MONITOR MOUNTED TO STRUCTURE ABOVE. SEE OWNERS VENDOR SKYTRON FOR MORE INFORMATION & EXACT LOCATION. SEE STRUCTURAL & ELECTRICAL DRAWINGS.
3. EXISTING MEDGAS COLUMN AND STRUCTURE TO REMAIN. PROTECT DURING CONSTRUCTION. SEE MECHANICAL DRAWINGS.
4. EXISTING CEILING MOUNTED SURGICAL LIGHT, BOOM AND ASSOCIATED STRUCTURAL SUPPORT TO REMAIN. PROTECT DURING CONSTRUCTION. FIELD VERIFY EXACT LOCATION.
5. EXISTING SURGICAL LIGHT AND BOOM ANCHORED TO CEILING RAIL TO REMAIN. PROTECT DURING CONSTRUCTION.
6. EXISTING UNISTRUT SUPPORT FOR SIEMENS CATHLAB EQUIPMENT AT THE CEILING ANCHORED TO THE STRUCTURE ABOVE TO REMAIN U.N.O, TYP. REMOVE PORTION OF UNISTRUT WHERE INDICATED WITH KEYNOTE #21 ON DEMOLITION SHEET A101. SEE SIEMENS DRAWINGS & STRUCTURAL DRAWINGS FOR DETAILS AND REQUIREMENTS. ALSO REFER TO DETAIL **C5/A-501**.
7. NEW PAINTED GYPSUM BOARD CEILING. INSTALL AFTER ALL STRUCTURAL, MECHANICAL, ELECTRICAL, SKYTRON BOOMS AND SIEMENS EQUIPMENT WORK IS COMPLETE. SEE FINISH FLOOR PLAN FOR PAINT COLOR. ALSO REFER TO CEILING DETAIL **E3/A-501**. CEILING HEIGHT FROM FLOOR TO THE FACE OF THE CEILING MOUNTED UNISTRUT SUPPORT IS REQUIRED TO BE 8'-11". FIELD VERIFY EXISTING AND SEE SIEMENS DRAWINGS FOR ACCEPTABLE TOLERANCES.
8. NEW OR RE-USED MECHANICAL DIFFUSER. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION, TYPICAL.
9. NEW OR RE-USED CEILING LIGHTS. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION, TYPICAL.
10. REMOVE & RE-INSTALL EXISTING ACOUSTICAL PANEL CEILING, GRID SYSTEM, CEILING DIFFUSER & LIGHTS AS REQUIRED FOR ANY ABOVE CEILING M/E/P WORK. SEE ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS FOR MORE INFORMATION.
11. PATCH/REPAIR EXISTING GYPSUM BOARD CEILING AFTER ALL ABOVE CEILING WORK IS COMPLETE. CLEAN AND RE-INSTALL LIGHTS AND DIFFUSERS. RE-PAINT ENTIRE CEILING. SEE FINISH FLOOR PLANS.
12. EXISTING GYPSUM BOARD SOFFIT TO REMAIN. PROTECT DURING CONSTRUCTION. REMOVE & REINSTALL LIGHT, DIFFUSER ETC. AS REQUIRED. REPAINT SOFFIT AND CEILING AFTER WORK IS COMPLETED. SEE FINISH FLOOR PLANS.
13. 18" x 18" GASKETTED CEILING MOUNTED FINISHED & PAINTED GFRG ACCESS PANELS TO MATCH HOSPITAL STANDARD. COORDINATE WITH VENDORS, MECHANICAL DRAWINGS FOR EXACT LOCATION & QUANTITY AS REQUIRED BEFORE INSTALLATION.
14. REMOVE AND RE-INSTALL GYPSUM BOARD CEILING/ SOFFIT PARTIALLY AT THIS LOCATION WHERE REQUIRED IN ORDER TO INSTALL NEW MECHANICAL DUCT/ EQUIPMENT ABOVE. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION. PATCH REPAIR, PAINT AND FINISH CEILING TO MATCH WITH ADJACENT EXISTING AFTER ALL WORK IS COMPLETED.
15. REMOVE EXISTING CEILING UNISTRUT HERE ALONG WITH ASSOCIATED ACCESSORIES & STRUCTURAL SUPPORT IN ORDER TO CLEAR THE AREA FOR INSTALLATION OF NEW CEILING BOOMS FROM SKYTRON. SEE DEMOLITION PLAN. CONTRACTOR SHALL REMOVE & DISMANTLE STRUCTURAL SUPPORT OF THE REMOVED UNISTRUT AND MAINTAIN STRUCTURAL INTEGRITY OF THE REMAINING UNISTRUT SYSTEM TO BE RE-USED FOR THE NEW SIEMENS EQUIPMENT. NOTIFY STRUCTURAL ENGINEER AS SOON AS CEILING IS REMOVED IN THIS AREA FOR AN EXAMINATION OF THE EXISTING UNISTRUT SYSTEM. PATCH, REPAIR AND PAINT GYPSUM CEILING TO ORIGINAL CONDITION AFTER WORK IS COMPLETED.
16. REMOVE & REINSTALL EXISTING SKYTRON SURGICAL LIGHTS AS REQUIRED. SEE ELECTRICAL DRAWINGS AND MANUFACTURERS MANUAL FOR MORE INFORMATION.
17. EXISTING WALL SCONCE AT SOFFIT TO REMAIN. PROTECT DURING CONSTRUCTION.
18. EXISTING MONITOR AND BOOM ANCHORED TO THE CEILING RAIL TO REMAIN. PROTECT DURING CONSTRUCTION.
19. PARTIALLY REMOVE AND RE-INSTALL EXISTING CEILING, GRIDS, LIGHTS AND DIFFUSERS AS REQUIRED AT THE HALLWAY TO INSTALL MECHANICAL DUCT ABOVE THE CEILING IN THIS AREA AS OUTLINED IN THE MECHANICAL DRAWINGS. SEE MECHANICAL DRAWINGS FOR THE EXTENT OF THE WORK REQUIRED. MATCH FINISHED WORK WITH ADJACENT EXISTING. COORDINATE WITH HOSPITAL BEFORE PROCEEDING.
20. CABLE OUTLET FOR C-ARM TO REMAIN. PROTECT DURING CONSTRUCTION. COORDINATE WITH SIEMENS.

GENERAL NOTES

1. COORDINATE WITH SIEMENS REPRESENTATIVE TO ENSURE REQUIRED CEILING HEIGHT OF 8' -11" IS ACHIEVED FROM FINISHED FLOOR TO THE FACE OF THE UNISTRUT INSTALLED AT THE CEILING. SEE SIEMENS EQUIPMENT DRAWINGS FOR ACCEPTABLE FLOOR SLOPE TOLERANCES AND FOR MORE INFORMATION. FIELD VERIFY AND COORDINATE WORK BEFORE PROCEEDING.
2. ALL EXPOSED STEEL IN THE WALLS, ABOVE CEILING ETC. ARE REQUIRED TO BE SPRAY APPLIED FIRE PROOFED. SEE CODE COMPLIANCE PLANS FOR FIRE RATINGS THAT IS REQUIRED TO BE MAINTAINED THROUGHOUT THE PROJECT. ANY DAMAGE TO THE EXISTING FIRE PROOFING IS REQUIRED TO BE PATCHED AND REPAIRED WITH COMPATIBLE FIRE PROOFING PRODUCT.
3. ALL EXISTING MAGNETIC AND LEAD SHIELDING IN THE EXISTING WALLS, FLOOR AND ROOF DECK IS REQUIRED TO BE RETAINED. REPLACE TO MAINTAIN SHIELDING WITH EQUIVALENT SHIELDING TO MATCH ORIGINAL CONDITIONS. IF DAMAGED DURING CONSTRUCTION.

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NJRA Project # 19205.00
Construction Documents July 15, 2020

Reflected Ceiling Plan- Level 1

A131

FINISH LEGEND

LEGEND	DESCRIPTION	MANUFACTURER	STYLE	MODEL #	COLOR	REMARKS
F1 - FLOOR FINISH	SHEET VINYL - FIELD	MANNINGTON	BIOSPEC MD	15361	FLAX	
F2 - FLOOR FINISH	SHEET VINYL - ACCENT BORDER	MANNINGTON	BIOSPEC MD	15369	BEDROCK	
B1 - WALL BASE	SHEET VINYL- COVED BASE	MANNINGTON	BIOSPEC MD	15361	FLAX	PROVIDE ALUMINUM TOP TRIM
B2 - WALL BASE	SHEET VINYL- COVED BASE	MANNINGTON	BIOSPEC MD	15369	BEDROCK	PROVIDE ALUMINUM TOP TRIM
P1 - PAINT	WALL PAINT	SHERWIN WILLIAMS	EGGSHELL	SW 7043	WORLDLY GRAY	
P2 - PAINT	DOOR FRAME PAINT	SHERWIN WILLIAMS	SEMI-GLOSS	SW 6115	TOTALLY TAN	TYPICAL AT ALL HM DOOR, FRAMES & WINDOWS- FIELD VERIFY TO MATCH EXISTING
P3 - PAINT	GYPSUM CEILING PAINT	SHERWIN WILLIAMS	EGGSHELL	SW 7005	PURE WHITE	
CG - CORNER GUARD	CORNER GUARD 2' X 2" X 4'-0"H	C/S ACROVYN	4000	SSM-20AN	262 DRIFTWOOD	WITH CONTINUOUS ALUMINUM RETAINER
WP - WALL PROTECTION	4'-0" FV TO MATCH EXISTING	C/S ACROVYN	4000	SSM-20AN	FIELD VERIFY TO MATCH	MATCH WITH ADJACENT EXISTING AT THE HALLWAY
PL1 - PLASTIC LAMINATE	PLASTIC LAMINATE COUNTERTOP	FORMICA	MATTE FINISH	303-58	ANTIQUE WHITE OXIDE	FIELD VERIFY LAMINATE STYLE AND COLOR - MATCH ADJACENT EXISTING

1 Finish Floor Plan - Level 1
SCALE: 1/2" = 1'-0"
NORTH

KEY NOTES - FLOOR PLAN

1. LINE OF TRANSITION BETWEEN NEW AND EXISTING FLOOR FINISHES.
2. EXISTING SHEET VINYL FLOORING TO BE REPLACED WITH NEW SHEET VINYL FLOORING. SEE NEW FLOOR PLAN, DEMOLITION PLAN AND FINISH LEGEND FOR MORE INFORMATION. EXISTING MAGNETIC SHIELDING IF ANY ON THE FLOOR IS REQUIRED TO BE PROTECTED DURING INSTALLATION. SEE FLOOR PLANS AND SIEMENS DRAWINGS FOR ACCEPTABLE FLOOR SLOPE TOLERANCES. FLOOR MAY NEED TO BE PREPARED TO MEET THE REQUIREMENTS OF THE NEW CATH LAB EQUIPMENT. FIELD VERIFY EXISTING CONDITIONS.
3. NEW CATH LAB EQUIPMENT BASE PLATE THROUGH BOLTED THROUGH EXISTING CONCRETE FLOOR. SEE SIEMENS AND STRUCTURAL DRAWINGS FOR MORE INFORMATION. INSTALL PLATE AFTER ALL FLOORING UNDER PLATE IS COMPLETE.
4. EXISTING VCT FLOORING & RESILIENT WALL BASE TO REMAIN IN THIS AREA. PROTECT DURING CONSTRUCTION.
5. CAREFULLY REMOVE AND CLEAN EXISTING MEDGAS PEDESTAL. RE-INSTALL IN THE SAME LOCATION AFTER ALL FLOORING WORK IS COMPLETE. FLOORING TO BE TUCKED INSIDE THE MED GAS PEDESTAL.
6. EXISTING SHEET VINYL FLOORING AND COVED WALL BASE TO REMAIN. PROTECT DURING CONSTRUCTION.
7. EXISTING CABINET COUNTERTOP MILLWORK & PLASTIC LAMINATE FINISHES TO REMAIN. PROTECT DURING CONSTRUCTION.
8. NEW COUNTERTOP TO REPLACE EXISTING IN THIS AREA. SEE FINISH LEGEND FOR THE PLASTIC LAMINATE AT THE COUNTERTOP TO MATCH ADJACENT EXISTING.
9. PATCH EXISTING SHEET VINYL FLOORING WITH MATCHING SHEET VINYL WHERE NEW WALL IS CONSTRUCTED AT HALLWAY. PROVIDE MATCHING COVED WALL BASE ALONG THE NEW WALL.

LEGEND - FLOOR PATTERN

(F1) - SHEET VINYL - FIELD COLOR

(F2) - SHEET VINYL - ACCENT BORDER

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NJRA Project # 19205.00
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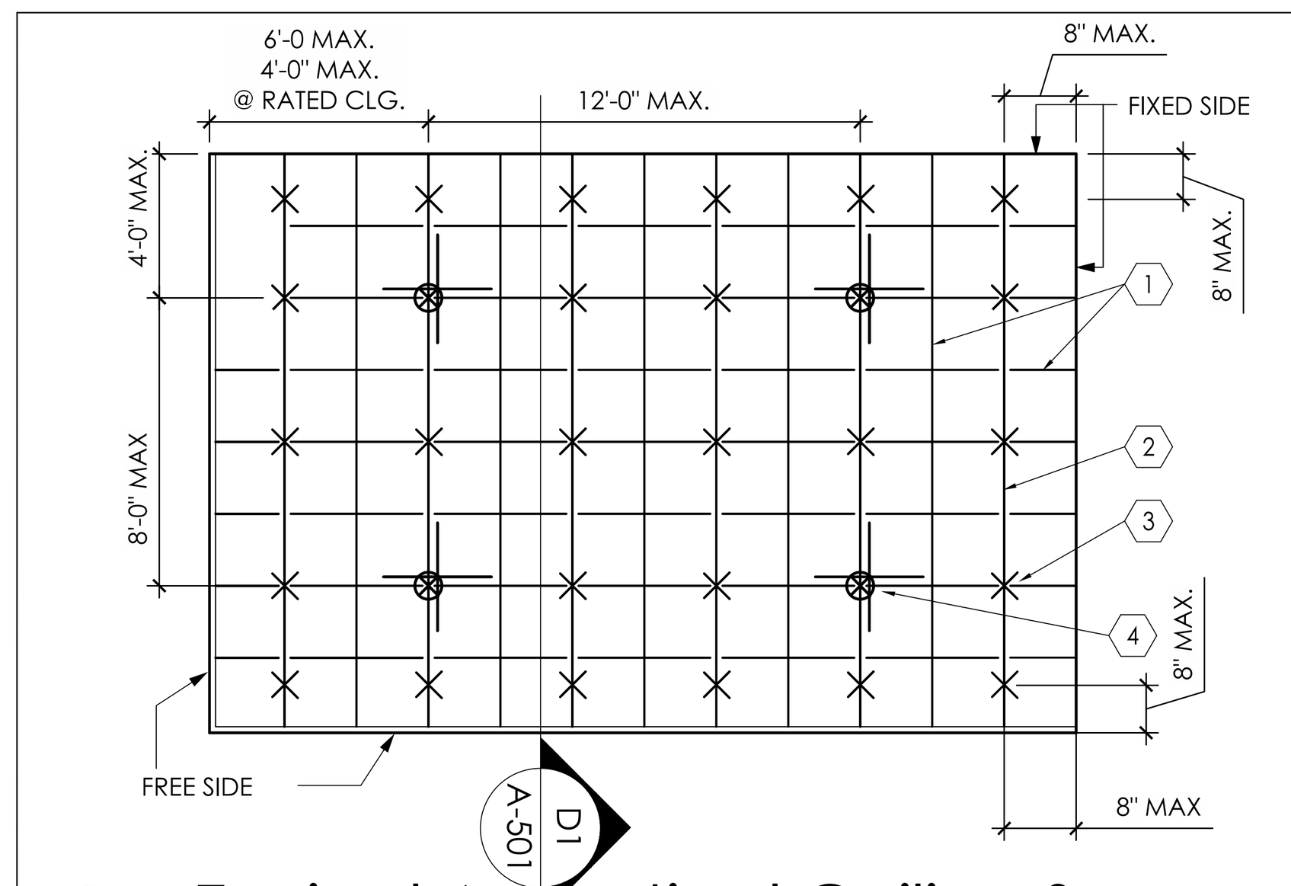
Finish Floor Plan- Level 1

A151

7/15/2020 11:51:15 AM - Z:\200 IHC\20204.00 IHC - IMC CATH LAB #2\02 BIM - REVIT & AUTOCAD\02 AUTOCAD DWGS\A151 FINISH FLOOR PLAN- LEVEL 1.DWG

E1 Typical Acoustical Ceiling Suspension

N.T.S.

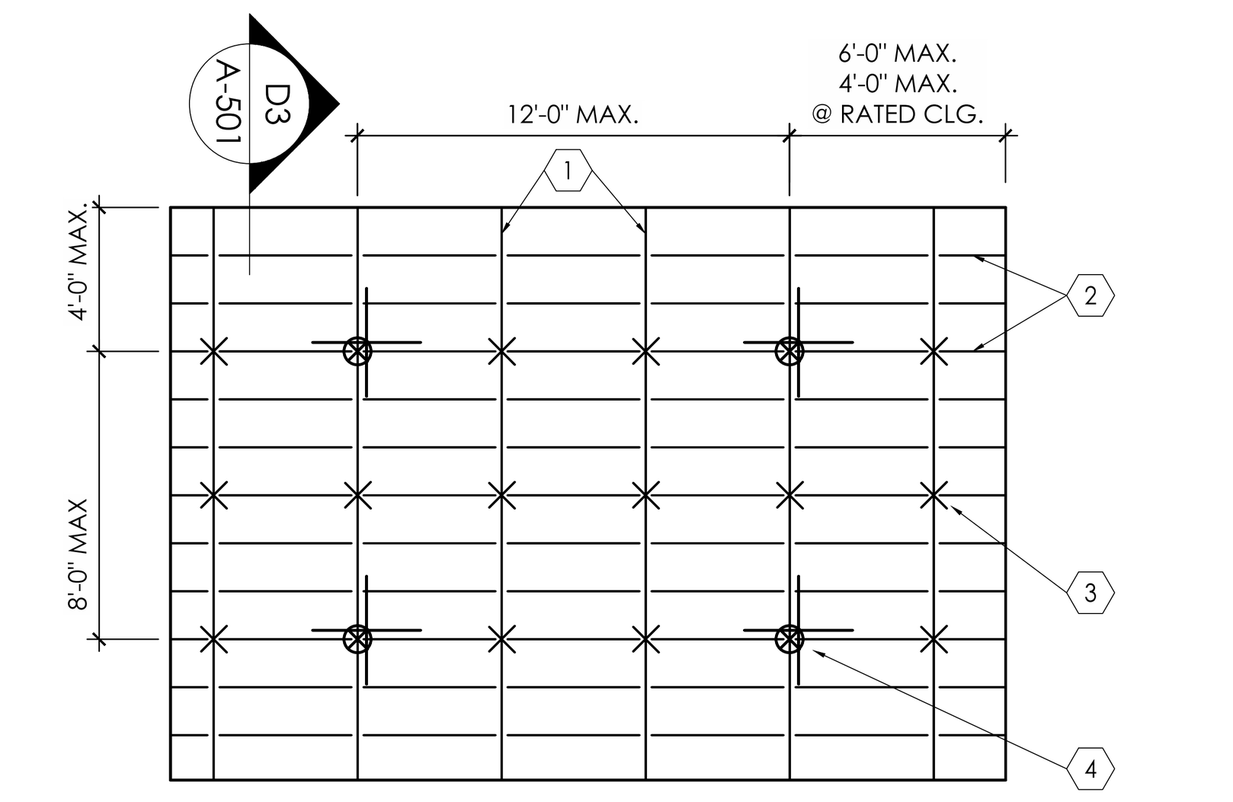


KEYED NOTES

1. EXPOSED CROSS GRID MEMBER @ 2'-0" O.C.
2. EXPOSED MAIN GRID MEMBER @ 4'-0".
3. HANGER WIRE 12GA MIN. @ 4'-0" O.C. MAX EACH WAY.
4. SEISMIC RESTRAINT. SEE DETAIL C1/A-501.

E3 Typical Gypsum Board Ceiling Suspension

N.T.S.

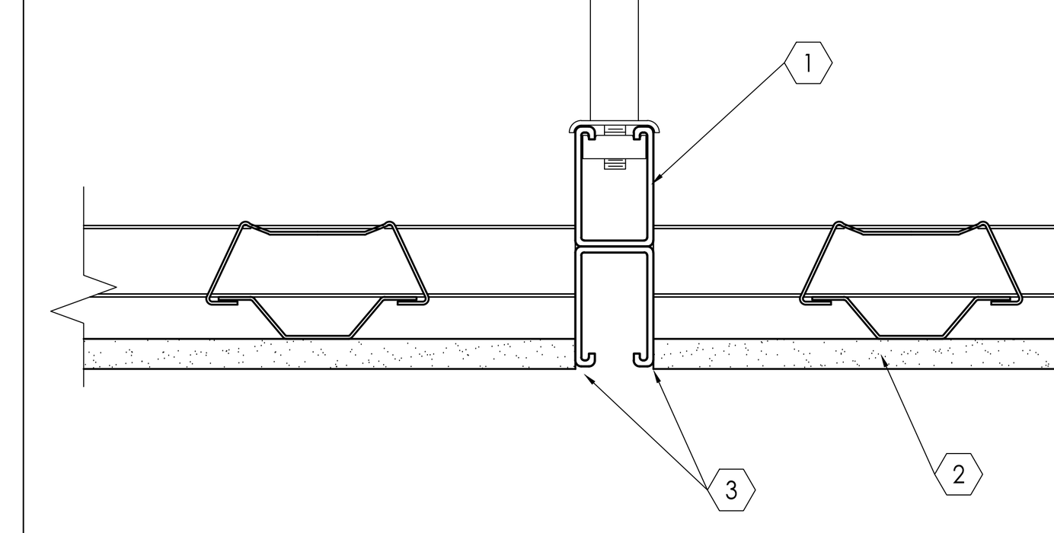


KEYED NOTES

1. MAIN RUNNER 1-1/2" @ 4'-0" O.C.
2. FURRING CHANNEL @ 1'-4" O.C.
3. HANGER WIRE 8GA MIN. @ 4'-0" O.C. EACH WAY.
4. SEISMIC RESTRAINT. SEE DETAIL C3/A-501.

E5 Gypsum Board Unistrut Suspension Detail

Scale: 3" = 1'-0"

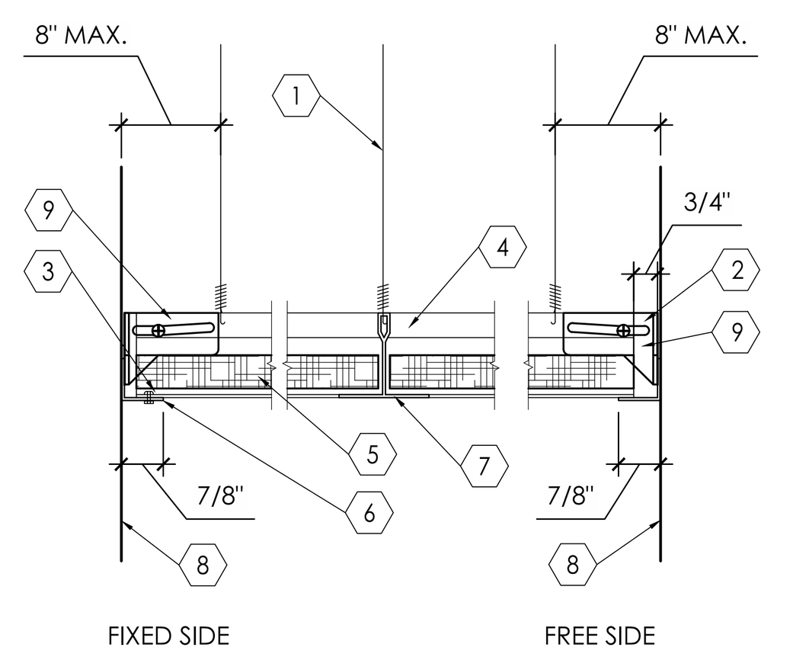


KEYED NOTES

1. CEILING MOUNTED UNISTRUT SYSTEM. SEE STRUCTURAL DRAWINGS.
2. GYPSUM BOARD CEILING AS SCHEDULED. SEE DETAIL E3/A501.
3. FINISH GYPSUM BOARD ON EITHER SIDE OF THE EQUIPMENT RAIL. BOTTOM OF GYPSUM BOARD TO ALIGN WITH BOTTOM OF RAIL, TYPICAL.

D1 Ceiling Grid Detail

Scale: 3" = 1'-0"

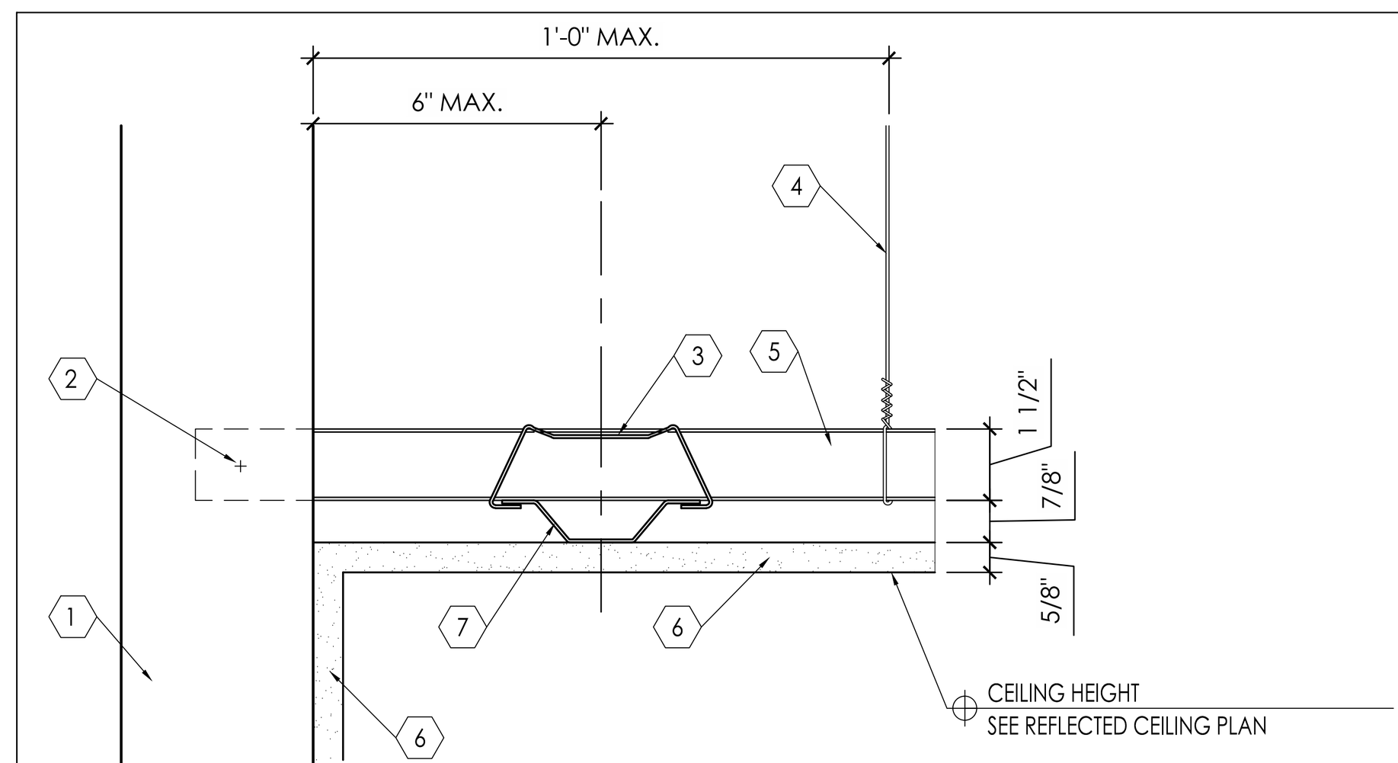


KEYED NOTES

1. CLASS 1 ZINC COATED, SOFT TEMPERED WIRES, 12 GAUGE MIN.
2. PROVIDE 3/4" GAP BETWEEN CEILING GRID AND ANGLE ON TWO ADJACENT SIDES OF THE ROOM (FREE SIDES). DO NOT ATTACH CEILING GRID TO WALL ANGLE.
3. ATTACH CEILING GRID TO WALL ANGLE ON TWO ADJACENT SIDES OF THE ROOM (FIXED SIDES).
4. EXPOSED CROSS RUNNER ATTACHED TO MAIN RUNNERS.
5. ACOUSTICAL CEILING TILES. SEE CEILING PLANS.
6. 7/8" SUPPORTING CLOSURE ANGLE AT CEILING PERIMETER ATTACHED TO WALL.
7. EXPOSED MAIN RUNNER SHALL BE HEAVY DUTY T-BAR GRID SYSTEM SUSPENDED FROM STRUCTURE ABOVE. THIS END OF THE GRID SHALL REST UPON AND BE FREE TO SLIDE ON THE CLOSURE ANGLE.
8. LINE OF WALL.
9. SEISMIC CLIPS. BASIS OF DESIGN ARMSTRONG BERC 2 CLIPS.

D3 Gypsum Board Ceiling Detail

Scale: 3" = 1'-0"

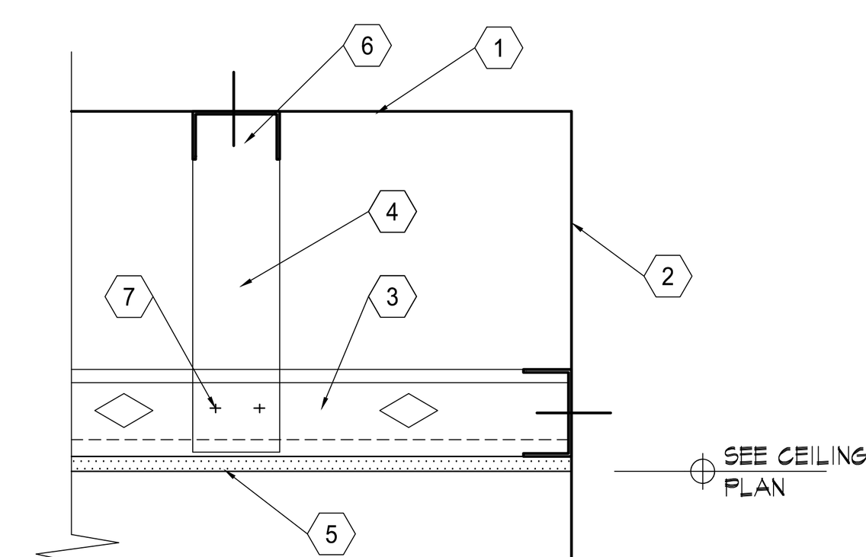


KEYED NOTES

1. METAL STUD WALL AS OCCURS. SEE PARTITION SCHEDULE.
2. SHEET METAL SCREW.
3. WIRE CLIP OR TIE.
4. HANGER WIRE, 8 GAUGE, @ 4'-0" O.C. EACH WAY MAXIMUM AND WITHIN 12" OF THE WALL TYPICAL.
5. METAL RUNNER CHANNELS, 1 1/2" THICK X 18 GA, @ 48" O.C.
6. GYPSUM BOARD, 5/8" THICK, ATTACHED TO METAL FURRING CHANNEL.
7. FURRING CHANNEL, 7/8" THICK X 18 GA, @ 1'-4" O.C. MAXIMUM

D5 Gypsum Board Ceiling Suspension Detail

Scale: 1-1/2" = 1'-0"

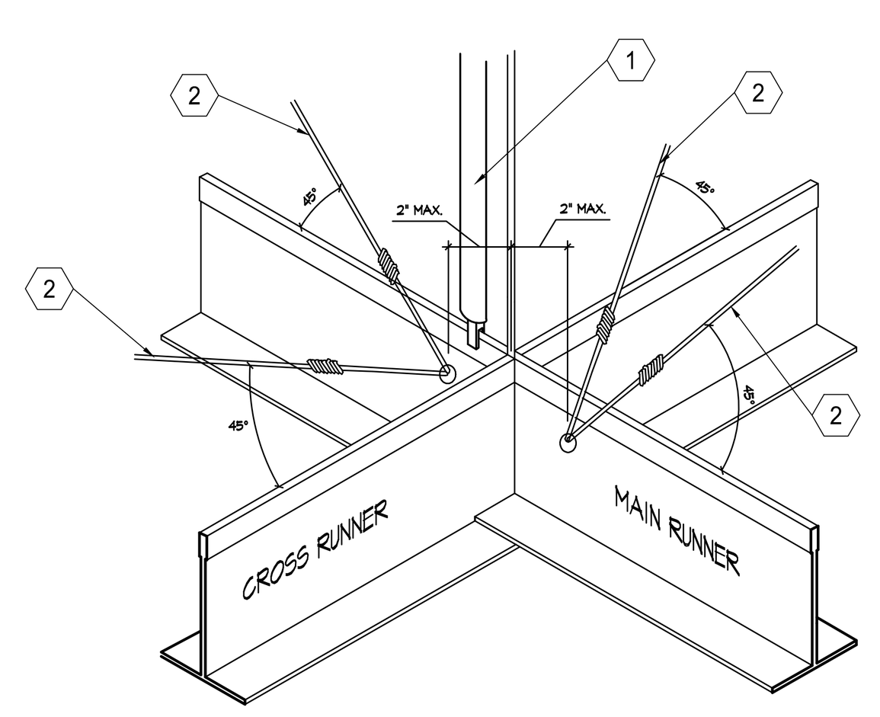


KEYED NOTES

1. LINE OF STRUCTURE ABOVE.
2. LINE OF WALL.
3. METAL STUD FRAMING (6" THICK, 18 GAUGE, METAL STUDS AT 16" O.C.- HORIZONTAL).
4. METAL STUD FRAMING (6" THICK, 18 GAUGE, METAL STUDS AT 32" O.C.- VERTICAL- BOTH WAYS- PERPENDICULAR AND PARALLEL TO HORIZONTAL FRAMING) . CROSS BRACE FRAMING AS REQUIRED FOR STRUCTURAL RIGIDITY.
5. 5/8" THICK TYPE 'X' GYP. BD. ATTACH TO METAL STUD FRAMING.
6. SEE DETAIL C3/A-501 FOR ATTACHMENT TO STRUCTURE ABOVE.
7. SHEET METAL SCREWS (2) # 10 AT EA. STUD.

C1 Acoustical Grid Seismic Detail

Not To Scale



KEYED NOTES

1. RIGID HORIZONTAL RESTRAINT/ COMPRESSION POST FROM CEILING GRID TO STRUCTURE ABOVE.
2. CLASS 1 ZINC COATED, SOFT TEMPERED WIRES, 12 GAUGE MIN.WIRES ARRANGED AT 90° FROM EACH OTHER AT AN ANGLE NOT EXCEEDING 45° FROM THE PLANE OF THE CEILING.

NOTE:

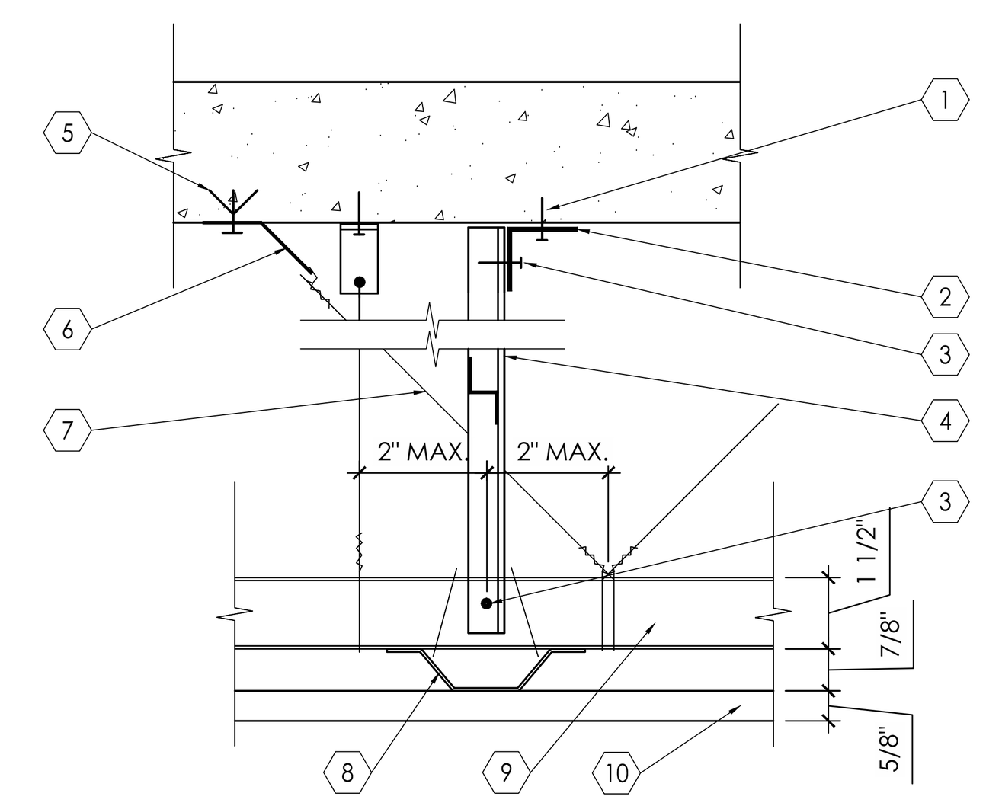
A. CEILING GRIDS IN ROOMS OR AREAS GREATER THAN 1,000 SQ. FT. SHALL HAVE A RIGID HORIZONTAL RESTRAINT FROM CEILING TO STRUCTURE ABOVE AT EVERY 96 SQ. FT.

B. ALL SPLAYED WIRES SHALL BE AT MAXIMUM ANGLE OF 45°, 12 GAUGE AND GALVANIZED.

C. WHEN CEILING AREA EXCEEDS 2,500 SQ. FT. PROVIDE SEISMIC SEPARATION JOINT APPROVED BY CEILING GRID MANUFACTURER AND ARCHITECT.

C3 Gypsum Board Ceiling Seismic Restraint Detail

Scale: 3" = 1'-0"

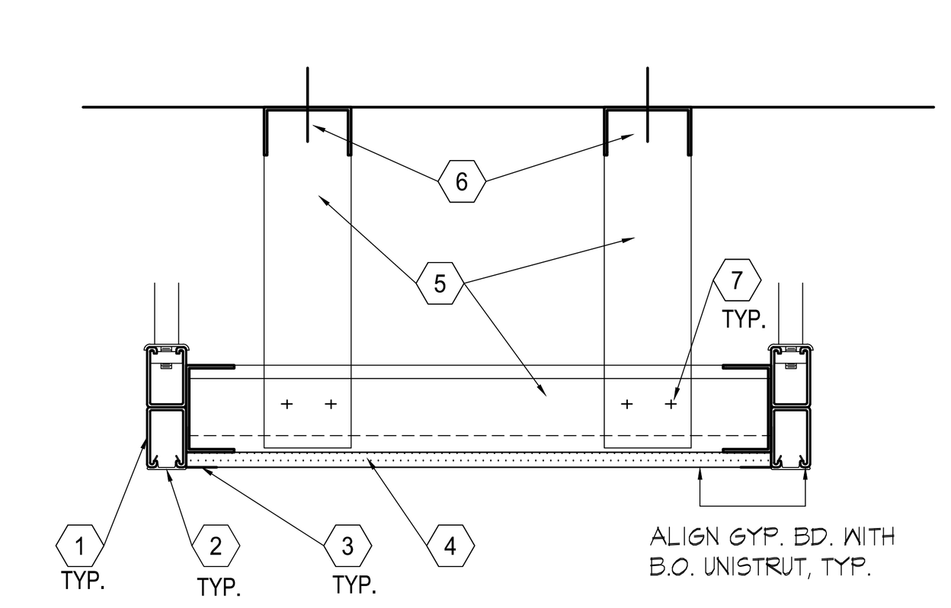


KEYED NOTES

1. EXP BOLT 3/16" MIN.
2. METAL CLIP 12 GA MIN x 3/4"W
3. MACHINE BOLT 1/2" DIA. MIN.
4. ANGLE STRUT OR CHANNEL.
5. EXP. BOLT 5/16" MIN.
6. METAL CLIP 1"W X 2" X 12 GA MIN.
7. DIAGONAL HANGER WIRES 12GA MIN.- 4 SIDES
8. FURRING CHANNEL, 7/8" THICK, @ 1'-4" O.C. MAXIMUM.
9. METAL RUNNER CHANNELS, 1 1/2" THICK, @ 48" O.C.
10. GYPSUM BOARD, 5/8" THICK, ATTACHED TO METAL FURRING CHANNEL.

C5 Gypsum Board Ceiling Suspension Detail at Unistruts

Scale: 1-1/2" = 1'-0"

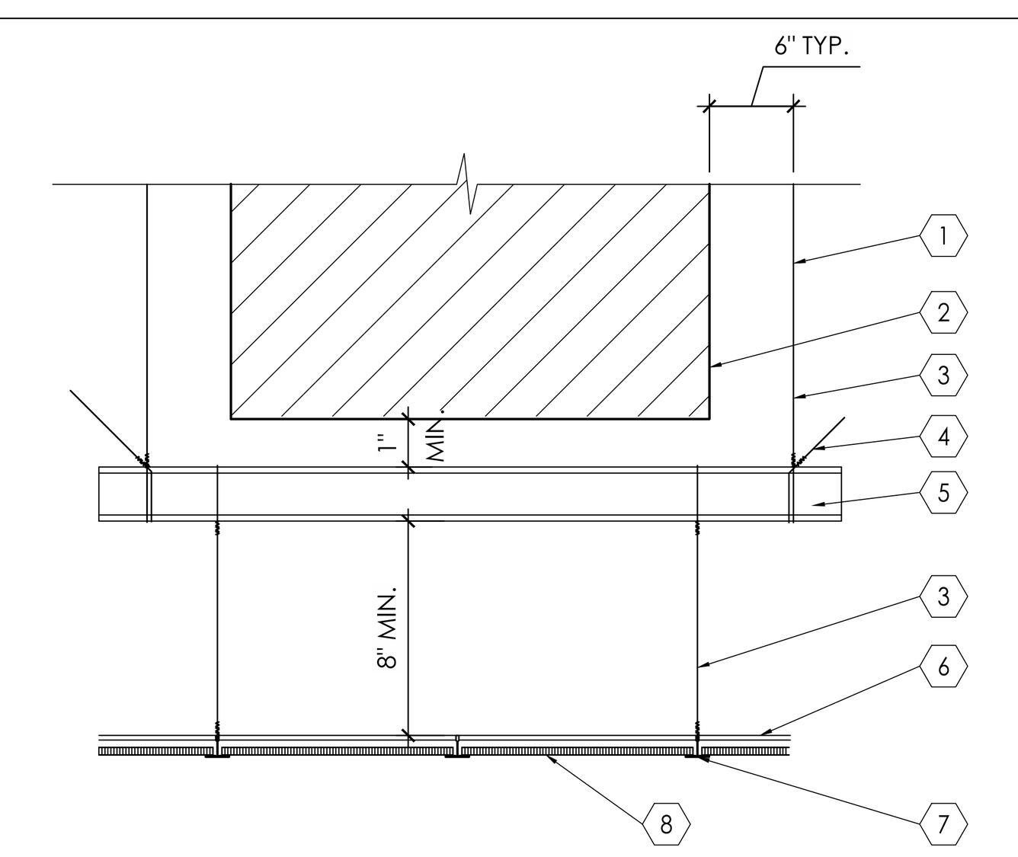


KEYED NOTES

1. P5501 UNISTRUT GRID. SEE STRUCTURAL DRAWINGS.
2. P1184P WHITE PVC UNISTRUT CAP. INSTALL AT EXPOSED TO VIEW UNISTRUTS AFTER SIEMENS EQUIPMENT RAILS INSTALLATION.
3. *'L' TRIM LOULDING. BASIS OF DESIGN FRY REGLET DRML-625. MUD OVER L-MOULDING TO PRIDE A SMOOTH FINISH.*
4. ATTACH 5/8" THICK, TYPE 'X' GYPSUM BOARD TO METAL STUD FRAMING.
5. METAL STUD FRAMING (6" THICK, 18 GAUGE, METAL STUDS AT 16" O.C.- HORIZONTALLY AND VERTICALLY). CROSS BRACE FRAMING AS REQUIRED FOR STRUCTURAL RIGIDITY.
6. SEE DETAIL C3/A-501 FOR ATTACHMENT TO STRUCTURE ABOVE.
7. SHEET METAL SCREWS (2) # 10 AT EA. STUD.

B1 Acoustical Trapeze Detail

N.T.S.

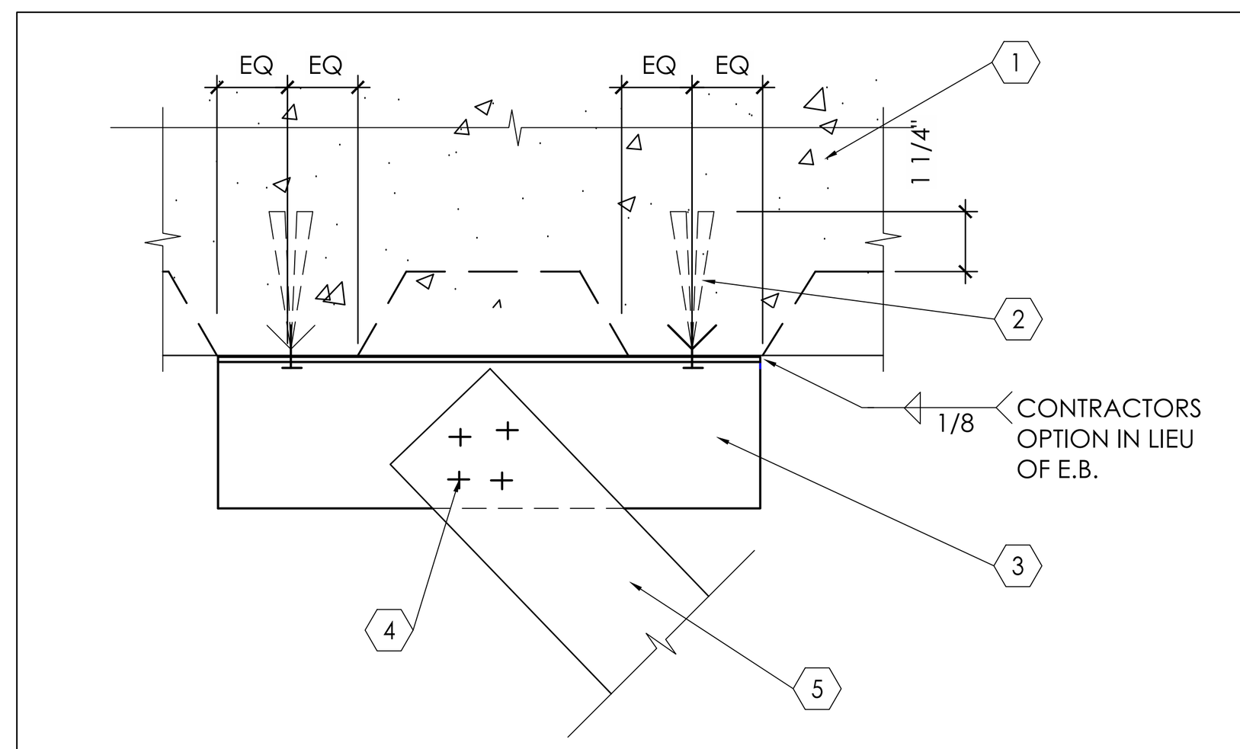


KEYED NOTES

1. SEE DETAIL C1 FOR HANGER WIRE ATTACHMENT.
2. DUCT OR OTHER OBSTRUCTION.
3. HANGER WIRE 8 GA MIN.
4. DIAGONAL HANGER WIRE 12 GA MIN..
5. METAL CHANNELS AT 4'-0" O.C.
4'-0" SPAN= 1-1/2" x 16GA
6'-0" SPAN= 2-1/2" x 16GA
8'-0" SPAN= 4" x 16GA
12'-0" SPAN= 6" x 16GA
6. CROSS RUNNER BEYOND
7. MAIN RUNNER
8. ACOUSTICAL CEILING PANEL. SEE DRAWINGS AND SPECS FOR DETAILS

B3 Gypsum Board Bracing Suspension Detail

3"= 1'-0"



KEYED NOTES

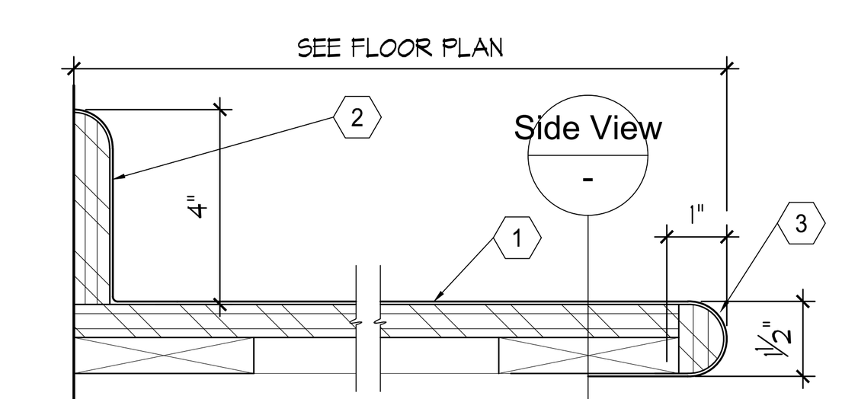
1. EXISTING CONCRETE OVER METAL DECK.
2. 1/4" Ø EXP. BOLTS, TYP.
3. METAL CLIP 12 GA, 3" x 3" x 1'-6" LONG MIN.
4. 4 # 10 SHEET METAL SCREWS.
5. METAL STUD, 18 GA MIN. 3-5/8" @ 4'-0" O.C.

B5 Countertop Detail

Scale: 3" = 1'-0"

KEYED NOTES

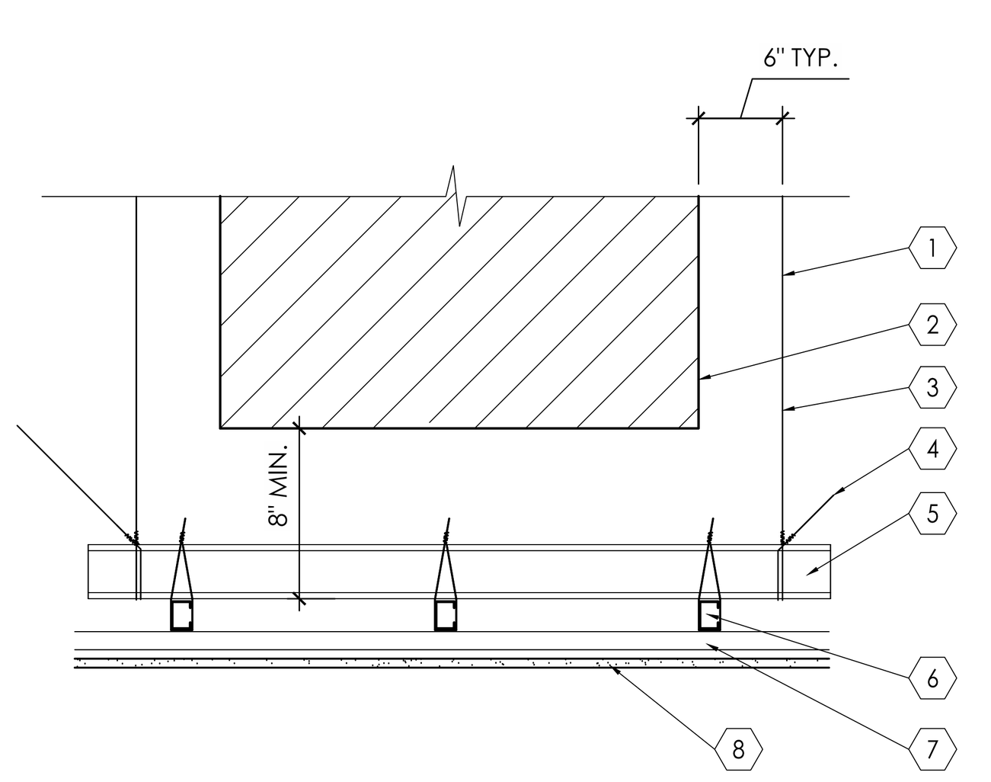
1. PLASTIC LAMINATE OVER PREMIUM GRADE MULTICORE, WITH RADIUS AS SHOWN. SEE SPECIFICATIONS. PROVIDE MARINE GRADE PLYWOOD WHERE SINK OCCURS AT COUNTERTOP.
2. LAMINATE SHALL RUN CONTINUOUSLY FROM COUNTERTOP TO BACKSPLASH. BACKSPLASH TO HAVE A 3/4" RADIUS EDGE.
3. PLASTIC LAMINATE BULLNOSE. FIELD VERIFY TO MATCH WITH ADJACENT EXISTING.



Plastic Laminate Countertop

A1 Gypsum Board Trapeze Detail

N.T.S.

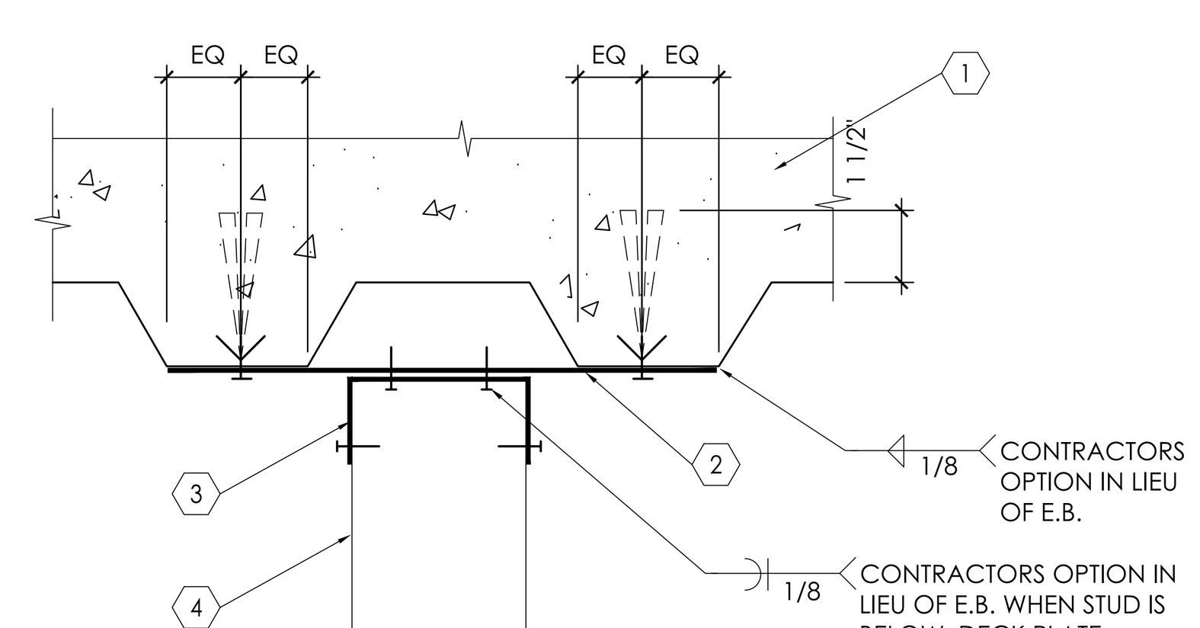


KEYED NOTES

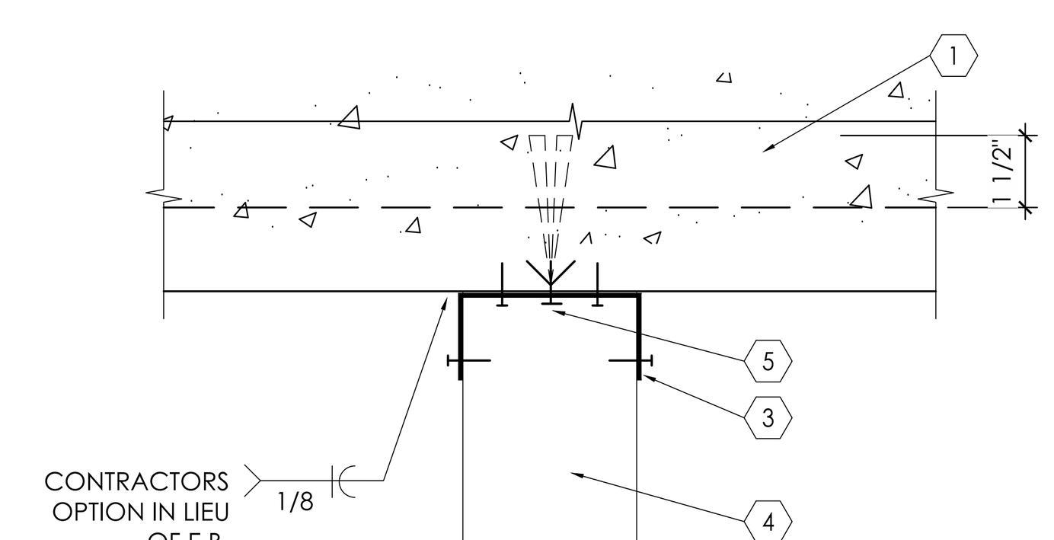
1. SEE DETAIL C1 FOR HANGER WIRE ATTACHMENT.
2. DUCT OR OTHER OBSTRUCTION.
3. HANGER WIRE 8 GA MIN.
4. DIAGONAL HANGER WIRE 12 GA MIN..
5. METAL CHANNELS AT 4'-0" O.C.
4'-0" SPAN= 1-1/2" x 16GA
6'-0" SPAN= 2-1/2" x 16GA
8'-0" SPAN= 4" x 16GA
12'-0" SPAN= 6" x 16GA
6. METAL RUNNER CHANNELS, 1 1/2" THICK.
7. GYPSUM BOARD, 5/8" THICK, ATTACHED TO METAL FURRING CHANNEL.
8. FURRING CHANNEL, 7/8" THICK, @ 1'-4" O.C. MAXIMUM

A3 Typical Suspended Stud Attachment

3"= 1'-0"



PARALLEL TO DECK



PERPENDICULAR TO DECK

KEYED NOTES

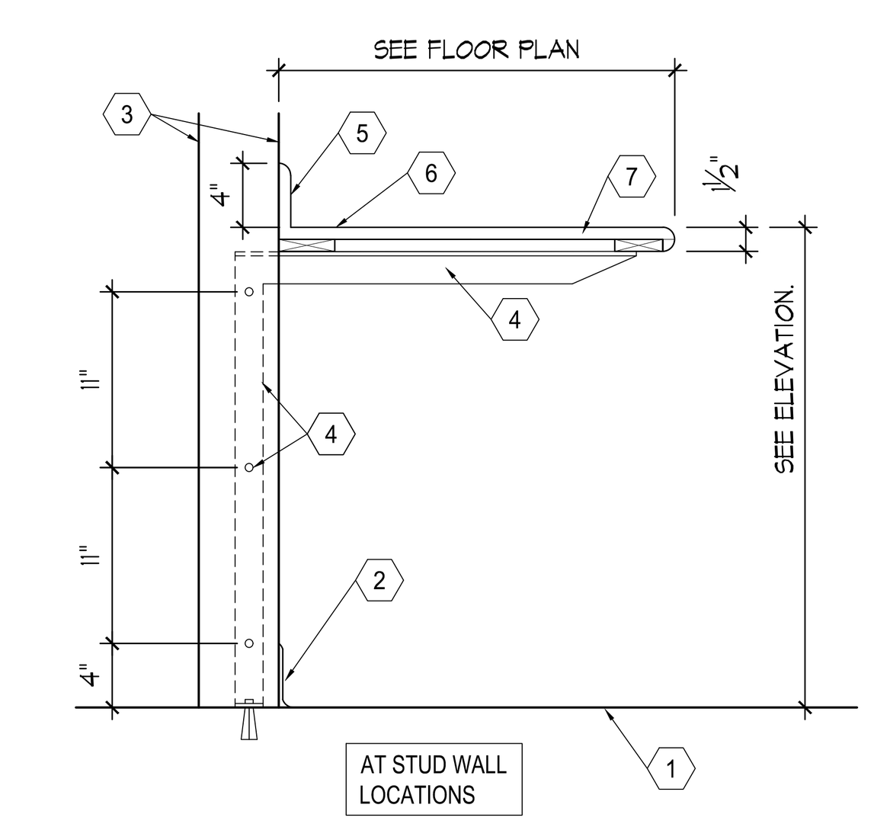
1. EXISTING CONCRETE OVER METAL DECK.
2. CONTINUOUS METAL PLATE, 10 GA x 1'-4" WIDE WITH TWO 1/4" EXP. BOLTS
3. LONG LEG TRACK 16 GA WITH 2 # 10 S.M.S. @ 16" O.C.
4. METAL STUD, 18 GA MIN. 3-5/8" @ 4'-0" O.C.
5. PL WASHER 1/8" x 3" x3"

A6 Countertop / Kneespace

SCALE: FULL SCALE

KEYED NOTES

1. LINE OF FLOOR.
2. WALL BASE. SEE FINISH SCHEDULE.
3. EXISTING METAL STUD FRAMED LEAD SHIELDED PARTITION WALL.
4. COUNTERTOP SUPPORT, PAINTED. SUPPORT SHALL BE STEEL ANGLE, 2" X 2" X 1/4", PIECES MITERED AND WELDED @ 90° ANGLE AS INDICATED. CHAMFER EXPOSED EDGE (BELOW COUNTERTOP EDGE) AND GRIND ALL EXPOSED EDGES SMOOTH. ATTACH SUPPORT TO METAL STUDS INSIDE WALL WITH 1/4" BOLTS, AS SHOWN. AT FLOOR, PROVIDE 3" WIDE X 6" LONG X 1/4" THICK, BASE STEEL PLATE WELDED TO VERTICAL STEEL ANGLE. ATTACH BASE PLATE TO FLOOR WITH TWO 1/2" DIAMETER ANCHOR BOLTS (ON EITHER SIDE OF VERTICAL ANGLE) WITH 3" MINIMUM EMBED IN CONCRETE FLOOR. CONTRACTOR SHALL REVIEW INTERIOR ELEVATIONS AND LOCATE SUPPORTS DURING WALL CONSTRUCTION. SUPPORT SPACING SHALL NOT EXCEED 2'-8" O.C. MAXIMUM. (RE-USE OF EXISTING SUPPORT AND BRACKET IS ACCEPTABLE IF FEASIBLE, COORDINATE WITH THE OWNER).
5. BACKSPLASH WITH 3/4" RADIUS EDGE.
6. PROVIDE OPENING AT THE COUNTERTOP AS SHOWN IN THE FLOOR PLAN. PROVIDE GROMMETS AS REQUIRED FOR THE EQUIPMENT CONNECTIONS.
7. PLASTIC LAMINATE FACED COUNTERTOP WITH BULLNOSE EDGE. SEE DETAIL B5/A-501 AND FIELD VERIFY TO MATCH WITH ADJACENT EXISTING. SEE FINISH FLOOR PLAN FOR PLASTIC LAMINATE COLOR.



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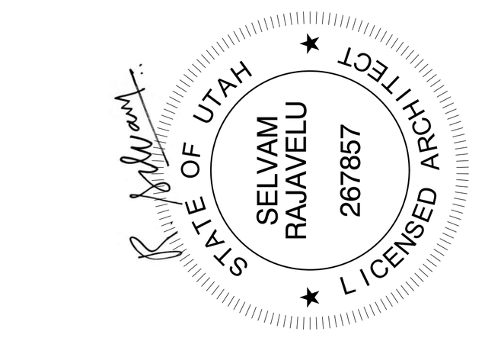

Intermountain Healthcare
IMC- Cath Lab 2 Remodel Project
5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

Details

A501

LEGEND OF MECHANICAL SYMBOLS AND ABBREVIATIONS

SINGLE LINE	DOUBLE LINE	
		POSITIVE PRESSURE DUCT – RISE
		POSITIVE PRESSURE DUCT – DROP
		NEGATIVE PRESSURE DUCT – RISE
		NEGATIVE PRESSURE DUCT – DROP
		ROUND DUCT – RISE
		ROUND DUCT – DROP
		UNDER FLOOR DUCT
		TURNING VANES
		FRESH AIR LOUVER
		RELIEF AIR OR EXHAUST AIR LOUVER
	12X12 200	CEILING SUPPLY DIFFUSER
	20X20 200	CEILING RETURN REGISTER
	12X12 200	CEILING EXHAUST REGISTER, (BALANCE TO MATCH SUPPLY IF RETURN CFM IS NOT SHOWN)
	24X10 200	SIDEWALL SUPPLY REGISTER
	24X10 200	SIDEWALL EXHAUST OR RETURN REGISTER
	12X12 200	CEILING SUPPLY DIFFUSER WITH FLEXIBLE DUCT
	24/24	CEILING RETURN AIR GRILE W/ SOUND BOOT
TOP FIGURES INDICATE NECK SIZE. BOTTOM FIGURE INDICATES CFM.		
	3–1" SLOTS @ 48" 400	LINEAR DIFFUSER WITH PLENUM AND FLEXIBLE DUCT CONNECTION. NO. OF SLOTS ON TOP, ACTIVE LENGTH AND CFM ON BOTTOM
		FLEXIBLE DUCT CONNECTION
		FLEXIBLE DUCT
		FAN
12/8 FO	12/8 FO	FLAT OVAL DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
12/8	12/8	RECTANGULAR DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
12"ø	12"ø	ROUND DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
UP	UP	INCLINED RISE
DN	DN	INCLINED DROP
		WITH RESPECT TO AIR FLOW 15° NOMINAL INCLINE WITH RADIUS TURNS=DEPTH OF DUCT.
W R		R/W=1. ROUND DUCT SIMILAR TO RECTANGULAR
12/12 8/8	12/12 8/8	RECTANGULAR TO RECTANGULAR OR ROUND TO ROUND DUCT TRANSFORMATION MAXIMUM 15° INCLUDED ANGLE EXCEPT WHERE SHOWN OTHERWISE.
9/9 9"ø	9/9 9"ø	RECTANGULAR TO ROUND DUCT TRANSFORMATION
R 6	R 6	BRANCH DUCT SPLIT WITH 6" WIDTH AND MIN. R=WIDTH OF BRANCH DUCT DOWNSTREAM. ELBOW TURNING VANE OPTIONAL.
RECT. TO ø RECT ROUND ALL	150 200 45° D D	TAP ENTRY AREA EQUALS 150% OF BRANCH AREA
		HIGH EFFICIENCY FITTING
		MANUAL VOLUME DAMPER
FD	FD	FIRE DAMPER IN DUCT, W/ ACCESS PANEL REQD.
FSD	FSD	COMBINATION FIRE/SMOKE DAMPER W/ ACCESS PANEL
SD	SD	SMOKE DAMPER W/ ACCESS PANEL
OR ATC	ATC OR	ATC DAMPER
AD	AD	ACCESS PANEL IN DUCT OR PLENUM
		HEATING OR COOLING COIL IN DUCT
		SINGLE DUCT AIR TERMINAL BOX VARIABLE OR CONSTANT VOLUME. MIN. 1–1/2 TERMINAL INLET SIZE STRAIGHT DUCT AT TERMINAL INLET.

	4–WAY BLOW PATTERN
	3–WAY BLOW PATTERN
	2–WAY BLOW PATTERN
	2–WAY BLOW PATTERN
	1–WAY BLOW PATTERN
LPC	LOW PRESSURE CONDENSATE
MPC	MEDIUM PRESSURE CONDENSATE
HPC	HIGH PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
MPS	MEDIUM PRESSURE STEAM
HPS	HIGH PRESSURE STEAM
BBD	BOILER BLOW DOWN
BF	BOILER FEED WATER
V	VACUUM
	PUMPED CONDENSATE
MUW	MAKE UP WATER
G	NATURAL GAS
(E)name	EXISTING PIPING
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CS	CONDENSER WATER SUPPLY
CR	CONDENSER WATER RETURN
HWS	HEATING HOT WATER SUPPLY
HWR	HEATING HOT WATER RETURN
GHR	GLYCOL HEAT RECOVERY PIPING
G(NAME)	GLYCOL PIPING SOLUTION
LPG	LIQUIFIED PETROLEUM GAS
(NAME)	EXISTING PIPING TO BE REMOVED
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
HG	HOT GAS
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
HFS	HELICOPTER FUEL SUPPLY
HFR	HELICOPTER FUEL RETURN
CF	CHEMICAL FEED
S	SOLENOID VALVE
	EXPANSION JOINT
	ALIGNMENT GUIDE
	DEMOLITION
	AHCHOR
T	PRESSURE GAUGE WITH SHUT–OFF COCK
P	PRESSURE GAUGE WITH PIGTAIL
	FLANGE

	UNION
GPM LB/HR.	FLOW METER ORIFICE
	AIR VENT–MANUAL
A	AIR VENT–AUTO
	FLOW SWITCH
	TEMPERATURE AND PRESSURE TEST PORT
PS	PRESSURE SWITCH
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR W/ DRAIN PAN
	PRESSURE REDUCING, SELF CONTAINED VALVE
	PRESSURE REDUCING, EXTERNAL PRESSURE VALVE
	BALL VALVE (PIPE SIZES 2" AND SMALLER) BUTTERFLY VALVE (PIPE SIZES 2–1/2" AND LARGER)
	CHECK VALVE
	MOTOR OPERATED BUTTERFLY VALVE
	GAS COCK
	RELIEF VALVE
	GATE VALVE
	ATC VALVE – 2 WAY
C	ATC VALVE – 3 WAY
	GLOBE VALVE
GPM	FLOW CONTROL VALVE
	CALIBRATED BALANCING VALVE
	SHUT–OFF COCK FOR USE WITH PRESSURE GAUGE
	PUMP
	FLEXIBLE CONNECTION
	FLOW METER
	90° ELBOW
	45° ELBOW
	REDUCER
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	LATERAL STRAINER WITH BLOW–OFF VALVE, PROVIDE HOSE END WITH CAP WHERE DISCHARGE IS NOT PIPED TO DRAIN
	THERMOMETER 0–100°F
T	THERMOSTAT
TN	NIGHT THERMOSTAT
S	SENSOR
F&T	STEAM TRAP, F&T=FLOAT & THERMOSTATIC B=BUCKET, T=THERMOSTATIC
SD	DUCT SMOKE DETECTOR
	ARROW INDICATES DIRECTION OF FLOW IN PIPE
DN	LEADER INDICATES DOWNWARD SLOPE
	PIPE INTO PLANE
	PIPE OUT OF PLANE
	PIPE BRANCH – IN TO PLANE
	PIPE BRANCH – OUT OF PLANE
	PIPE BRANCH – IN PLANE

	NRS GATE VALVE WITH SUPERVISION
	FLOW SWITCH
	HOSE VALVE
RD	ROOF DRAIN
RDO	ROOF DRAIN OVERFLOW
	CLEAN–OUT
	FLOOR CLEAN–OUT OR CLEAN–OUT TO GRADE
VTR	VENT THRU ROOF
	DOMESTIC COLD WATER (DCW)
	DOMESTIC HOT WATER (DHW)
	DOMESTIC HOT WATER RETURN (DHWR)
	SEWER (BELOW GRADE)
	SEWER (ABOVE GRADE)
	VENT (SEWER)
P–1	PLUMBING FIXTURES
	POINT OF CONNECTION
A M1–1	SECTION TAG – TOP FIGURE IS SECTION NO. BOTTOM FIGURE IS SHEET NO.
1 M1–1	DETAIL TAG – TOP FIGURE IS DETAIL NO. BOTTOM FIGURE IS SHEET NO.
EF 1	EQUIPMENT IDENTIFICATION
1	KEYED NOTE IDENTIFICATION
SW	SOFT DOMESTIC WATER (SW)
AW	ACID WASTE
AV	ACID VENT
HP(NAME)	HIGH PRESSURE DOMESTIC WATER
RO	REVERSE OSMOSIS WATER SUPPLY
ROR	REVERSE OSMOSIS WATER RETURN
OX	MEDICAL OXYGEN
OX 120	MEDICAL OXYGEN AT PRESSURE INDICATED
MA	MEDICAL AIR
MA 120	MEDICAL AIR AT PRESSURE INDICATED
MV	MEDICAL VACUUM
N	NITROGEN
N2O	NITROUS OXIDE
CO2	CARBON DIOXIDE
IA	INSTRUMENT AIR
IA 120	INSTRUMENT AIR AT PRESSURE INDICATED
CA	COMPRESSED AIR
LA	LAB AIR
LV	LAB VACUUM
B	BRINE
S	FIXTURE FROM LEVEL ABOVE

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Intermountain Healthcare
IMC- Cath Lab 2 Remodel Project
5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

MECHANICAL SYMBOLS AND LEGEND

M000

MEDICAL GAS GENERAL NOTES

1. MEDICAL GAS PIPING IS TO BE RUN ABOVE THE CEILING, UNLESS NOTED OTHERWISE. COORDINATE PIPING ROUTING WITH ALL OTHER POSSIBLE CONFLICTS SUCH AS DUCTWORK, DIFFUSERS, OTHER PIPING, LIGHTS, CONDUIT, STRUCTURE, ETC.

2. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.

3. SLEEVE PIPING THRU WALLS/FOUNDATIONS WHERE REQUIRED.

4. MEDICAL GAS PIPING IS SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OTHER TRADES.

5. 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.

6. MOUNT ALL SERVICE VALVES NEAR CEILING HEIGHT FOR ACCESSIBILITY.

7. PIPING BEING DISCONNECTED AND REMOVED SHALL BE REMOVED BACK TO AN ACTIVE MAIN. NO DEAD LEGS SHALL BE ALLOWED.

FIRE PROTECTION GENERAL NOTES

1. CONTRACTOR SHALL REMOVE AND REROUTE ALL FIRE SUPPRESSION PIPING AS NECESSARY TO ACCOMODATE ROUTING OF MECHANICAL DUCTWORK AND PIPE, PLUMBING LINES, ESPECIALLY WASTE AND VENT PIPING, AND OTHER DISCIPLINES AS NECESSARY TO COMPLETE THE PROJECT.

2. NO FIRE PROTECTION LINE SHALL BE DESIGNED OR INSTALLED PRIOR TO CLOSE COORDINATION WITH ALL OTHER DISCIPLINES. DUCTWORK, MECHANICAL PIPING AND PLUMBING TAKE SPACE PRECEDENCE OVER FIRE PROTECTION PIPING. FAILURE TO COMPLY WILL RESULT IN THE FIRE PROTECTION REMOVAL AND REINSTALLATION AT THE FIRE PROTECTION CONTRACTORS EXPENSE.

3. ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING SURROUNDING AREA.

4. COORDINATE EXACT LOCATION OF PIPING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUITS, DUCTWORK, MECHANICAL AND PLUMBING PIPING, AND ALL OTHER TRADES AND ALL EXISTING CONDITIONS.

5. ALL NEW SPRINKLERS ARE TO BE QUICK RESPONSE, FLAT PLATE CONCEALED WITH A WHITE COVER PLATE. CLEAN ROOM SPRINKLERS ARE TO BE LISTED FOR USE IN CLEAN ROOMS.

PLUMBING GENERAL NOTES

1. 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.

2. 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.

3. PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OTHER TRADES.

4. ALL PIPING IN PLUMBING CHASES SHALL BE ARRANGED TO ALLOW MAINTENANCE ACCESS.

5. 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.

6. COORDINATE FAN ROOM FLOOR DRAIN AND FLOOR SINK LOCATIONS WITH COOLING COIL, EVAPORATIVE SECTION, AND HEATING COIL LOCATIONS.

7. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.

8. 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.

9. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS, DIMENSIONS, AND OTHER REQUIREMENTS.

10. CONTRACTOR TO VERIFY CONNECTION SIDE OF ADA FIXTURES AND ADJUST ACCORDINGLY. INSTALL FLUSH VALVES HANDLES ON WIDE SIDE OF ALL FIXTURES.

11. LOCATE ALL VENTS MINIMUM 25' AWAY FROM AIR INTAKES.

12. INSTALL ALL DOMESTIC WATER LINES BELOW DUCTWORK.

13. INSTALL A 24" X 24" ACCESS DOOR BELOW ALL ISOLATION VALVES, BALANCING VALVES AND WATER HAMMER ARRESTORS WHERE MOUNTED ABOVE HARD CEILINGS.

14. MOUNT ALL ISOLATION VALVES, CONTROL VALVES, BALANCING VALVES, ETC. NEAR CEILING HEIGHT FOR ACCESSIBILITY.

15. INSTALL ALL EQUIPMENT WITH SUFFICIENT CLEARANCE FOR MAINTENANCE PER MANUFACTURERS RECOMMENDATION.

16. COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL AND PROVIDE SLEEVES AS NECESSARY.

17. COORDINATE EXACT LOCATION OF PLUMBING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING, CABLE TRAY, DUCTWORK, MECHANICAL PIPING, MEDICAL GASES, FIRE PROTECTION AND OTHER TRADES, TYPICAL.

18. COORDINATE THE LOCATION OF THE FLOOR DRAIN, SHOWER DRAIN, OR FLOOR SINK WITH ARCHITECTURAL AND STRUCTURAL, TYPICAL.

19. ACCESS DOORS SHALL BE PROVIDED TO ALL WATER HAMMER ARRESTORS IN WALLS OR ABOVE CEILINGS.

20. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES OF WASTE, VENT AND DOMESTIC WATER TO/FROM SINGLE FIXTURE.

21. HOSE BIBBS SHOWN AT LAVATORIES ARE TO BE MOUNTED AT AN ACCESSIBLE LOCATION UNDER THE LAVATORY.

22. COORDINATE EXACT LOCATION OF PLUMBING PIPING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUITS, DUCTWORK, MECHANICAL AND FIRE PROTECTION PIPING, AND ALL OTHER TRADES AND ALL EXISTING CONDITIONS.

23. LOCATE CIRCUIT SETTERS, VALVES, WATER HAMMER ARRESTORS, ETC. IN ACCESSIBLE LOCATIONS. PROVIDE 24"X24" ACCESS PANEL WHERE ITEM IS LOCATED ABOVE A HARD CEILING.

24. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.

25. 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.

26. PIPING BEING DISCONNECTED AND REMOVED SHALL BE REMOVED BACK TO AN ACTIVE MAIN. NO DEAD LEGS SHALL BE ALLOWED.

MECHANICAL PIPING GENERAL NOTES

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PIPING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.

2. UNLESS OTHERWISE NOTED: ALL MECHANICAL PIPING IS OVERHEAD TO RUN ABOVE DUCTWORK AND TIGHT TO UNDERSIDE OF STRUCTURE.

3. WHERE VALVING OR EQUIPMENT IS LOCATED ABOVE HARD CEILINGS PROVIDE AN ACCESS DOOR IN CEILING. MINIMUM ACCESS DOOR SIZE OF 24"X24".

4. 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.

5. SLEEVE PIPING THRU WALLS/FOUNDATIONS WHERE REQUIRED.

6. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.

7. ALL VALVES SHALL BE INSTALLED SO THAT VALVE REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.

8. PROVIDE AN AIR VENT AT THE HIGH POINT OF EACH DROP IN THE HEATING AND CHILLED WATER PIPING SYSTEM.

9. INSTALL ALL PIPING WITHOUT FORCING OR SPRINGING.

10. ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION.

11. PROVIDE ISOLATION VALVES AT EACH EXIT/ENTRANCE INTO SHAFT WHETHER OR NOT SHOWN.

12. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.

13. COORDINATE LOCATION OF THERMOSTAT WITH ARCHITECTURAL FURNISHING PLANS. MOUNT THERMOSTAT AT HEIGHT AS SPECIFIED ON ARCHITECTURAL.

14. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.

15. PIPING BEING DISCONNECTED AND REMOVED SHALL BE REMOVED BACK TO AN ACTIVE MAIN. NO DEAD LEGS SHALL BE ALLOWED.

MECHANICAL GENERAL NOTES

1. COORDINATE EXACT PLACEMENT OF DIFFUSERS, GRILLES, AND REGISTERS WITH ARCHITECTURAL REFLECTED CEILING PLAN, TYPICAL.

2. SEE DETAIL FOR DIFFUSER CONNECTIONS TO DUCTWORK, TYPICAL.

3. BRANCH DUCTWORK SHALL BE SIZED TO MATCH THE NECK INLET SIZE OF THE DIFFUSERS, REGISTER OR GRILLE IT SERVES UNLESS NOTED OTHERWISE, TYPICAL.

4. COORDINATE EXACT MOUNTING LOCATION OF ALL THERMOSTATS WITH LATEST REVISION OF ARCHITECTURAL ELEVATION AND FURNISHINGS PLANS, TYPICAL.

5. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CAULKING AND SEALING ALL PENETRATIONS IN FIRE AND SMOKE RATED PARTITIONS TO MAINTAIN RATINGS, SEE SPECIFICATION, TYPICAL.

6. THE MECHANICAL CONTRACTOR SHALL PROVIDE FIRE, SMOKE OR COMBINATION FIRE/SMOKE DAMPERS AT ALL LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS AND AS REQUIRED TO MEET THE INTEGRITY OF ALL SMOKE AND FIRE PARTITIONS. THE CONTRACTOR SHALL REFER TO THE LATEST ARCHITECTURAL LIFE SAFETY PLANS FOR ALL FIRE AND SMOKE PARTITION LOCATIONS. DAMPERS ARE TO BE PROVIDED WITH SHUTOFF/TEST SWITCH AT EACH LOCATION.

7. PROVIDE AND INSTALL TURNING VANES IN ALL SQUARE LOW PRESSURE DUCTWORK AT ELBOWS OR TEES, TYPICAL.

8. INSTALL ALL TERMINAL BOXES IN EASILY ACCESSIBLE AND SERVICEABLE LOCATIONS, MEETING ALL MANUFACTURERS REQUIRED CLEARANCES ON EACH SIDE, SEE DETAILS, TYPICAL.

9. CONTRACTOR SHALL OFF-SET, TRANSITION AND PROVIDE CHANGES AS REQUIRED FOR COORDINATION WITH OTHER TRADES, TYPICAL.

10. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. REFER TO MECHANICAL SPECIFICATIONS FOR EXTENT OF DUCT INSULATION AND LINER.

11. PROVIDE AND INSTALL REMOTE DAMPER OPERATORS FOR ALL DAMPERS INSTALLED ABOVE INACCESSIBLE CEILINGS, SEE MECHANICAL SPECIFICATIONS FOR EQUIPMENT REQUIREMENTS, TYPICAL.

12. PROVIDE AND INSTALL HIGH EFFICIENCY TAKE-OFF FITTINGS AND BALANCING DAMPER AT ALL BRANCH CONNECTIONS TO LOW PRESSURE DUCTWORK.

13. PROVIDE AND INSTALL HIGH EFFICIENCY OR CONICAL TAKE-OFFS AT ALL BRANCH CONNECTIONS TO MEDIUM PRESSURE DUCTWORK.

14. WHERE DUCTWORK CROSSES, SUPPLY DUCTWORK IS USUALLY BELOW RETURN AND EXHAUST DUCT. RETURN DUCTWORK IS USUALLY BELOW EXHAUST DUCTS.

15. AT LOCATIONS WHERE DIFFUSERS OR GRILLES ARE UNDER DUCTWORK, CONTRACTOR TO FABRICATE TRANSITION BOOT FROM FLEX CONNECTION TO DIFFUSER OR GRILLE WITH BALANCING DAMPER, TYPICAL.

16. THE MECHANICAL CONTRACTOR SHALL PROVIDE CEILING MOUNTED ACCESS DOORS FOR ALL FIRE, SMOKE AND COMBINATION FIRE/SMOKE DAMPERS INSTALLED ABOVE INACCESSIBLE CEILING. FIELD VERIFY EXACT INSTALLATION LOCATIONS PRIOR TO COMMENCING WORK AND COORDINATE INSTALLATIONS WITH LATEST ARCHITECTURAL REFLECTED CEILING PLANS.

17. 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.

18. ALL VAV BOXES TO HAVE REHEAT COILS, EXCEPT AS NOTED. PROVIDE A MINIMUM OF TWO DUCT DIAMETERS OF STRAIGHT ROUND DUCT TO INLET OF VAV BOX. BOX SHALL BE HARD CONNECTED (CONICAL) TO MEDIUM PRESSURE DUCT, TYPICAL.

19. PROVIDE ACCESS DOORS TO ACCESS VAV BOX CONTROLS ABOVE HARD CEILINGS. PROVIDE MIN. 24" X 24".

20. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.

21. ALL DUCTWORK ABOVE HARD CEILINGS SHALL BE EXTENDED ALL THE WAY TO THE SUPPLY DIFFUSERS, RETURN GRILLS OR EXHAUST GRILLS WHETHER OR NOT HARD DUCT OR FLEX DUCT IS SHOWN ON PLANS. FLEX DUCT WILL NOT BE ALLOWED TO DIFFUSERS OR GRILLS ABOVE HARD CEILINGS. FLEX DUCT WILL BE REQUIRED IN AREAS ABOVE T-BAR CEILINGS.

22. 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 ALL OTHER EXISTING CONDITIONS.

23. THE CONTRACTOR SHALL INFORM THE DESIGNER OF ANY PROPOSED DEVIATIONS FROM THE CONTRACT DOCUMENTS.

24. PROVIDE ACCESS TO ALL TEMPERATURE CONTROLS ABOVE CEILING. LOCATE IN ACCESSIBLE LOCATION. WHERE THERE ARE HARD CEILINGS THE CONTRACTOR SHALL PROVIDE 24"X24" ACCESS DOOR.

25. UNLESS NOTED OTHERWISE, SUPPLY DIFFUSERS SHALL BE OF THE CD-1 TYPE, RETURN GRILLS SHALL BE OF THE RG-1 TYPE AND EXHAUST GRILLS SHALL BE OF THE EG-1 TYPE. REFER TO DIFFUSER SCHEDULE.

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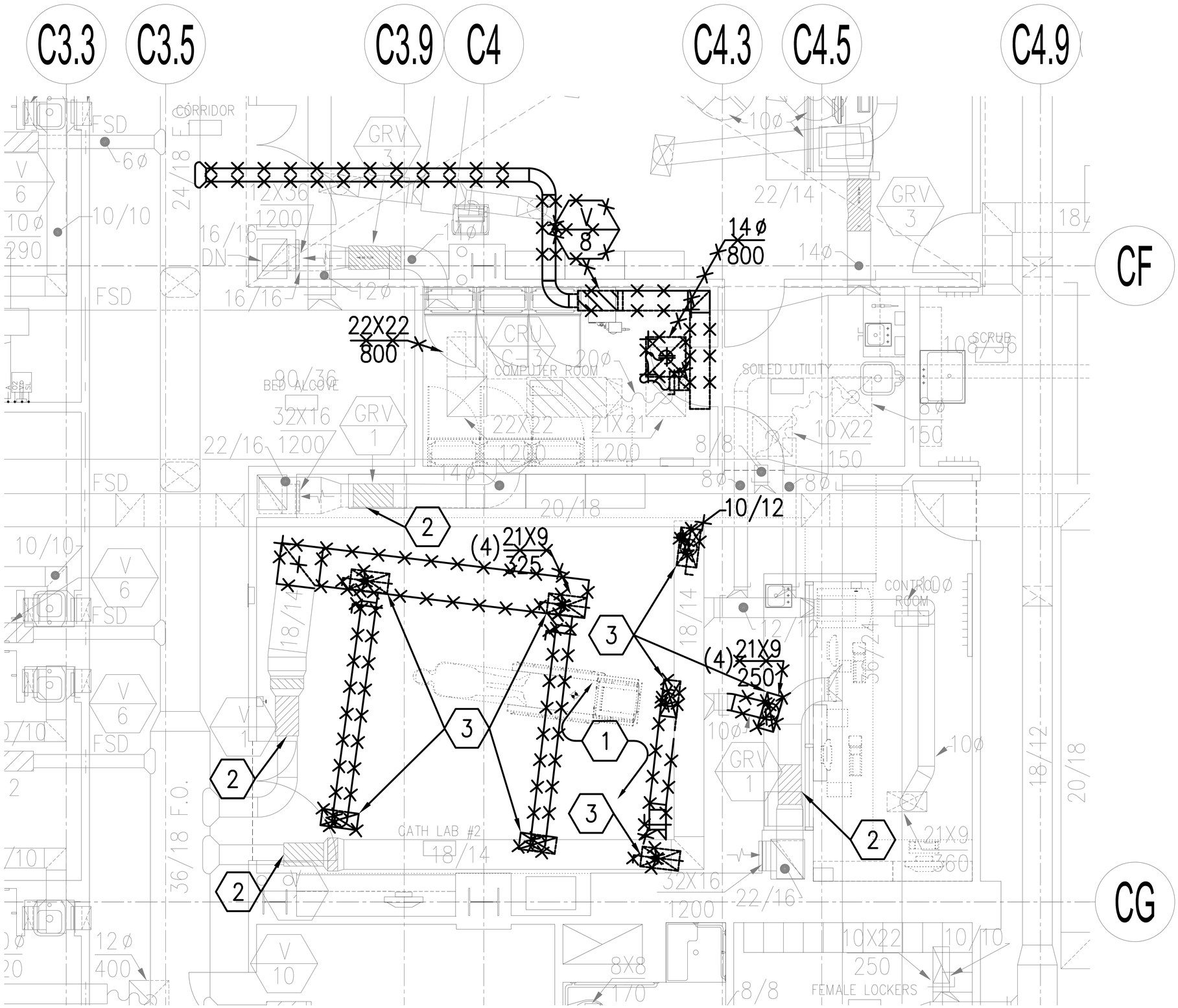
MECHANICAL SYMBOLS AND LEGEND

M001



1 MECHANICAL DEMOLITION PLAN
SCALE: 1/2" = 1'-0"

NORTH

KEYED NOTES

1. EXISTING SHOWN LIGHT TO REMAIN. ITEMS CROSSED OUT TO BE REMOVED. CAP ALL UNUSED DUCTWORK. FIELD VERIFY EXISTING CONDITIONS. TYPICAL.
2. EXISTING VAV BOX TO REMAIN. CLEAN PRESSURE DIFFERENTIAL/AIR FLOW SENSORS AND CHECK BOX FUNCTIONALITY. FIELD VERIFY EXISTING CONDITIONS..
3. REMOVE EXISTING DIFFUSERS. CLEAN. KEEP FOR REINSTALLATION IN NEW CEILING. TYPICAL

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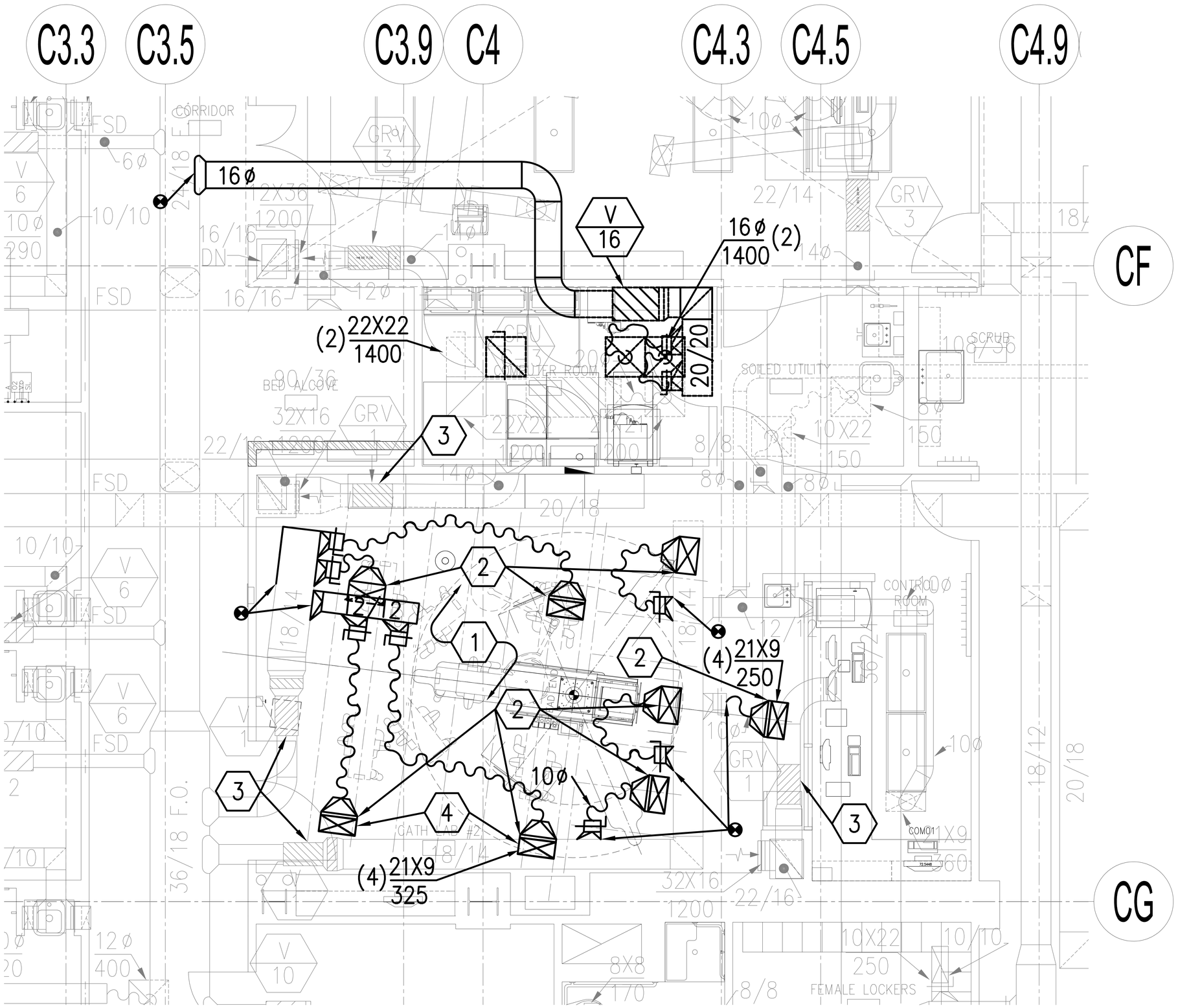
MECHANICAL DEMOLITION PLAN

M101



1 MECHANICAL PLAN
SCALE: 1/2" = 1'-0"

KEYED NOTES

1. EXISTING SHOWN LIGHT TO REMAIN. NEW WORK SHOWN DARK. FIELD VERIFY EXISTING CONDITIONS. TYPICAL.
2. INSTALL 10"ø FLEXIBLE DUCT FROM MAIN LOW PRESSURE SUPPLY DUCT. ROUTE AS NECESSARY TO ACCOMMODATE AT LEAST 7 FT OF FLEXIBLE DUCT TO EACH DIFFUSER FOR NOISE REDUCTION. PROVIDE ROUND TO RECTANGULAR TRANSITION TO 21/9 DUCT. INSTALL 90 DEGREE TRANSITION AND DROP INTO DIFFUSER. CLEAN AND REINSTALL EXISTING DIFFUSERS. TYPICAL.
3. EXISTING VAV BOX TO REMAIN. CLEAN PRESSURE DIFFERENTIAL/AIR FLOW SENSORS AND CHECK BOX FUNCTIONALITY. FIELD VERIFY EXISTING CONDITIONS.
4. REBALANCE EXISTING DIFFUSERS TO CFM SHOWN. TYPICAL.

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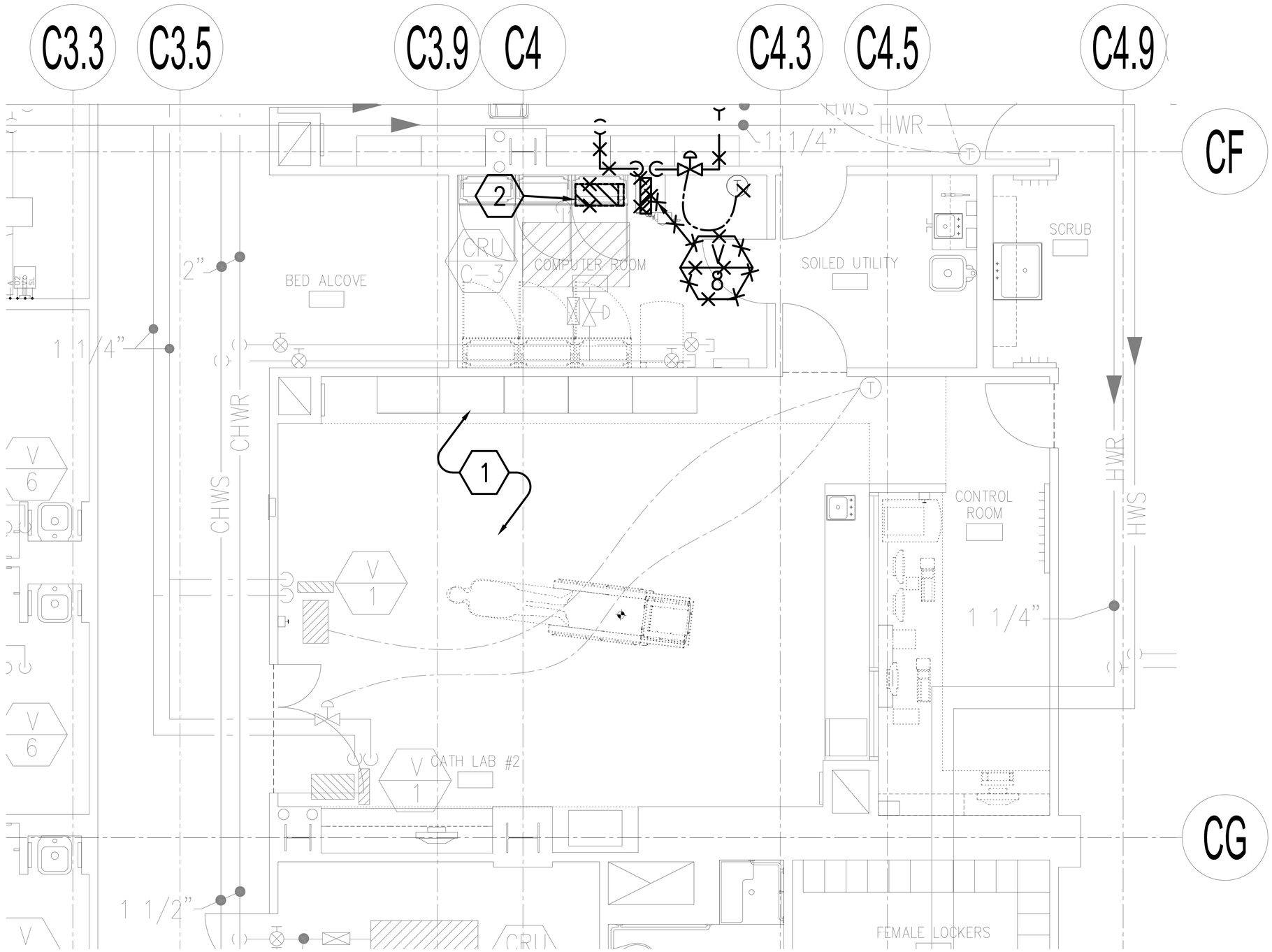
MECHANICAL PLAN

M111

KEYED NOTES

1. EXISTING SHOWN LIGHT TO REMAIN. ITEMS CROSSED OUT TO BE REMOVED. CAP ALL UNUSED PIPING. FIELD VERIFY EXISTING CONDITIONS. TYPICAL.
2. DEMOLISH EXISTING VAV BOX AND PIPING.



1 MECHANICAL PIPING DEMOLITION PLAN
SCALE: 1/2" = 1'-0"

NORTH

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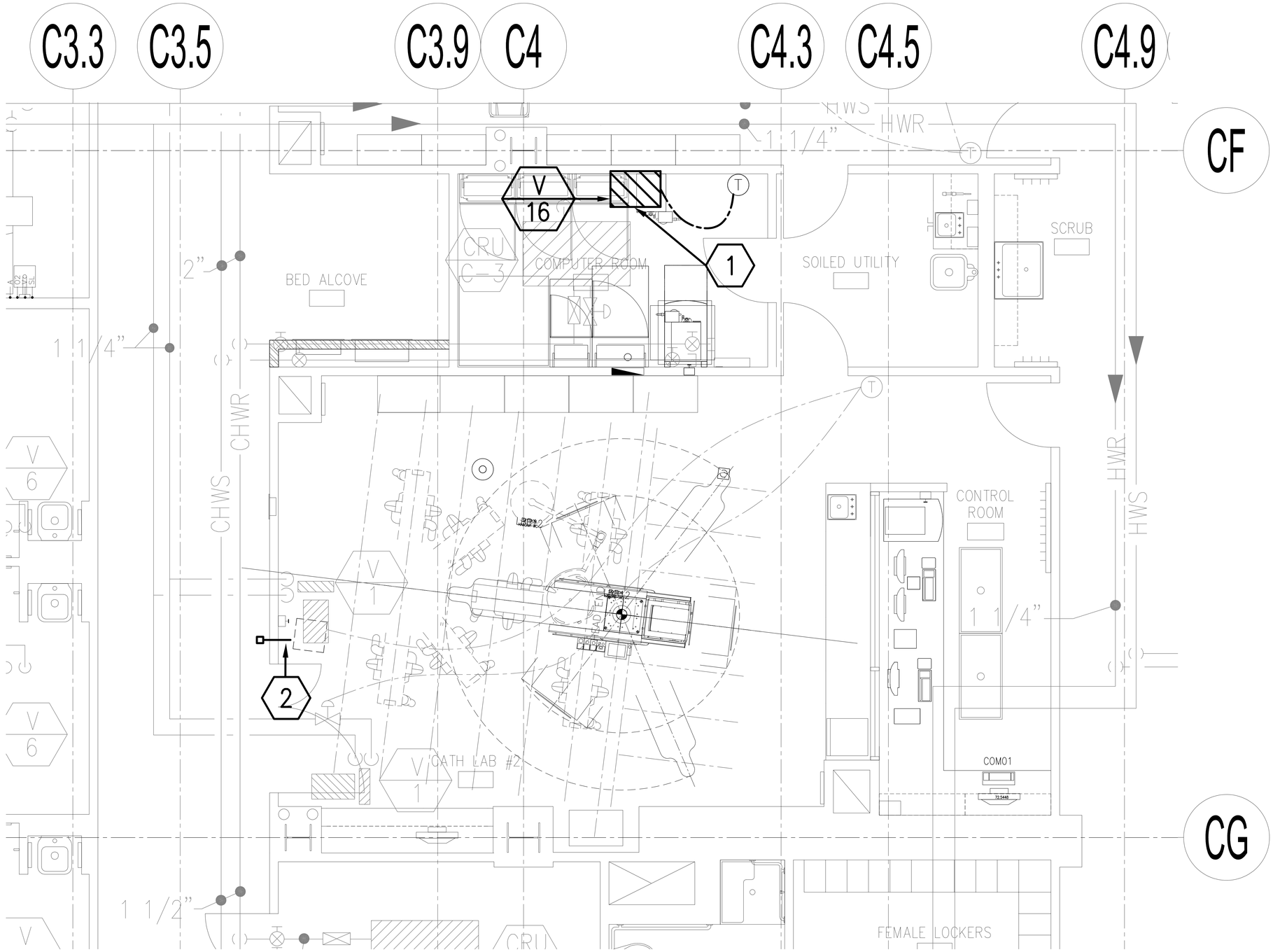
MECHANICAL PIPING DEMOLITION PLAN

M201

KEYED NOTES

1. INSTALL NEW VAV BOX AND THERMOSTAT. VAV TO BE COOLING ONLY. FIELD VERIFY EXISTING CONDITIONS.
2. NEW THRU-THE-WALL PRESSURE MONITOR. VERIFY PROPER OPERATION.



1 MECHANICAL PIPING PLAN
SCALE: 1/2" = 1'-0"

NORTH

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MECHANICAL PIPING PLAN

M211

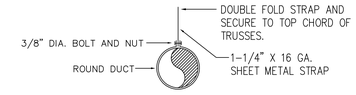
VAV BOX SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	INLET SIZE (IN)	AIR: COOLING MAXIMUM AIR (5) (CFM)	AIR: HEATING MAXIMUM AIR (CFM)	AIR: MINIMUM AIR (3) (CFM)	AIR: ENTERING AIR TEMP. DB (DEG. F)	AIR: LEAVING AIR TEMP. DB (DEG. F)	AIR: S.P. LOSS AT MAX CFM (4) (IN H20)	AIR: NC AT 1" H2O (1) S.P.	FLUID (2): HEAT LOAD (MB)	FLUID (2): TOTAL FLUID FLOW (GPM)	FLUID (2): ENT. FLUID TEMP (DEG. F)	FLUID (2): WORKING FLUID	FLUID (2): MAX. FLUID PRESSURE DROP (FT)	COIL: MIN. COIL ROWS	COIL: PIPE SIZE (IN)	COIL: BALANCING VALVE SIZE (IN)	REMARKS
V-16	TITUS-ESV-3	16	2800	1680	580	52	100	0.7	26	69.6	3.5	180	H. WATER	1	2	3/4	3/4	1,2,3,4,5,6

1. MAXIMUM DISCHARGE NC AT BOX DIFFENTIAL PRESSURE BASED ON ARI STANDARD 880-89
2. COIL HEATING CAPACITY BASED ON HEATING MAIXIMUM AIR FLOW (60% OF MAXIMUM COOLING CFM).
3. MINIMUM CFM IS LOWEST CONTROLLABLE CFM SETTING (BASED ON 400 FPM INLET VELOCITY).
4. MAXIMUM STATIC PRSSURE DROP PERMISSABLE ACROSS BOX AND COIL AT MAXIMUM COOLING CFM.
5. BOX COOLING MAXIMUM IS THE SUM OF DIFFUSERS CFM VALUES AS SHOWN IN THE DRAWINGS. BOX MINIMUM CFM TO BE SET AT 30% OF THIS MAXIMUM. BOX HEATING CFM TO BE SET AT 60% OF THIS SAME MAXIMUM. TYPICAL UNLESS OTHERWISE NOTED.
6. PRESSURE INDEPENDENT TYPE BOX.

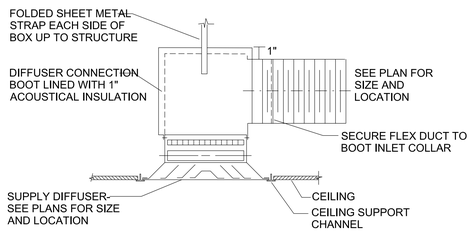
GRILLES, REGISTERS AND DIFFUSERS

ID	MANUFACTURER	MODEL	DESCRIPTION	
CD-1	EH PRICE	SPD	FACE STYLE: SQUARE PLAQUE DIFFUSER	MOUNTING-FRAME: SURFACE OR LAY-IN, (C/W CEILING TYPE.)
			FACE SIZE: 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE	PATTERN: 360° RADIAL HORIZONTAL AIR PATTERN
			APPLICATION: ENGINEERED VAV SYSTEMS	DAMPER: OPPOSED BLADE
			MATERIAL: STEEL	MAX NC - 30
			FINISH: B12 WHITE POWDERCOAT	DAMPER: NONE
				REMOVABLE FACE

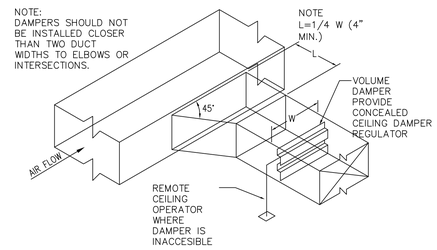


NOTE:
USE SPECIFIED SPACING AND NOT LESS THAN ONE SUPPORT PER BRANCH.

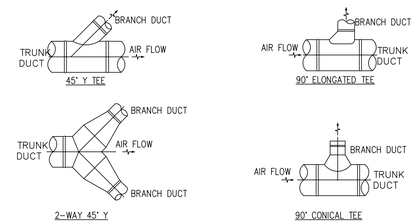
6 M501 ROUND DUCT SUPPORT DETAIL
NO SCALE



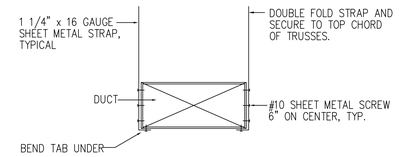
7 M501 SUPPLY DIFFUSER W/ FLEX DUCT DETAIL
NO SCALE



1 M501 BRANCH DUCT TAKE-OFF & DAMPER DETAIL
NO SCALE

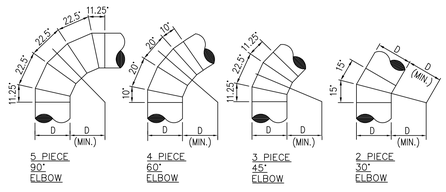


2 M501 ROUND DUCT BRANCH TAKE-OFF DETAILS
NO SCALE

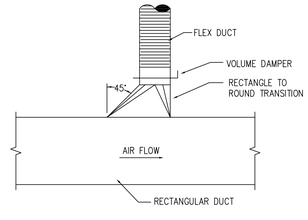


NOTE:
USE SPECIFIED SPACING AND NOT LESS THAN ONE SUPPORT PER BRANCH.

3 M501 RECTANGULAR DUCT SUPPORT
NO SCALE



4 M501 ROUND DUCT ELBOW DETAILS
NO SCALE



5 M501 HIGH EFFICIENCY TAKE-OFF DETAIL
NO SCALE

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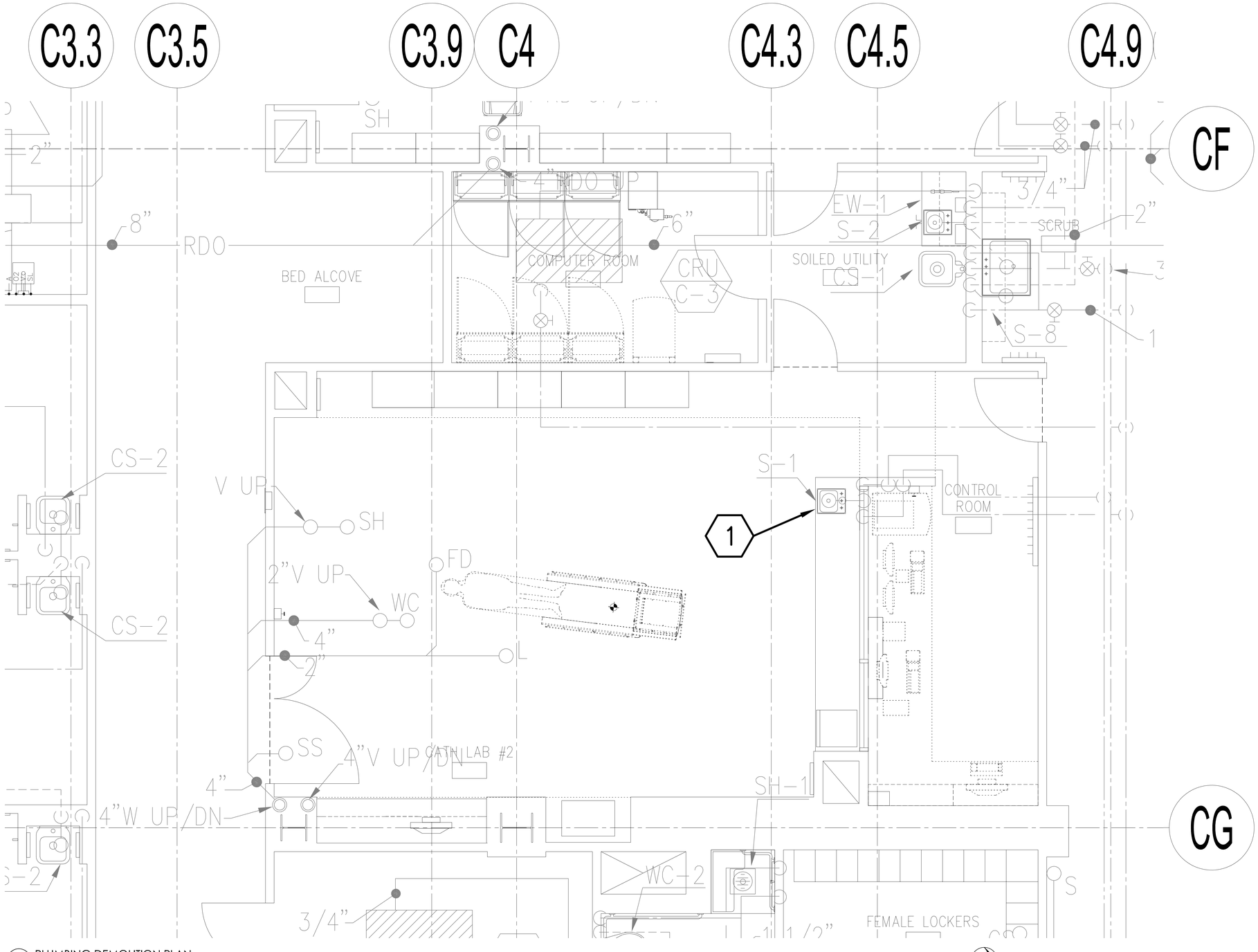
MECHANICAL DETAILS

M501

KEYED NOTES

1. VERIFY FUNCTIONALITY OF SINK. CLEAN ALL FITTINGS AND SURFACES.



1 PLUMBING DEMOLITION PLAN
SCALE: 1/2" = 1'-0"

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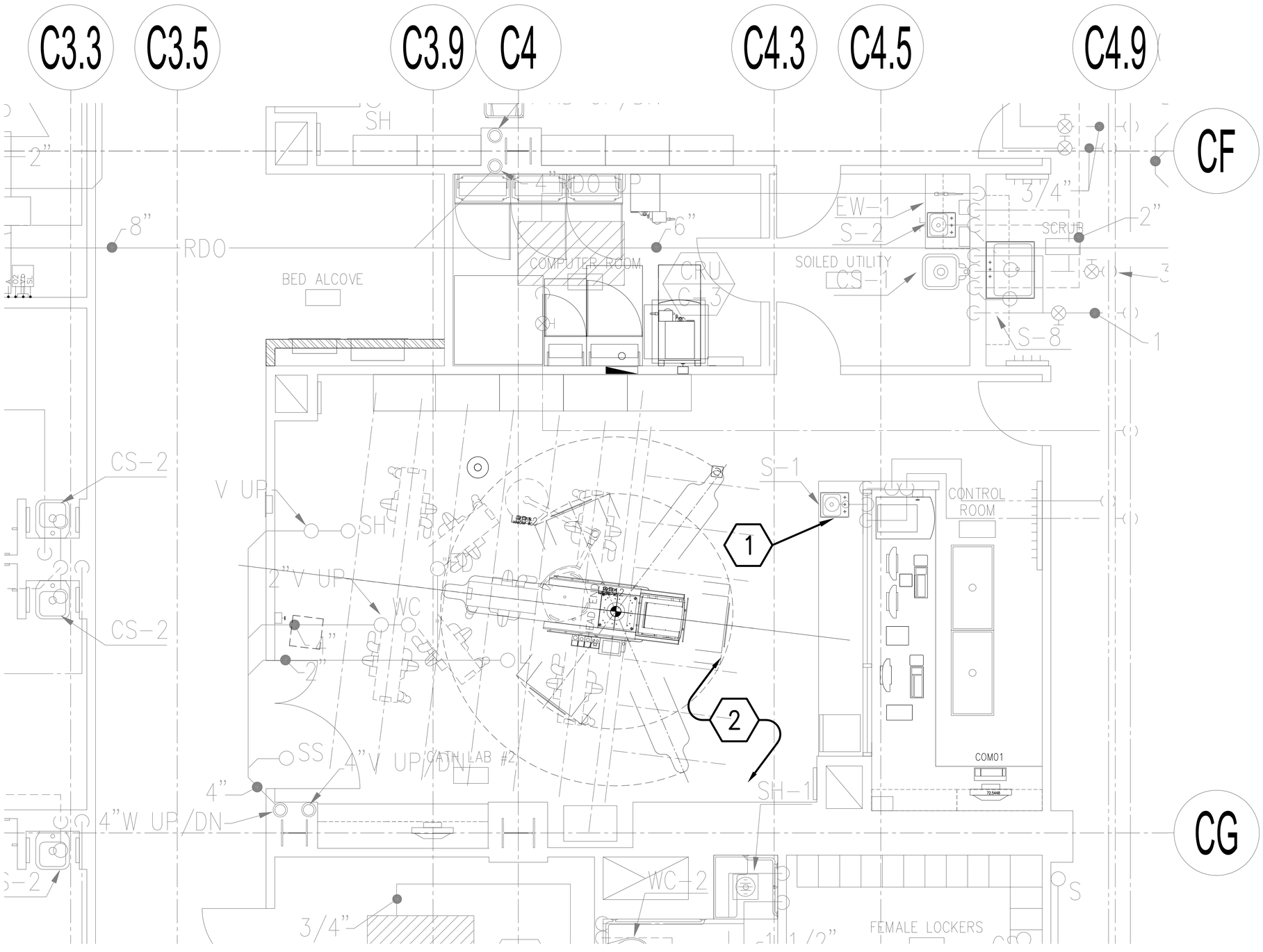
PLUMBING DEMOLITION PLAN

P101

KEYED NOTES

1. VERIFY FUNCTIONALITY OF SINK. CLEAN ALL FITTINGS AND SURFACES.
2. REPLACE EXISTING SPRINKLER HEADS WITH SPACING PER NFPA 13 STANDARDS. REMOVE AND REROUTE SPRINKLER PIPING AS NECESSARY TO ACCOMMODATE OTHER DISCIPLINES.



1 PLUMBING PLAN
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VBFA Project Number: 20172

Intermountain Healthcare
IMC- Cath Lab 2 Remodel Project
5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

PLUMBING PLAN

P111

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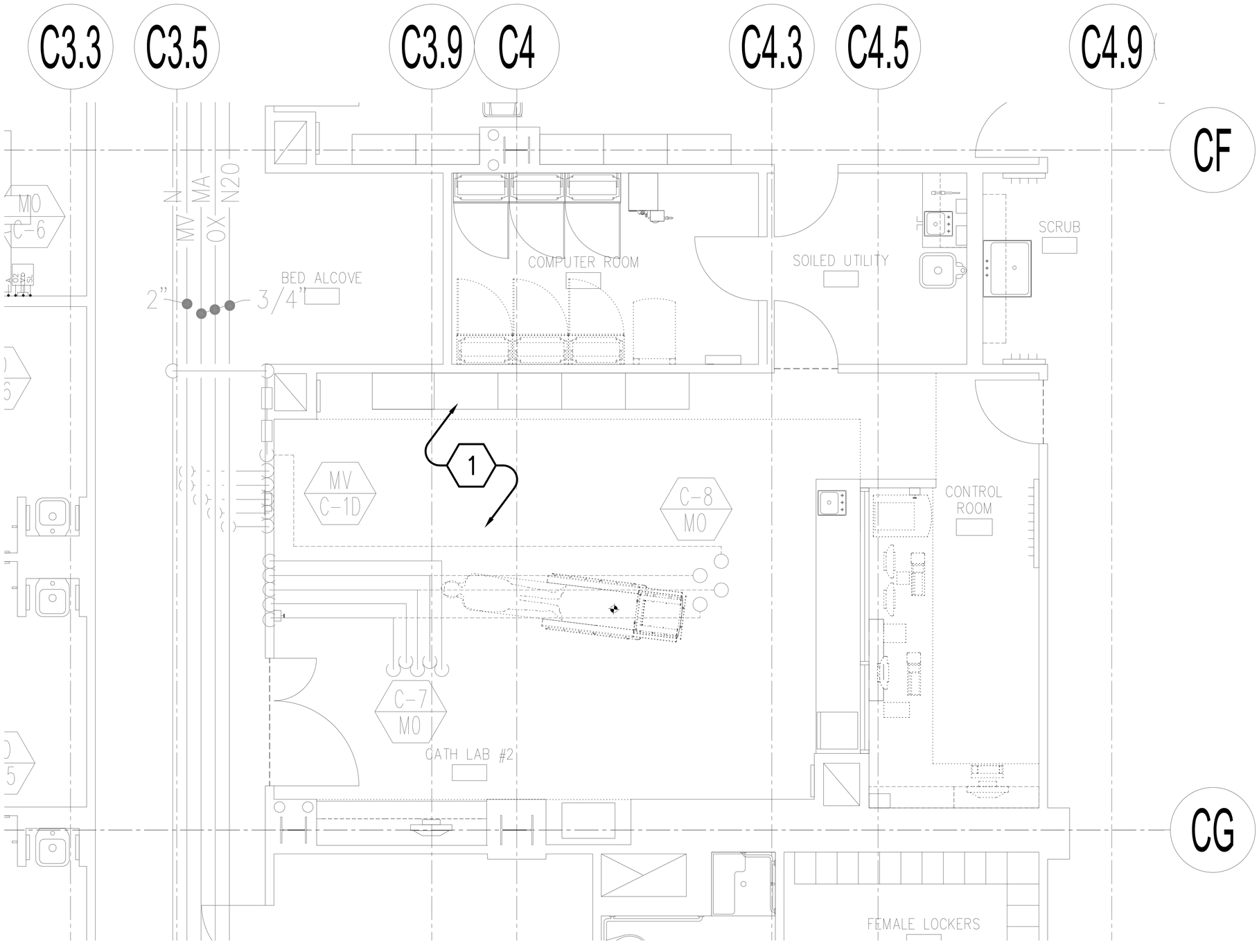
KEYED NOTES

1. NO NEW MED GAS WORK TO BE PERFORMED. PROTECT EXISTING MED GAS PIPING FROM DAMAGE DURING CONSTRUCTION.



1 MED GAS DEMOLITION PLAN
SCALE: 1/2" = 1'-0"

NORTH

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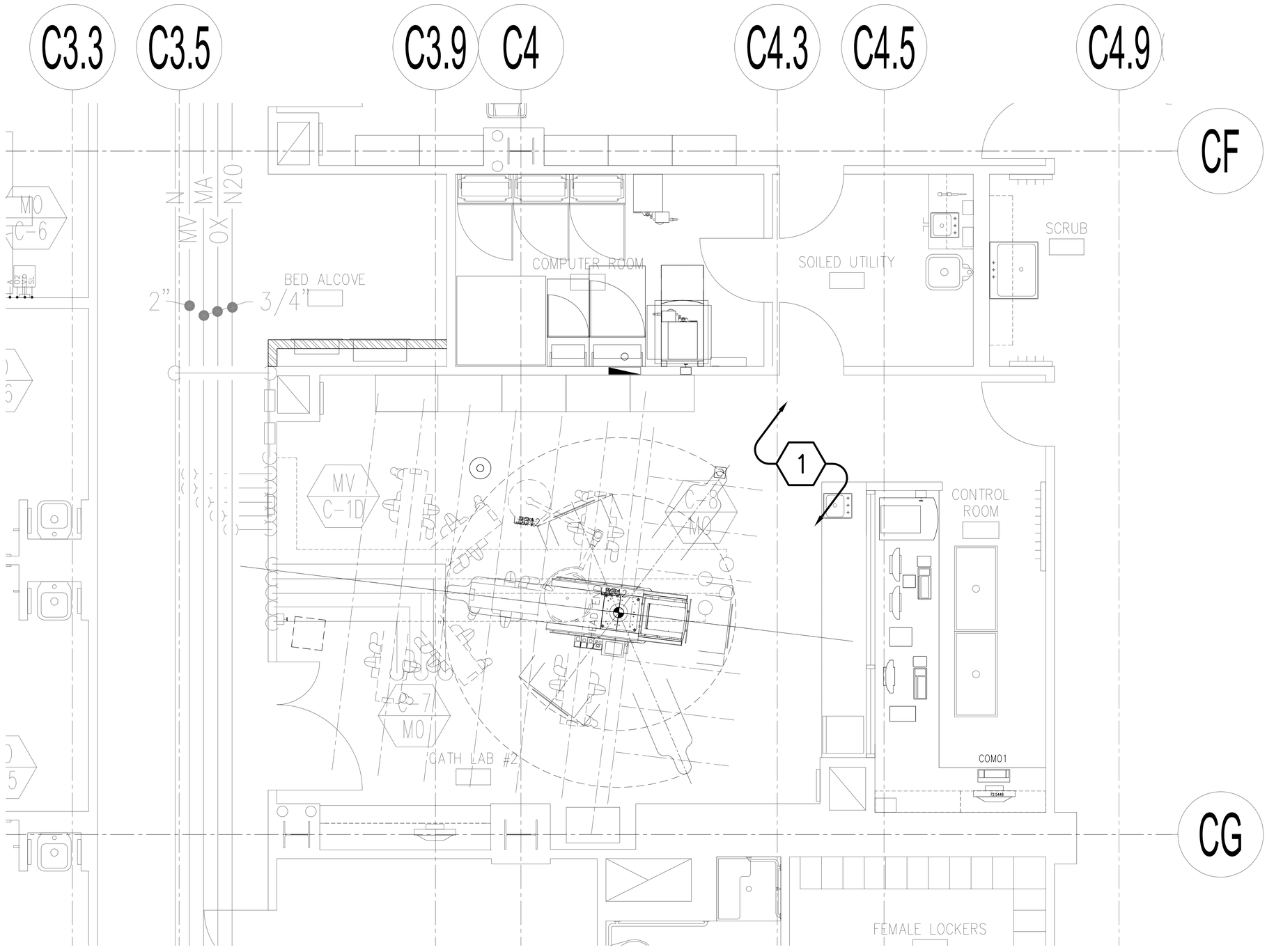
MED GAS
DEMOLITION PLAN

P201

KEYED NOTES

1. NO NEW MED GAS WORK TO BE PERFORMED. PROTECT EXISTING MED GAS PIPING FROM DAMAGE DURING CONSTRUCTION.



1 MED GAS PLAN
SCALE: 1/2" = 1'-0"

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MED GAS PLAN

P211

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
00	**REFERENCE AND LINE SYMBOLS**
01 A5 E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
02 A5 E-201	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
03 A5 E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
04 ROOM NAME 100	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.
05 1	KEYNOTE INDICATOR.
06 1	REVISION INDICATOR.
09	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING
10	BREAK, ROUND
12	NEW LINE: MEDIUM LINE.
13	HIDDEN FEATURES LINE: HIDDEN, THIN LINE
14	EXISTING TO REMAIN LINE: THIN LINE.
15	DEMOLITION LINE: DASHED, MEDIUM LINE
00	**WIRING METHODS**
01	WIRING.
04 A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
05 1 A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE. FOR BRANCH WIRING USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
07	FLEXIBLE WIRING.
08 — X —	WIRING AND/OR RACEWAY: THIN LINE. WHERE "X" = : CATV = CABLE TELEVISION; CCTV = CLOSED CIRCUIT TELEVISION; FA = FIRE ALARM; FO = FIBER OPTICS; I = INTERCOM; NC = NURSE CALL; P = POWER; RC = RIGID CONDUIT; S = SOUND; T = TELEPHONE; TV = TELEVISION OTHERS AS NOTED IN OTHER SCHEDULES. RACEWAYS AND WIRING SHALL BE SIZED AS SHOWN AND/OR SPECIFIED.
09	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.
10	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.
11 1	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
12 HC	ADA ACCESS PUSH PLATE
13	JUNCTION BOX.
19 C C	CABLE TRAY ABOVE ACCESSIBLE CEILING.
21	EARTH GROUND (ONE-LINE DIAGRAM).
22 C	JUNCTION BOX, CEILING.
23	LADDER RACK.
25	MECHANICAL EQUIPMENT CONNECTION. REFER TO EQUIPMENT SCHEDULE FOR REQUIREMENTS.
00	**LIGHTING (REFER TO FIXTURE SCHEDULE FOR SYMBOLS)**
01 (W-3)	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
02 (W-3)	FIXTURE IDENTIFICATION, EMERGENCY WITH BATTERY PACK, CONNECTED TO GENERATOR AS INDICATED: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
03 EM	EMERGENCY.
04 NL	NIGHT LIGHT: DO NOT SWITCH.
05	EGRESS DIRECTION ARROW (EXIT SIGNS).
07	EXIT SIGN: SINGLE FACE; CEILING MOUNTED
08	EXIT SIGN: SINGLE FACE; WALL MOUNTED
09	EXIT SIGN: DOUBLE FACE; CEILING MOUNTED
10	EXIT SIGN: DOUBLE FACE; WALL MOUNTED
00	**LIGHTING CONTROL**
01	OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
02	OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.
03	OCCUPANCY SENSOR, DUAL TECHNOLOGY, DIRECTIONAL.
05 R	OCCUPANCY SENSOR CONTROL RELAY.
06	VACANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
07	VACANCY SENSOR, DUAL TECHNOLOGY, WALL.
08 P	PHOTOCELL.
18 a,b $	LOW VOLTAGE DIGITAL LIGHTING CONTROL SWITCH: LETTER "a,b" INDICATES ZONING WHERE SHOWN (REFER TO PLANS, SCHEDULES, AND DETAILS FOR EXACT BUTTON CONFIGURATION AND PROGRAMMING REQUIREMENTS)
19 DC	DIGITAL LIGHTING DIMMING CONTROLLER
20 LC	DIGITAL PLUG LOAD CONTROLLER
21 LS	LIGHTING NETWORK SWITCH.
22 NR	LIGHTING NETWORK ROUTER.
23 RC	DIGITAL LIGHTING ROOM CONTROLLER
25 SM	LIGHTING NETWORK SEGMENT MANAGER
26 L X	LIGHTING SPACE CONTROL TYPE. X INDICATES TYPE. SEE SCHEDULE / DIAGRAM.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
00	**WIRING DEVICES**
02	RECEPTACLE, DUPLEX: NEMA 5-20R.
03 A	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
05 D	RECEPTACLE, DUPLEX, DEDICATED CIRCUIT: NEMA 5-20R.
06 DF	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, DRINKING FOUNTAIN: CONCEAL WATER COOLER RECEPTACLE BEHIND WATER COOLER. SEE MECHANICAL/PLUMBING SHOP DRAWINGS FOR INSTALLATION REQUIREMENTS.
12	RECEPTACLE, DUPLEX, HOSPITAL GRADE: NEMA 5-20R.
13	RECEPTACLE, DUPLEX ON EMERGENCY POWER: NEMA 5-20R.
14	RECEPTACLE, DUPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
16	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
17	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.
18	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
19 WP	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.
22	RECEPTACLE, QUADRAPLEX: NEMA 5-20R.
23	RECEPTACLE, QUADRAPLEX ON EMERGENCY POWER: NEMA 5-20R.
24	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE: NEMA 5-20R.
25	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
27	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
28	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
29	RECEPTACLE, SPECIAL PURPOSE ON EMERGENCY POWER. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
33	MULTI-OUTLET ASSEMBLY: NEMA 5-20R.
34 D	DROP CORD. SEE DETAIL.
36 FB#	FLUSH FLOOR BOX. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
37 PP#	POWER POLE. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
38 PT#	FLUSH FIRE RATED POKE THRU. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
39	SWITCH, DIMMER.
40 X $	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).
41 X $2	SWITCH, DOUBLE POLE ("x" INDICATES FIXTURES CONTROLLED).
42 X $3	SWITCH, THREE-WAY ("x" INDICATES FIXTURES CONTROLLED).
43 X $4	SWITCH, FOUR-WAY ("x" INDICATES FIXTURES CONTROLLED).
44 $DS	SWITCH, DOOR.
47 $M	SWITCH, MOMENTARY.
53	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.
54	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
56	RECEPTACLE, SINGLE PLEX, WITH USB OUTLET
00	**STRUCTURED CABLING IHC**
01	IHC COMMUNICATIONS DEVICE (1 DATA).
02	IHC COMMUNICATIONS DEVICE (1 DATA / 1 ANALOG).
03	IHC COMMUNICATIONS DEVICE (1 DATA WALL PHONE).
04	IHC COMMUNICATIONS DEVICE (2 DATA).
05 3	IHC COMMUNICATIONS DEVICE (3 DATA).
06 4	IHC COMMUNICATIONS DEVICE (4 DATA).
07 6	IHC COMMUNICATIONS DEVICE (6 DATA).
08 M	IHC COMMUNICATIONS DEVICE PHYSIOLOGICAL MONITOR (1 DATA).
09 WAP	IHC COMMUNICATIONS DEVICE WIRELESS ACCESS POINT (2 DATA).
00	**TECHNOLOGY SYSTEMS**
01 X	TECHNOLOGY SYSTEM CABLE. SEE SPECIFIC JOB EQUIPMENT LIST FOR APPLICABLE DESIGNATIONS. EXAMPLES: C = CONTROL CABLE G = GROUND CABLE, 10 AWG, 1 CONDUCTOR, GREEN INSULATED M = MICROPHONE CABLE S = SPEAKER CABLE, 70 VOLT SYSTEM Z = SPEAKER CABLE, 8 OHM SYSTEM
02 S #	SPEAKER, CEILING MOUNTED.
21	EQUIPMENT CABINET.
40 CP#	CONNECTION PANEL.
00	**NURSE CALL**
01	JUNCTION BOX.
02	CORRIDOR LIGHT.
03 B	BATHROOM PULL CORD STATION.
04 D	DUTY STATION.
05 E	EMERGENCY ASSISTANCE CALL STATION.
06 E CB	EMERGENCY ASSISTANCE CODE BLUE CALL STATION.
07 P	PATIENT STATION.
08 S	STAFF STATION.
09 NCM	TOUCH SCREEN NURSE CALL MASTER STATION.
10 ZLC	ZONE LIGHT CONTROLLER.
11 CU	NURSE CALL AREA CONTROL UNIT & POWER SUPPLIES.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
00	**ELECTRICAL POWER AND DISTRIBUTION**
01	FUSE WITH RATING (ONE-LINE DIAGRAM).
02	DISCONNECT, FUSED (ONE-LINE DIAGRAM).
03	DISCONNECT, NONFUSED (ONE-LINE DIAGRAM).
04	DISCONNECT WITH FUSE AND MOTOR STARTER COMBINATION (ONE-LINE DIAGRAM).
05	OVERLOAD RELAY (ONE-LINE DIAGRAM).
06	STARTER (ONE-LINE DIAGRAM).
07	CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
08	CIRCUIT BREAKER, MOLDED CASE WITH SHUNT TRIP (ONE-LINE DIAGRAM).
10	CIRCUIT BREAKER, SOLID STATE (ONE-LINE DIAGRAM).
11 GFP	CIRCUIT BREAKER, SOLID STATE WITH GROUND FAULT PROTECTION (ONE-LINE DIAGRAM).
12	MOTOR.
16	TRANSFORMER (ONE-LINE DIAGRAM).
20	DELTA CONNECTION (ONE-LINE DIAGRAM).
21	WYE CONNECTION (ONE-LINE DIAGRAM).
23 225/3 "1H"	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
24 225/3 "1H"	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
25 225/3 "1H" 60/3	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM).
27 225/3 "1H" 225/3 "1H"	PANELBOARD WITH SUB FEED LUGS (ONE-LINE DIAGRAM).
29	CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
31	TRANSFER SWITCH (ONE-LINE DIAGRAM).
32 DMM	DIGITAL MULTIMETER (ONE-LINE DIAGRAM).
33	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM).
35 G	GENERATOR, POWER (ONE-LINE DIAGRAM).
36 M	METER.
38 VFC VFD	VARIABLE FREQUENCY MOTOR CONTROLLER (ONE-LINE DIAGRAM).
41	DISCONNECT SWITCH, FUSED.
42	DISCONNECT SWITCH, UNFUSED.
43	STARTER, COMBINATION WITH DISCONNECT SWITCH.
44	STARTER OR MOTOR CONTROLLER.
45	PUSHBUTTON.
46	PUSHBUTTONS, MOTOR CONTROL.
47	PANELBOARD CABINET, FLUSH MOUNTED.
48	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
49	PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.
50 DP#__	DISTRIBUTION PANEL OR SWITCHBOARD.
51 LP	LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.
52	LIGHTING CONTROL STATION.
55 $ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION.
56 75	TRANSFORMER: NUMBER INDICATES kVA.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
00	**FIRE ALARM**
01 FSA	FIRE SYSTEM ANNUNCIATOR.
02 FCP	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
03 FPS	FIRE ALARM NOTIFICATION POWER SUPPLY.
04 FTR	FIRE ALARM TRANSPONDER OR TRANSMITTER.
05 HVA	SMOKE CONTROL PANEL.
06 C	AUTOMATIC DOOR CLOSERS: DOOR CLOSERS SHALL BE FURNISHED WITH DOOR HARDWARE AND CONNECTED TO BY FIRE ALARM INSTALLERS.
07 CM	CONTROL MODULE.
08 MM	MONITOR MODULE.
09 P	FIRE ALARM MANUAL PULL STATION.
10 R	SHUT DOWN RELAY: INSTALL RELAY IN CONTROL CIRCUIT OF EQUIPMENT TO BE CONTROLLED IN THE EVENT OF A FIRE.
11	MAGNETIC DOOR HOLDER.
12 A	FIRE SERVICE OR EMERGENCY TELEPHONE STATION, ACCESSIBLE.
13 H	FIRE SERVICE OR EMERGENCY TELEPHONE STATION, HANDSET.
14 J	FIRE SERVICE OR EMERGENCY TELEPHONE STATION, JACK.
15	DETECTOR, SMOKE.
22	DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE.
23	DETECTOR, HEAT.
24	INDICATOR LAMP.
25	STROBE.
27 WP	ALARM, HORN/SPEAKER, WEATHERPROOF.
28	ALARM, HORN/STROBE, ONE ASSEMBLY.
35	DETECTOR, FLOW SWITCH: FLOW SWITCHES SHALL BE PROVIDED AND INSTALLED WITH FIRE SPRINKLER SYSTEM AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
36	DETECTOR, TAMPER SWITCH WITH VALVE: TAMPER SWITCHES SHALL BE PROVIDED AND INSTALLED WITH FIRE SPRINKLER SYSTEM AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
37 SD	SMOKE DAMPER.
38 FSD	FIRE AND SMOKE DAMPER.
39	BELL (GONG).
40 CO	DETECTOR, CARBON MONOXIDE.
41	DETECTOR, SMOKE/STROBE, RESIDENTIAL.
42 75	ALARM, HORN/STROBE, ONE ASSEMBLY, CEILING MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
43 75	ALARM, HORN, CEILING MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
44 75	ALARM, STROBE, CEILING MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
00	**CCTV**
01 P	CCTV CABLE, POWER.
02 V	CCTV CABLE, VIDEO SIGNAL.
03 CCTV	CCTV HEADEND EQUIPMENT.
04 M	CCTV MONITOR.
05	CCTV CAMERA/ENCLOSURE WITH LENS, TYPICAL. SEE SCHEDULE.
06 PTZ	CCTV CAMERA WITH PAN, TILT AND ZOOM.
07 360°	PANNING CAMERA TRANSVERSE ANGLE.
00	**SECURITY**
01 X	SECURITY CABLE. SEE EQUIPMENT SCHEDULE FOR CABLE TYPE.
02 ACC	ACCESS CONTROL HEADEND EQUIPMENT.
03 CTR	SECURITY CONTROL PANEL.
04 SEC	INTRUSION DETECTION HEADEND EQUIPMENT.
05 #1	CARD ACCESS DOOR TYPE #1 OR AS NOTED. SEE SCHEDULE.
06 CR	CARD READER.
07 KCR	KEYPAD/CARD READER COMBINATION.
08	DOOR SWITCH, BALANCED MAGNETIC CONTROL.
09 ER	EXIT REQUEST.
10 RL	REMOTE DOOR RELEASE BUTTON.
11	BELL.
12	BUZZER.
13	BUZZER, COMBINATION BELL.
14	SENSOR, BURIED VEHICULAR.
15	SENSOR, GLASS BREAK.
16	SENSOR, VOLUMETRIC.
17 CA	CONTROLLED ACCESS POINT.
21 P	PANIC DURESS SWITCH.

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

1P	SINGLE POLE
1PH	SINGLE-PHASE
1WAY	ONE-WAY
2/C	TWO-CONDUCTOR
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3WAY	THREE-WAY
4OUT	QUADRUPLE RECEPTACLE OUTLET
4PDT	FOUR-POLE DOUBLE THROW
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
4WAY	FOUR-WAY
A	ABOVE COUNTER
AC	ARMORED CABLE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
AMP	AMPERE
ANN	ANNUNCIATOR
AP	ACCESS POINT (WIRELESS DATA)
AR	AS REQUIRED
ASC	AMPS SHORT CIRCUIT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAGE
BB XFMR	BUCK-BOOST TRANSFORMER
C	CEILING MOUNTED
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT
CCTV	CLOSED CIRCUIT TELEVISION
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
CND	CONDUIT
CO	CONVENIENCE OUTLET
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
dBA	UNIT OF SOUND LEVEL
DPDT	DOUBLE POLE, DOUBLE THROW
DS	DISCONNECT SWITCH
EA	EACH
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRIC NONMETALLIC TUBING
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
EX	EXISTING
F	FURNITURE MOUNTED
FA	FIRE ALARM
FCP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
FOB	FREIGHT ON BOARD
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GEN	GENERATOR
GFCI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
HD	HEAVY DUTY
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HZ	HERTZ
I/O	INPUT/ OUTPUT
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IN/IS	INSULATED/ ISOLATED
IR	INFRARED
J-BOX	JUNCTION BOX
kV	KILOVOLT
kVA	KILOVOLT AMPERE
kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWh	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MC	METAL CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MDP	MAIN DISTRIBUTION PANEL
MG	MOTOR GENERATOR
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTS	MANUAL TRANSFER SWITCH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFC	NATIONAL FIRE CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OCP	OVER CURRENT PROTECTION
OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
OFP	OBTAIN FROM PLANS
OH DR	OVERHEAD (COILING) DOOR
OL	OVERLOAD
PB	PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PTZ	PAN/TILT/ZOOM
QTY	QUANTITY
R	REMOVE
RCP	REFLECTED CEILING PLAN
RMC	RIGID METAL CONDUIT
RNC	RIGID NONMETAL CONDUIT
RPM	REVOLUTIONS PER MINUTE
RR	REMOVE AND RELOCATE
S/S	START/STOP
SCA	SHORT CIRCUIT AMPS
SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
SF	SQUARE FOOT (FEET)
SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
SPD	SURGE PROTECTIVE DEVICE
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
ST	SINGLE THROW
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TL	TWIST LOCK
TP	TELEPHONE POLE
TP	TWISTED PAIR
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UF	UNDERFLOOR
UGND	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPERE
VFC/VFD	VARIABLE FREQUENCY MOTOR CONTROLLER
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER

GENERAL ELECTRICAL NOTES

1. CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.

2. OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.
   A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.
   B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.
   C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE.THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.

3. EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.

4. SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND, BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.

5. REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

6. ALL WORK SHALL BE DONE ACCORDING TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFC. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

ELECTRICAL SHEET INDEX

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STATE OF UTAH
07/15/20

Intermountain Healthcare

IMC - Cath Lab 2 Remodel Project

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Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

SHEET INDEX, ABBREVIATIONS, AND GENERAL NOTES

EE001

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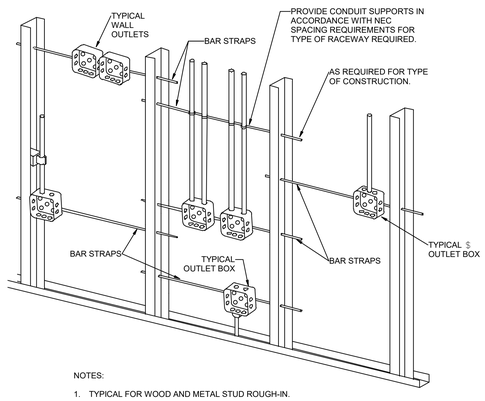
ELECTRICAL DETAILS

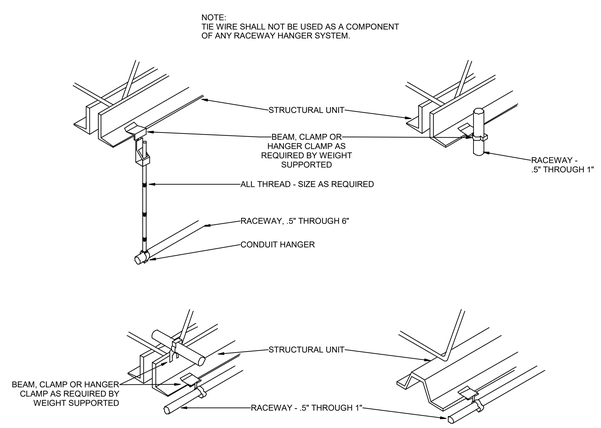
EE501



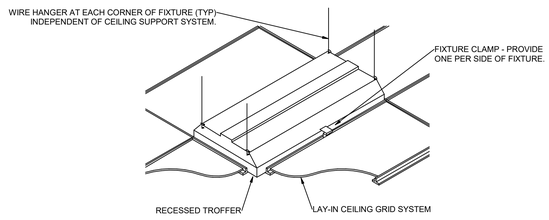
NOTES:

1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH IBC 714.3.2 EXCEPTION 1, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE IN A RATED FIRE SEPARATION WALL MUST BE SEPARATED BY A MINIMUM OF 24" HORIZONTAL DISTANCE OR LISTED, SOUND AND FIRE RATED PUTTY PADS SHALL BE USED ON THE OUTLET BOXES.
5. IN NON-RATED WALLS, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY 16" FOR SOUND ATTENUATION.

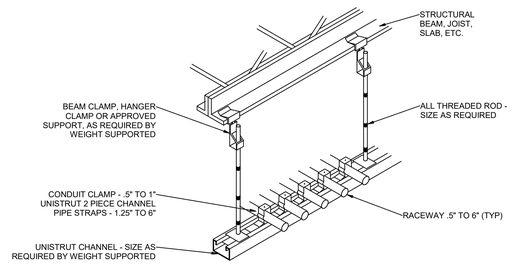
1 TYPICAL ROUGH-IN REQUIREMENTS DETAIL
SCALE: 1/8" = 1'-0"



2 TYPICAL RACEWAY SUPPORT METHODS DETAIL
SCALE: 1/8" = 1'-0"



4 RECESSED FIXTURE MOUNTING DETAIL
SCALE: 1/8" = 1'-0"



3 TYPICAL CONDUIT RACK DETAIL
SCALE: 1/8" = 1'-0"

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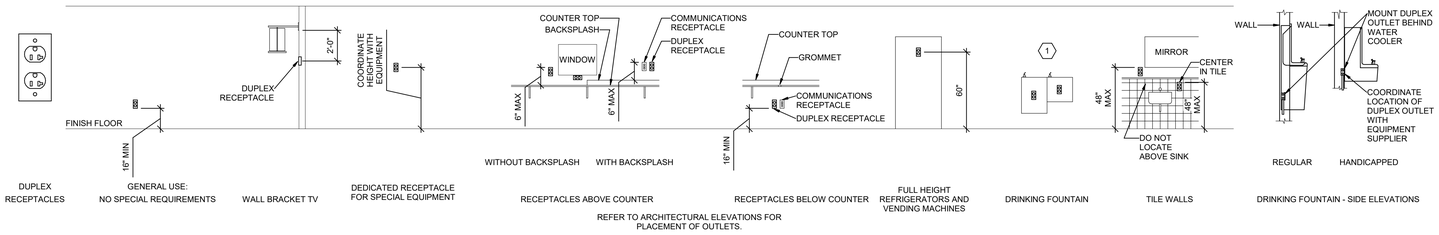
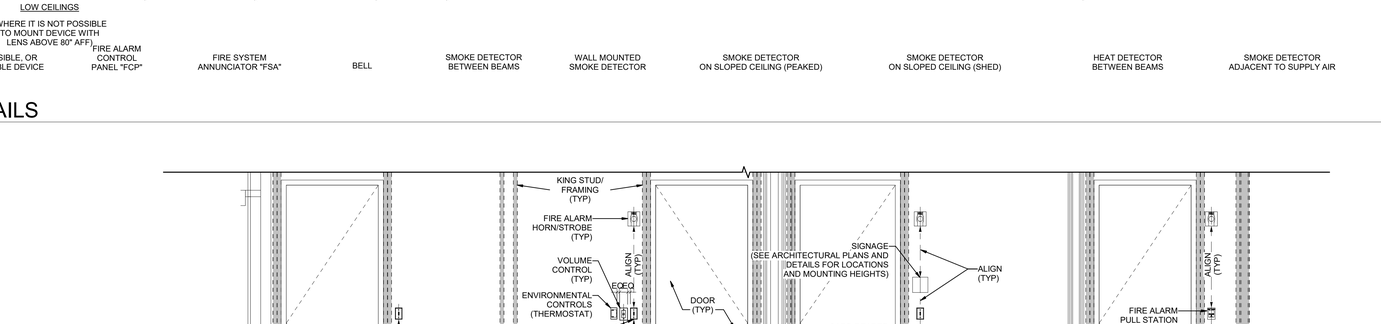


E2 RECEPTACLE MOUNTING DETAILS

SCALE: NTS

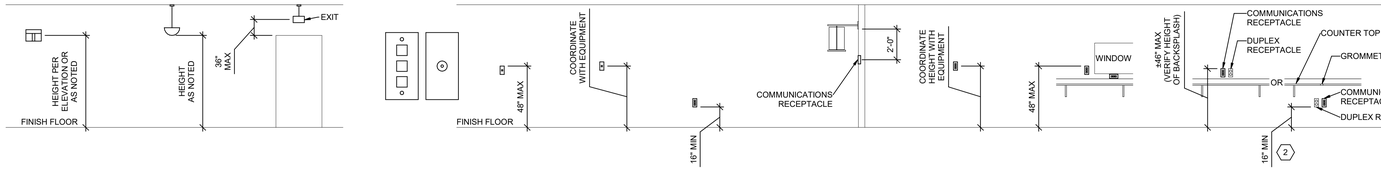


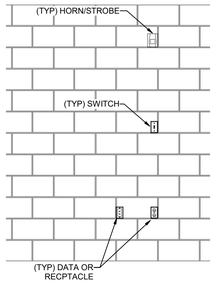
D2 ADA DETAIL

SCALE: NTS

D3 SWITCH MOUNTING DETAILS

SCALE: NTS





NOTE: ALL DEVICES SHALL BE INSTALLED AND LOCATED IN THE BLOCK CONSISENTLY THROUGH OUT THE BUILDING.

C1 CMU DEVICE MOUNTING ALIGNMENT DETAIL

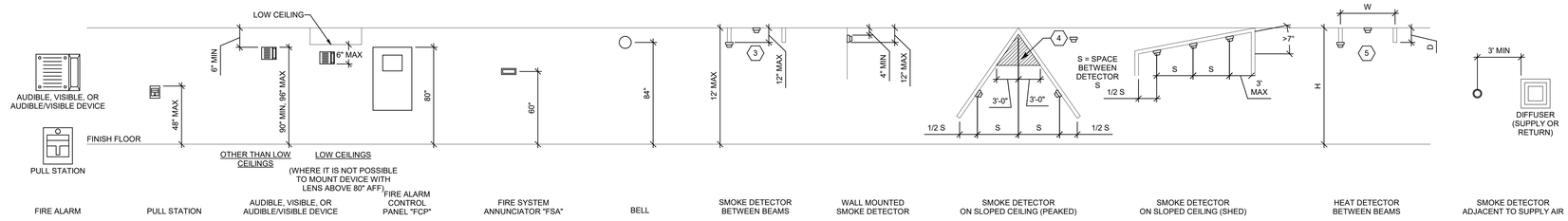
SCALE: NTS

C2 LIGHTING MOUNTING DETAILS

SCALE: NTS

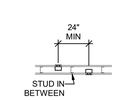
C3 COMMUNICATIONS MOUNTING DETAILS

SCALE: NTS



B1 FIRE ALARM MOUNTING DETAILS

SCALE: NTS



FOR LESS THAN 24" SEPERATION, PROVIDE LISTED SOUND AND FIRE PUTTY PADS

BOXES ON OPOSITE SIDES OF WALL

A1 BOX MOUNTING DETAILS

SCALE: NTS

A2 TYPICAL WALL MOUNTED DEVICES ALIGNMENT DETAIL

SCALE: NTS

GENERAL SHEET NOTES

1. DETERMINE MOUNTING HEIGHTS OF ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE FOLLOWING ORDER OF PRIORITY:

   1 - ELEVATIONS (ARCHITECTURAL, ELECTRICAL, MECHANICAL, ETC).

   2 - EQUIPMENT SHOP DRAWINGS.

   3 - FIELD INSTRUCTIONS.
2. LOCATE RECEPTACLES SERVING THE SAME TYPE OF USE AT A UNIFORM HEIGHT UNLESS DIRECTED OTHERWISE.
3. MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS: COORDINATE LOCATION OF LIGHTING AND POWER RECEPTACLES WITH EQUIPMENT, PIPING, AND DUCTWORK. DO NOT INSTALL RECEPTACLES BEHIND EQUIPMENT OR WHERE OTHERWISE INACCESSIBLE. POSITION LIGHTING REGARDLESS OF WHERE SHOWN ON DRAWING TO PROVIDE PROPER ILLUMINATION.
4. MOUNT RECEPTACLE BOXES FOR SWITCHES AND RECEPTACLES WITH LONG AXIS OF THE DEVICE VERTICAL UNLESS OTHERWISE INDICATED.
5. SET BOXES WITH PLASTER RINGS FLUSH WITH FINISHED SURFACE.
6. LOCATE BOX COVERS OR DEVICE PLATES SO THEY WILL NOT SPAN DIFFERENT TYPES OF BUILDING FINISHES EITHER VERTICALLY OR HORIZONTALLY.
7. VERIFY ALL DOOR CONDITIONS ON ARCHITECTURAL DRAWINGS PRIOR TO INSTALLING SWITCHES.
8. LOCATE WIREING DEVICES WHICH ARE ADJACENT AND ARE COMPATIBLE VOLTAGES IN ONE PLATE.
9. WHERE DEVICES ARE LOCATED IN CLOSE PROXIMITY OF THE SAME VERTICAL PLANE, ALIGN DEVICES VERTICALLY PER THE TYPICAL WALL MOUNTED DEVICES ALIGNMENT DETAIL, UNLESS OTHERWISE INDICATED.

SHEET KEYNOTES

1. LOCATE RECEPTACLES BEHIND DRINKING FOUNTAINS.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.
3. LOCATE AT BOTTOM OF BEAMS (OR JOISTS) OR AT CEILING. (REDUCE SPACING BY .5 PERPENDICULAR TO BEAM OR JOIST DIRECTION.) FOR OTHER CONDITIONS, REFER TO NFPA 72.
4. LOCATE DETECTOR ANYWHERE IN SHADED AREA BUT NOT IN TOP 4" OF PEAK.
5. LOCATE AT BOTTOM OF BEAMS IF D/H < .1 OR W/H < .4; OTHERWISE, LOCATE IN BEAM POCKET. FOR D > 4 REDUCE SPACING .33 PERPENDICULAR TO BEAMS.

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TYPICAL MOUNTING HEIGHT DETAILS

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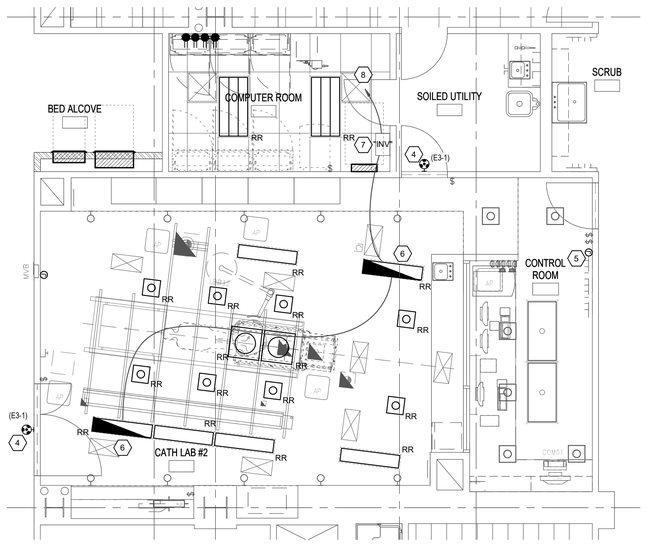
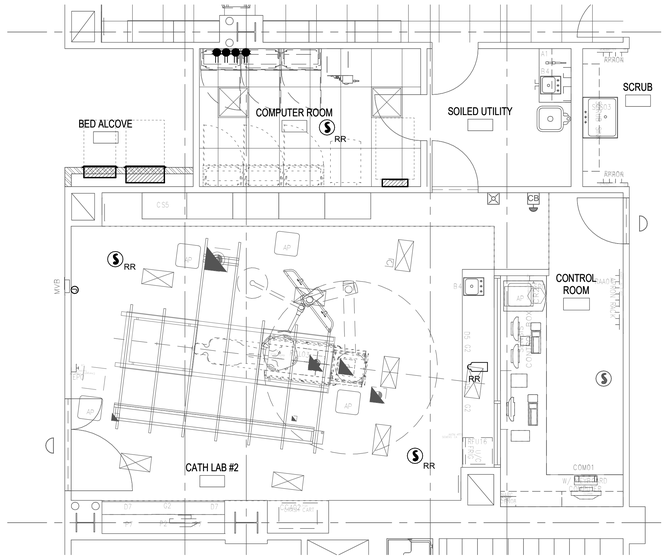
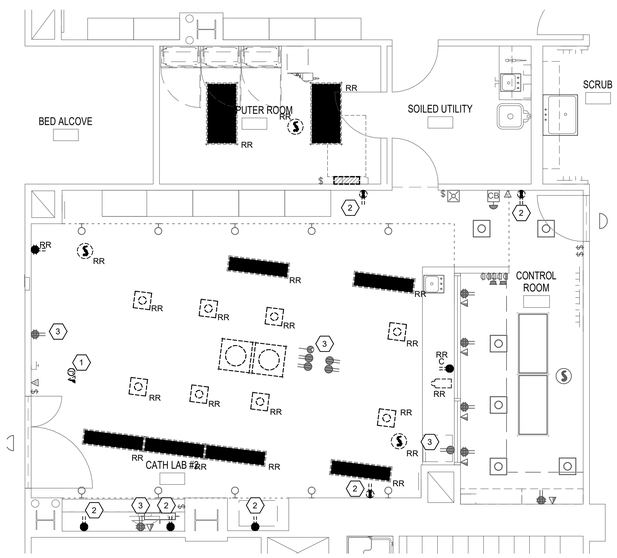


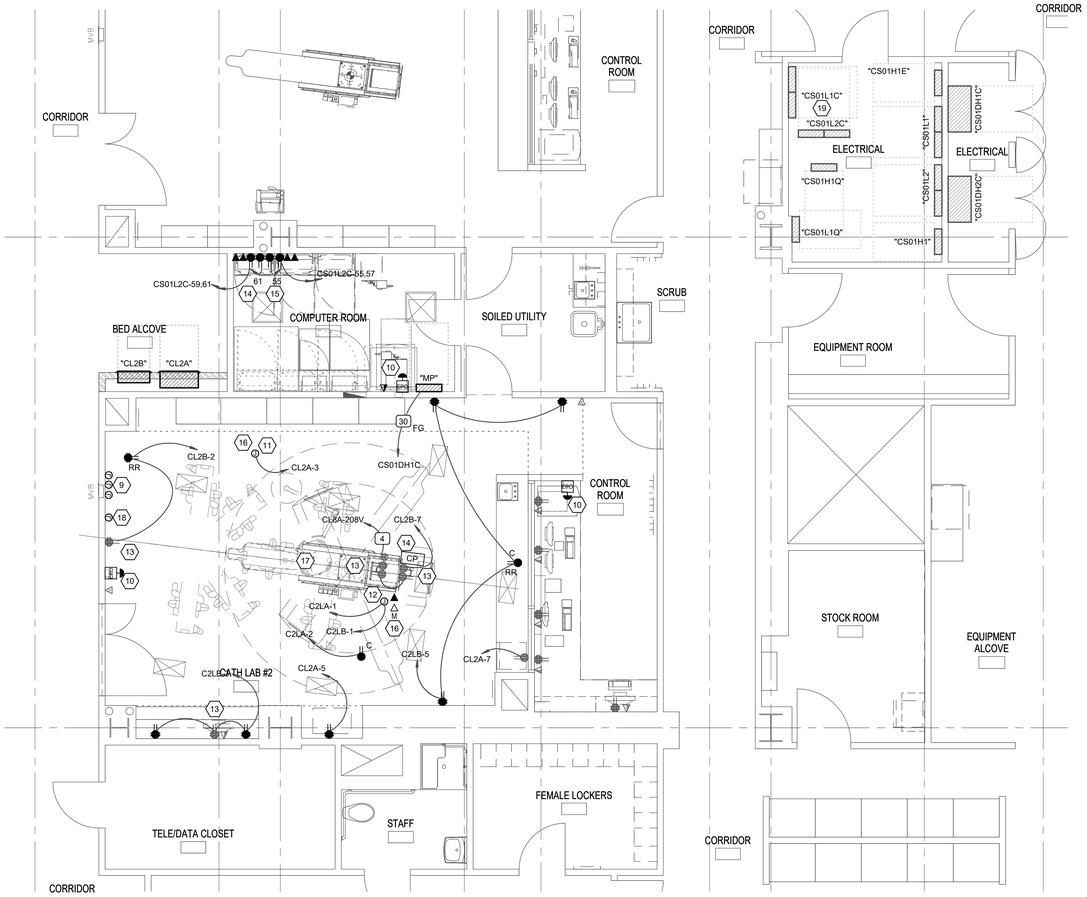
3 LEVEL 1 LIGHTING PLAN
SCALE: 1/4" = 1'-0"



4 LEVEL 1 AUXILIARY PLAN
SCALE: 1/4" = 1'-0"



1 LEVEL 1 ELECTRICAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



2 LEVEL 1 POWER PLAN
SCALE: 1/4" = 1'-0"

GENERAL SHEET NOTES

SHEET KEYNOTES

1 DEMOLISH EXISTING ELECTRICAL AND DATA TO MED GAS COLUMN.

2 EXISTING DUPLEX RECEPTACLE TO BE REPLACED WITH A NEW FOUR-PLEX RECEPTACLE AND RECIRCUITED TO NEW ISOLATION PANEL.

3 EXISTING RECEPTACLE TO BE RE-CIRCUITED TO NEW ISOLATION PANEL.

4 CONNECT TO EXISTING LIGHTING CIRUCIT IN THE ROOM. DO NOT CONNECT TO ANY ROOM LIGHTING SWITCH LEGS. REFER TO SIEMENS DETAIL.

5 PROVIDE BACK BOX AS REQUIRED FOR SKYTRON LIGHTING CONTROLS AS INDICATED IN SKYTRON DRAWINGS. PROVIDE (1) .75" CONDUTI FOR THE 120V POWER CIRCUIT AND ONE .75" CONDUIT FROM LIGHTING CONTROL BOX TO THE BOOM. REFER TO SKYTRON DRAWINGS FOR WIRING REQUIRMENTS AND ADDITIONAL CONTRACTOR RESPONSIBILITIES.

6 CONNECT LIGHT FIXTURE TO NEW LIGHITNG INVERTER LOCATED IN THE EQUIPMENT ROOM.

7 PROVIDE EVENLITE PUREWAVE PW-25-LC-V2-RT LIGHTING INVERTER (OR EQUIVALENT) WITH REMOTE TEST SWITCH IN THE CATH LAB EQUIPMENT ROOM. COORDINATE EXACT LOCATIONS FOR THE INVERTER AND REMOTE TEST SWITCH WITH THE OWNER. CONNECT THE SWITCHED INPUT FOR THE INVERTER TO THE LOAD SIDE OF TEH SWITCH FEEDING THE 1X4 FIXTURES IN THE LAB AND USE THE INVERTER SWITCHED OUTPUT TO CONNECT TO THE LIGHT FIXTURES.

8 CIRCUIT LIGHTING INVERTER TO THE EXISTING CRITICAL BRANCH LIGHTING CIRCUIT FEEDING THE OTHER LIGHT FIXTURES IN THE CATH LAB.

9 PROVIDE A REMOTE ANNUCIATOR (DRA-1V) FOR EACH ISOLATION PANEL IN THE CATH LAB.

10 PROVIDE EMERGNECY POWER OFF SWITCH CONNECTED TO CATH LAB MAIN SHUNT TRIP BREAKER (MP).

11 PROVIDE 120V CIRCUIT TO THE SKYTRON BOOM FOR THE LIGHT.

12 PROVIDE TWO 120V 20A CIRCUITS TO SKYTRON BOOM, ONE FROM EACH ISOLATION PANEL FOR THE RECEPTACLES. PROVIDE THREE STANDARD DATA DROPS AND ONE PATIENT MONITORING DATA DROP TO THE BOOM. DATA INSTALLER TO MAKE ALL FINAL TERMINATIONS IN BOOM. COORDINATE EXACT LOCATION WITH SKYTRON DRAWINGS.

13 RE-CIRCUIT EXISTING RECEPTACLES TO NEW ISOLATION PANEL.

14 PROVIDE (1) 2" CONDUIT FROM NEW NETWORK RACK LOCATION TO THE MED GAS PEDASTAL. RUN CONDUIT DOWN TO THE CEILING SPACE OF THE FLOOR BELOW AND BACK UP TO THE PEDASTAL.

15 PROVIDE (1) 3" CONDUIT AND (3) 2" CONDUITS STUBBED TO ABOVE THE NEW NETWORK RACK TO THE FOLLOWING LOCATIONS: (1) 2" CONDUIT TO MONITOR BOOM ON PATIENT LEFT, (1) 2" CONDUIT TO THE MED GAS EQUIPMENT BOOM, (1) 2" CONDUIT TO UNDER THE CONTROL ROOM DESK VIA THE CHASE ON THE WEST END OF THE DESK, AND (1) 3" CONDUIT TO THE TABLE BASE.

16 PROVIDE (1) 2" CONDUIT FROM BOOM TO NEWTWORK EQUIPMENT RACK.

17 PROVIDE (1) 3" CONDUIT FROM TABLE BASE TO THE NETWORK RACK IN THE EQUIPMENT ROOM. RUN CONDUIT DOWN TO THE CEILING SPACE OF THE FLOOR BELOW AND BACK UP TO THE TABLE BASE.

18 PROVIDE A 1.25" CONDUIT WITH CAT6A SHIELDED CABLE FROM THE VIDEO SWITCH LOCATION IN THE PROCEDURE ROOM TO THE DATA RACK LOCATED IN THE EQUIPMENT ROOM. COORDINATE EXACT LOCATION WITH OWNER.

19 RELOCATE TWO 20A SINGLE POLE CIRCUITS FROM PANEL CS01L1C TO CS01L2C TO MAKE ROOM FOR THE NEW BREAKER FEEDING THE CATH LAB ISOLATION PANEL. TRACE THE RELOCATED CIRCUITS AND RELABEL ALL JUNCTION BOXES AND DEVICES WITH THE NEW PANEL NAME AND CIRCUIT NUMBER.

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NJRA Project # 19205.00
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LEVEL 1
POWER PLAN

EP101

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CLIENT:						JOB:			6/30/2020				CIRCUITS:	32
PANEL ID: CL2A			MOUNT: FLUSH			TYPE: BOLT-ON BOLT-ON			120 VOLT 1 PHASE 3 WIRE ISOLATION PANEL					
80 AMPERE MAIN			BREAKER			LOCATION:						PANEL SIZE:	72"Hx32"Wx12"D	
ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, LINE ISOLATION MONITORS, 7.5 KVA, 208-120/208 VOLT TRANSFORMERS,														
INDICATOR ALARMS, INDICATOR LIGHTS, STAINLESS STEEL COVER (BOTH PANEL SECTIONS UNDER COMMON COVER)														
CRITICAL BRANCH A SECTION						SECTION 1								
CIR	O/C PROT		OUTLETS				LCL	LOAD	LCL		OUTLETS			O/C PROT		CIR
#	AMP	POLE	LTG	CO'S	PWR	DESCRIPTION			KVA	DESCRIPTION	LTG	CO'S	PWR	AMP	POLE	#
1	20	2		2		EAST BOOM	0.4	0.6	0.2	CEILING OUTLETS		1		20	2	2
3	20	2		2		WEST BOOM	0.4	0.4	0	SPARE				20	2	4
5	20	2		2		EAST RECEPTACLE	0.4	0.4	0	SPARE				20	2	6
7	20	2		2		NORTH RECEPTACLE	0.4	0.4	0	SPARE				20	2	8
9	20	2		0		SPARE	0	0	0	SPARE				20	2	10
11	20	2				SPARE	0	0	0	SPARE				20	2	12
13	20	2				SPARE	0	0	0	SPARE				20	2	14
15	20	2				SPARE	0	0	0	SPARE				20	2	16
TOTALS:				KVA				1.8	TOTAL KVA						1.8	
				AMPS				15	AVERAGE AMPS						8	

PANEL ID:CL2A-208V			MOUNT: FLUSH			TYPE: BOLT-ON BOLT-ON			208 VOLT 1 PHASE 3 WIRE ISOLATION PANEL					
50 CL2A-208V			BREAKER			LOCATION:						PANEL SIZE:	72"Hx32"Wx12"D	
ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, LINE ISOLATION MONITORS, 7.5 KVA, 208-120/208 VOLT TRANSFORMERS,														
INDICATOR ALARMS, INDICATOR LIGHTS, STAINLESS STEEL COVER (BOTH PANEL SECTIONS UNDER COMMON COVER)														
CRITICAL BRANCH B SECTION						SECTION 2								
CIR	O/C PROT		OUTLETS				LCLLOAD		LCL		OUTLETS			O/C PROT		CIR
#	AMP	POLE	LTG	CO'S	PWR	DESCRIPTION	KVA		KVA	DESCRIPTION	LTG		PWR	AMP	POLE	#
1	30	2		2		LASER	0.4	0.4	0	SPACE				20	2	2
3	20	2		2		SPACE	0.4	0.4	0	SPACE				20	2	4
5	20	2		2		SPACE	0.4	0.4	0	SPACE				20	2	6
7	20	2		2		SPACE	0.4	0.4	0	SPACE				20	2	8
9	20	2		3		SPACE	0.6	0.6	0	SPACE				20	2	10
11	20	2				SPACE	0	0	0	SPACE				20	2	12
TOTALS:				KVA				2.2	TOTAL KVA						2.2	
				AMPS				18	AVERAGE AMPS						9	
WIRING:																
NOTE	PANEL SCHEDULE IS TYPICAL FOR OR ROOMS #1, #2, #3, #4, #5 , #6 & #7															

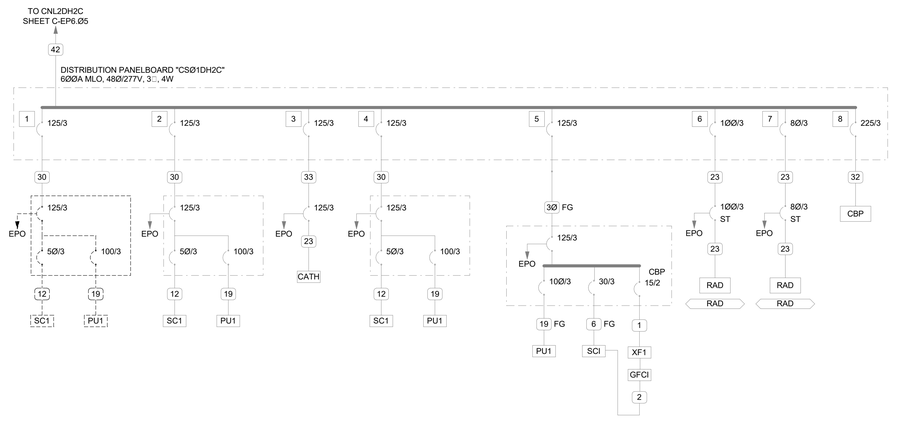
CLIENT:						JOB:			6/30/2020				CIRCUITS:	32
PANEL ID: CL2B			MOUNT: FLUSH			TYPE: BOLT-ON BOLT-ON			120 VOLT 1 PHASE 3 WIRE ISOLATION PANEL					
50 AMPERE MAIN			BREAKER			LOCATION:						PANEL SIZE:	72"Hx32"Wx12"D	
ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, LINE ISOLATION MONITOR, 7.5 KVA, 208-120 VOLT TRANSFORMER,														
INDICATOR ALARMS, INDICATOR LIGHTS, STAINLESS STEEL COVER (BOTH PANEL SECTIONS UNDER COMMON COVER)														
CRITICAL BRANCH B						SECTION 1								
CIR	O/C PROT		OUTLETS				LCL	LOAD	LCL		OUTLETS			O/C PROT		CIR
#	AMP	POLE	LTG	CO'S	PWR	DESCRIPTION			KVA	DESCRIPTION	LTG	CO'S	PWR	AMP	POLE	#
1	20	2		4		EAST BOOM	0.8	1.6	0.8	SOUTH RECEPTACLES		4		20	2	2
3	20	2		6		EAST RECEPTACLES	1.2	1.2	0	SPARE				20	2	4
5	20	2		6		NORTH RECEPTACLES	1.2	1.2	0	SPARE				20	2	6
7	20	2		4		PEDASTALS RECEPTACLES	0.8	0.8	0	SPARE				20	2	8
9	20	2				SPARE	0	0	0	SPARE				20	2	10
11	20	2				SPARE	0	0	0	SPARE				20	2	12
13	20	2				SPARE	0	0	0	SPARE				20	2	14
15	20	2				SPARE	0	0	0	SPARE				20	2	16
TOTALS:				KVA				4.8	TOTAL KVA						4.8	
				AMPS				40	AVERAGE AMPS						20	

BRANCH CIRCUIT CONDUCTOR AND CONDUIT SIZING TABLE

CIRCUIT AMPACITY/VOLTAGE	CIRCUIT LENGTH	CONDUCTOR SIZE (PHASE, NEUTRAL AND GR)	CONDUIT SIZE
20A/120V	0' - 60'	#12 AWG	0.75" Ø
20A/120V	60' - 95'	#10 AWG	0.75" Ø
20A/120V	95' - 150'	#8 AWG	1" Ø
20A/120V	150' - 240'	#6 AWG	1.25" Ø
20A/277V	0' - 140'	#12 AWG	0.75" Ø
20A/277V	140' - 220'	#10 AWG	0.75" Ø
20A/277V	220' - 350'	#8 AWG	1" Ø
20A/277V	350' - 550'	#6 AWG	1.25" Ø

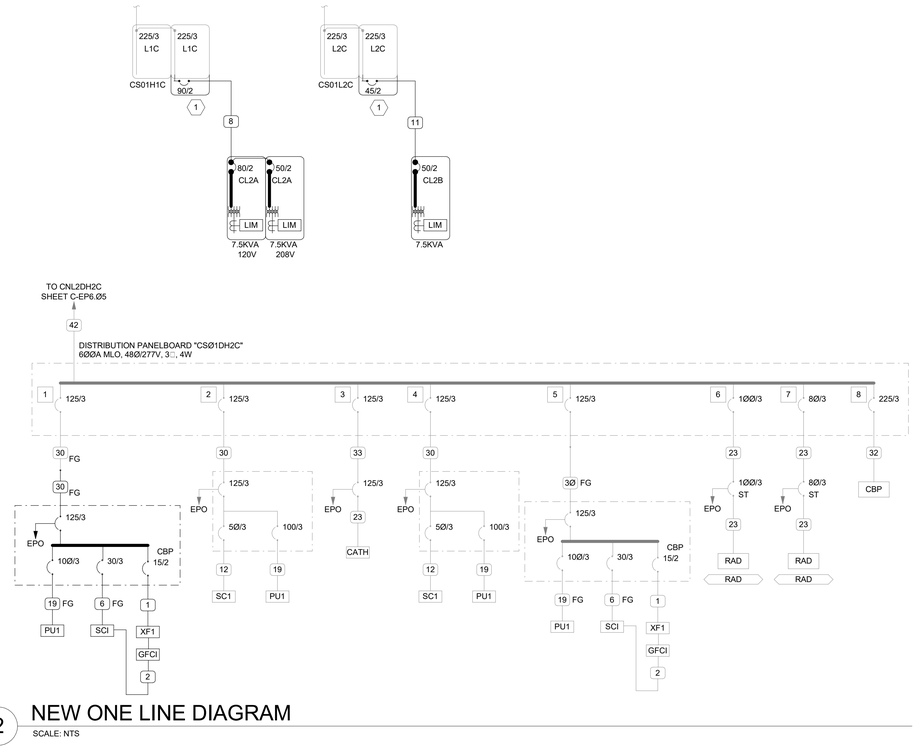
NOTES:

1. WIRE SIZING IS BASED ON COPPER CONDUCTORS SUPPLYING A 20A, 120V CIRCUIT AT THE INDICATED VOLTAGE, ASSUMED TO BE 80% LOADED (16A), WITH MAXIMUM VOLTAGE DROP OF 3% AT THE LOAD.
2. DOWN-SIZED WIRE AT DEVICE/LOAD AS REQUIRED AND TERMINATE CONDUCTORS IN A SAFE AND CODE COMPLIANT MANNER.
3. CONDUIT SIZE IS BASED ON A MAXIMUM OF 3 CIRCUITS PER CONDUIT, EACH WITH A SEPARATE NEUTRAL CONDUCTOR.



1 DEMOLITION PLAN

SCALE: NTS



2 NEW ONE LINE DIAGRAM

SCALE: NTS

SHEET KEYNOTES

1. PROVIDE NEW BREAKER IN EXISTING GE PANEL.

CONDUCTOR AND CONDUIT SCHEDULE

SCHEDULE NUMBER
SUBSCRIPT (NOTE 5)
(E.G.) 5 IG

SYM	AMP	CONDUIT SIZE	CONDUCTOR(NOTE 1) QTY	SIZE	GR	IG	SE	NOTES
1	20	.75	2	12	12	12	8	2
2	20	.75	3	12	12	12	8	2,3
3	20	.75	4	12	12	12	8	2,3
4	30	.75	2	10	10	10	8	2
5	30	.75	3	10	10	10	8	2
6	30	.75	4	10	10	10	8	2
7	40	1	2	8	10	8	6	2
8	40	1	3	8	10	8	6	2
9	40	1	4	8	10	8	6	2
10	55	1	2	6	10	8	4	2
11	55	1	3	6	10	8	4	2
12	55	1.25	4	6	10	8	4	2
13	70	1	2	4	8	4	2	2
14	70	1.25	3	4	8	4	2	2
15	70	1.25	4	4	8	4	2	2
16	85	1.25	2	3	8	3	2	2
17	85	1.25	3	3	8	3	2	2
18	85	1.25	4	3	8	3	2	2
19	95	1.25	3	2	8	2	2	2
20	95	1.50	4	2	8	2	2	2
21	130	1.50	3	1	6	2	2	2
22	130	1.50	4	1	6	2	2	2
23	150	2	3	1/0	6	2	1/0	2
24	150	2	4	1/0	6	2	1/0	2
25	175	2	3	2/0	6	2	2/0	2
26	175	2	4	2/0	6	2	2/0	2
27	200	2	3	3/0	6	2	2/0	2
28	200	2.50	4	3/0	6	2	2/0	2
29	230	2.50	3	4/0	4	2	2/0	2
30	230	2.50	4	4/0	4	2	2/0	2
31	255	2.50	3	250	4	1	2/0	2
32	255	2.50	4	250	4	1	2/0	2
33	310	3	3	350	3	1/0	3/0	2
34	310	3	4	350	3	1/0	3/0	2
35	380	3.50	3	500	3	3/0	3/0	2
36	380	4	4	500	3	3/0	3/0	2
37	400	2 EA 2	3	3/0	3	3/0	3/0	2
38	400	2 EA 2.50	4	3/0	3	3/0	3/0	2
39	510	2 EA 2.50	3	250	1	4/0	3/0	2
40	510	2 EA 3	4	250	1	4/0	3/0	2
41	620	2 EA 3	3	350	1/0	4/0	3/0	2,4
42	620	2 EA 3	4	350	1/0	4/0	3/0	2,4
43	760	2 EA 3.50	3	500	1/0	4/0	3/0	2,4
44	760	2 EA 4	4	500	1/0	4/0	3/0	2,4
45	855	3 EA 3	3	300	2/0	4/0	3/0	2,4
46	855	3 EA 3	4	300	2/0	4/0	3/0	2,4
47	1000	3 EA 3.50	3	400	2/0	4/0	3/0	4
48	1000	3 EA 3.50	4	400	2/0	4/0	3/0	4
49	1140	3 EA 4	3	500	3/0	4/0	3/0	4
50	1140	3 EA 4	4	500	3/0	4/0	3/0	4
51	1240	4 EA 3	3	350	3/0	4/0	3/0	4
52	1240	4 EA 3	4	350	3/0	4/0	3/0	4
53	1675	5 EA 4	4	400	4/0	4/0	4/0	4
54	2010	6 EA 4	4	400	250	250	250	4
55	2660	7 EA 4	4	500	350	350	350	4
56	3040	8 EA 4	4	500	500	500	500	4
57	4180	11 EA 4	4	500	500	500	500	4
58		5 EA 4						6
59		5						6
60		10 EA 4						6

CONDUCTOR AND CONDUIT SCHEDULE NOTES

1. CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 4. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
2. PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN TABLE.
3. PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING COMPUTERS.
4. SYMBOL SUBSCRIPTS:

   "2N": INCLUDE TWO NEUTRAL CONDUCTORS, SIZED AS SCHEDULED FOR PHASED AND NEUTRAL CONDUCTORS.

   "FG": FULL SIZE GROUND, SIZE EQUIPMENT GROUNDING CONDUCTOR TO BE THE SAME SIZE AS THE PHASE CONDUCTORS.

   "HH": NEUTRAL CURRENTS EXIST DUE TO HIGH HARMONIC "NONLINEAR" LOADS. CURRENT CARRYING CONDUCTORS DERATED ACCORDINGLY. PROVIDE THE IG/HH SIZE FOR THE EQUIPMENT GROUNDING CONDUCTOR.

   "IG": INCLUDE IG (INSULATED/ISOLATED GROUND CONDUCTOR) SCHEDULED ALONG WITH GROUND OF EQUIPMENT GROUND CONDUCTOR.

   "SE": SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEM.

NJRA ARCHITECTS

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PROFESSIONAL ENGINEER
No. 11783731-2202
JASON R. WORTHEN
STATE OF UTAH
07/15/20

Intermountain Healthcare

IMC - Cath Lab 2 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

ONE-LINE DIAGRAM

EP601

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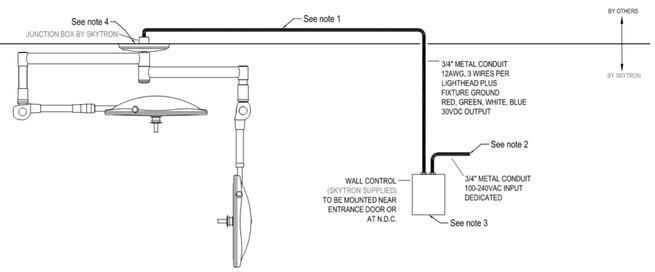
SKYTRON®

THIS DIAGRAM IS FOR INFORMATIONAL PURPOSES ONLY. THIS WILL NOT MATCH YOUR EXACT MODEL.

AUA



SPECIAL GROUNDING REQUIREMENTS - Electrical Engineer

1. Use of approved metal conduit shall be employed throughout the fixture's wiring circuit where applicable. - Flexible conduit to extend 18" (457mm) below finished ceiling. Facility supplied, circuit breaker protected, 100-240VAC 50/60 Hz power source wiring.
2. Grounding - Proper performance and safety of this fixture can only achieved by an adequate grounding system. Fixture ground must be a dedicated ground point ultimately bonded to the facilities grounding system to prevent the migration of electrical interference generated by other devices.

Protective Means - To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth ground. This fixture requires a properly circuit protected, appropriately sized, dedicated circuit. An isolated power supply circuit must be protected by an appropriately sized double pole, single throw circuit breaker

3. Fail Safe Compliance - In order for dual or triple lighthead systems to maintain fail safe compliance, a battery back up (UPS) or generator back up power system must be provided in the mains wiring prior to the wall control which will restore power in five (5) seconds or less.
4. Mounting and anchorage: please refer to the Aurora Four Installation Manual for mounting requirements. Seismic applications will differ in construction requirements. Please request seismic calculations and mounting requirements from your SKYTRON representative.

INITIAL:_____
DATE:_____

PROJECT #: 20-101
SUBMITTAL
PLOT DATE: 3/23/2020

INTERMOUNTAIN MEDICAL CENTER

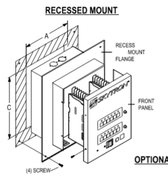
MDL: AUA5-1500
QTY.: 1
DESCRIPTION: LIGHT FIXTURE DETAILS
REV #: 0

SHEET
A6

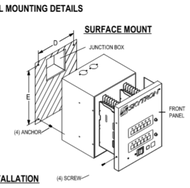
SKYTRON®

GENERIC WALL CONTROL MOUNTING DETAILS

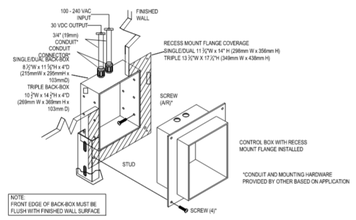
RECESSED MOUNT



SURFACE MOUNT

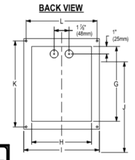


OPTIONAL BACK-BOX INSTALLATION



SIDE VIEW

BACK VIEW



DIMENSIONS	SINGLE/DUAL	TRIPLE
A	8-5/8" (220mm)	10-5/8" (270mm)
B	4" (100mm)	4" (100mm)
C	10-5/8" (270mm)	14" (355mm)
D	6-7/8" (175mm)	8-5/8" (220mm)
E	7-5/8" (195mm)	11" (280mm)
F	6" (153mm)	6-3/8" (162mm)
G	10" (255mm)	13-1/2" (343mm)
H	7-7/8" (200mm)	10" (253mm)
I	11-3/4" (298mm)	13-3/4" (348mm)
J	13-7/8" (353mm)	17-1/4" (438mm)
K	12-3/8" (315mm)	15-3/4" (400mm)
L	10-1/4" (260mm)	12-1/4" (310mm)

INITIAL:_____
DATE:_____

WALL CONTROL REQUIREMENTS

3/4" metal conduit and minimum 12AWG wire (3 wires per lighthead plus fixture ground) is required between wall control and fixture. Flexible conduit should extend 18" below finished ceiling.

Separate dedicated conduit required for 100-240VAC supply lines to wall control. All wiring to be in accordance with local, state and national electrical codes.

Room placement of the wall control will vary by application. Always follow current standards from the NFPA (National Fire Protection Agency). NEC (National Electrical Code) and IEC (International Electrotechnical Commission) for proper compliance.

The selection of anchorage fasteners shall be determined by the engineer of record and will vary by application. The selected fasteners must not interfere with wall control components. Seismic applications require the use of approved fasteners.

WALL CONTROL WEIGHT
SINGLE - 25lbs
DUAL/TRIPLE - 30lbs

PROJECT #: 20-101
SUBMITTAL
PLOT DATE: 3/23/2020

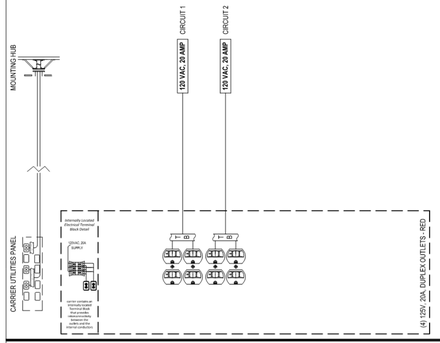
INTERMOUNTAIN MEDICAL CENTER

MDL: AUA5-1500
QTY.: 1
DESCRIPTION: WALL CONTROL DETAILS
REV #: 0

SHEET
A6.1

SKYTRON®

SITE SPECIFIC WIRING DETAILS
INTERNAL FIXTURE WIRING TYPICAL, EXTRA FLEX STEEL CONDUIT
TYPE: 12AWG, 600V, XHHW-2, 90°C - UNLESS NOTED

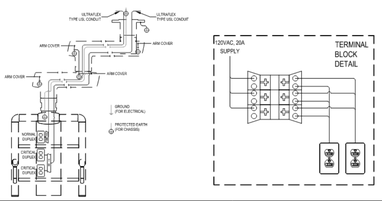


ELECTRICAL REQUIREMENTS - Electrical Engineer

Each boom fixture is fabricated in accordance to the specifications required by the customer. The Configuration drawings supplied by SKYTRON will indicate the type and quantity of circuits required. SKYTRON provides all wiring and electrical materials for connection from fixture to junction box or pump enclosure (if applicable). SKYTRON supplies an electrical junction box (8-5/8" x 4-5/8" x 1-3/4") to facilitate field wiring for up to six circuits that is mounted on the mounting plate in the correct position and if applicable, a hydraulic pump enclosure/junction box (18"L x 6"W x 12"H) that is to be remote mounted within 24" of the mounting structure (by contractor). The pump enclosure can be shipped with the installation kit upon request. Typical wire type is 12AWG, 600V, XHHW-2. Each circuit requires a separate, properly circuit protected, 120VAC, 60Hz power supply line enclosed in rigid metal conduit. All electrical materials for connection to SKYTRON supplied junction box or pump enclosure and installation labor for such materials to be provided by customer. All wiring and materials to be in accordance with federal, state and local codes. It is the customer's responsibility to meet conformity to NFPA and NEC standards with respect to the color, type and number of receptacles provided in a patient care area. (e.g. Color - red/white, Amperage - 15 or 20, dedicated circuits, tamper resistant, LED, GFCI)

Specific conductor colors and/or wiring for isolated applications are available upon request.

GENERIC BOOM ELECTRICAL WIRING DIAGRAM FOR FIXED ARMS



INITIAL:_____ DATE:_____	REQUIRED FOR FABRICATION VERIFY AND INITIAL POWER TYPE	ISOLATED POWER BROWN W/YELLOW STRIPE, ORANGE W/BLUE STRIPE, GREEN W/YELLOW STRIPE INITIAL: _____	NON-ISOLATED POWER BLACK, WHITE, GREEN INITIAL: _____

PROJECT #: 20-101
SUBMITTAL
PLOT DATE: 3/23/2020

INTERMOUNTAIN MEDICAL CENTER

MDL: 300 SERIES
QTY.: 1
DESCRIPTION: ELECTRICAL WIRING DETAILS
REV. # 0

SHEET
B4

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PROFESSIONAL ENGINEER
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IMC - Cath Lab 2 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

SKYTRON DRAWINGS

EP701

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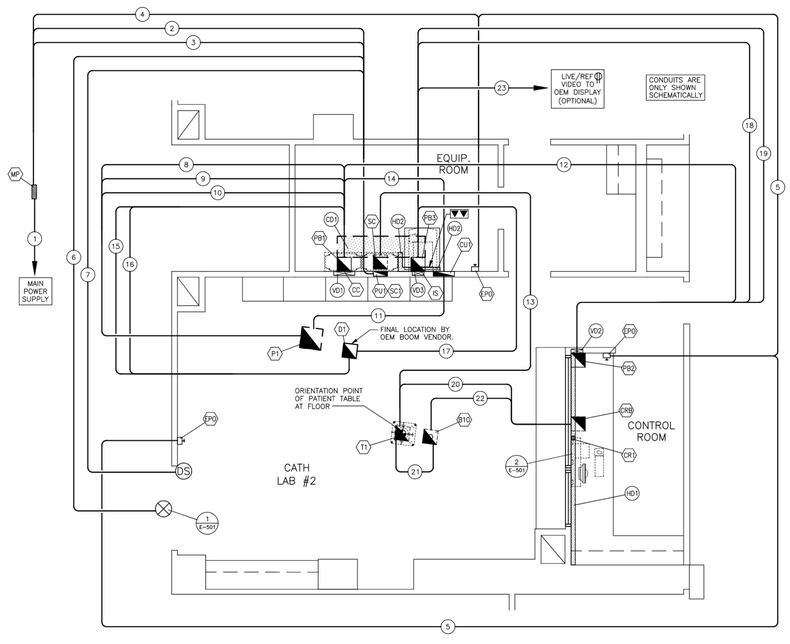

ELECTRICAL RACEWAY PLAN

SCALE: 1/4" = 1'-0"

SYMBOLS

ALL MAY NOT APPLY

	CIRCUIT BREAKER BY CUSTOMER/CONTRACTOR
	OPENING IN RACEWAY OR TRENCHDUCT
	PULLBOX IN (FLOOR/WALL/CEILING)
	OPENING IN ACCESS FLOORING
	WARNING LIGHT (X-RAY ON)
	DOOR SAFETY SWITCH
	(EPO) EMERGENCY POWER OFF BUTTON
	TRENCHDUCT
	CEILING DUCT
	UNDER FLOOR DUCT
	SURFACE DUCT
	VERTICAL DUCT
	ETHERNET CONNECTION TO CUSTOMER'S INFORMATION SYSTEMS NETWORK (VERIFY WITH SMS PROJECT MANAGER).
	110 VOLT, 20 AMP, HOSPITAL GRADE DUPLEX OUTLET
	110 VOLT, 20 AMP, HOSPITAL GRADE QUAD OUTLET

ELECTRICAL LEGEND

SYM	SIZE	DESCRIPTION SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR	REMARKS
TA	AS REQUIRED	(EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. PROVIDE 4"ø CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR. PROVIDE STAINLESS STEEL WATERPROOF PLATE ON TOP OF CORED OPENING IN FLOOR.	TABLE ACCESSORIES
CI	18" X 8"	(EXISTING) BUSHED OPENING IN VERTICAL DUCT "VD1" COVER AT FLOOR LINE.	CABLE INLET
D1	3"ø	(EXISTING) BUSHED OPENING IN TOP OF HORIZONTAL DUCT "HD1".	CONTROL ROOM DISTRIBUTOR
DB	AS REQUIRED	(VERIFY EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. FOR A SINGLE CONDUIT CONNECTION TO THIS BOX, PROVIDE A 3" CONDUIT THRU FLOOR. FOR MULTIPLE CONDUIT CONNECTIONS, PROVIDE (2) 4" CONDUITS THRU FLOOR. E.C. TO DESIGN TRANSITION TO SURFACE FLOOR DUCT AS REQUIRED.	CONTROL ROOM UNDER-FLOOR BOX
EU	AS REQUIRED	(VERIFY EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED WALL AT 48" AFF. PROVIDE BOX WITH REMOVABLE FRONT COVER AND (1) 4"ø BUSHING IN CENTER OF REMOVABLE COVER FOR CABLE EXIT. SEE PLAN FOR LOCATION.	COOLING UNIT
HD1	AS REQUIRED	(NEW) PULL BOX MOUNTED ABOVE FINISHED CEILING WITH REMOVABLE BOTTOM COVER WITH 3"ø BUSHED OPENING. NOTE: IF LOCAL CODES REQUIRE COMPLETE CABLE CONTAINMENT IN RACEWAY, THIS BOX MUST BE SIZED SUCH THAT A 8" X 6" X 3" SIEMENS POWER DISTRIBUTION BOX CAN BE INSTALLED INSIDE THIS PULL BOX.	BOOM DVI 2x8WD-19D (live+ref)
EPO	---	EMERGENCY OFF BUTTONS FOR CIRCUIT BREAKERS. EPO'S MUST PREVENT RESETTING OF CIRCUIT BREAKERS WHEN IN OFF POSITION. EPO'S MUST BE RECESSED OR SHIELDED. FINAL LOCATION DETERMINED BY CUSTOMER	EMERGENCY POWER OFF
IG	4"ø	(VERIFY EXISTING) BUSHED OPENING IN VERTICAL DUCT "VD" COVER AT FLOOR LINE.	IMAGE SYSTEM
MP	---	MAIN PANEL WITH MAIN BREAKER. LOCATION DETERMINED BY CUSTOMER/CONTRACTOR. SEE "POWER SCHEDULE"	BREAKER PANEL
PB1, PB2, PB3	AS REQUIRED	(VERIFY EXISTING) ABOVE FINISHED CEILING PULL BOXES FOR CONDUIT TERMINATION INTO VERTICAL DUCT. SEE PLAN FOR LOCATION.	PULL BOXES
PT	12" TALL	(EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED CEILING WITH REMOVABLE BOTTOM COVER WITH 6"ø BUSHED OPENING.	C-ARM
RG	AS REQUIRED	(VERIFY EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED WALL AT FLOOR LINE. PROVIDE BOX WITH REMOVABLE FRONT COVER WITH 4"ø BUSHED OPENING AT BOTTOM OF COVER.	GENERATOR
SC	AS REQUIRED	(VERIFY EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED WALL AT FLOOR LINE. PROVIDE BOX WITH REMOVABLE FRONT COVER WITH 4"ø BUSHED OPENING AT BOTTOM OF COVER.	SYSTEM CABINET
SC	AS REQUIRED	(VERIFY EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. PROVIDE 6"ø CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR WITH BUSHING AT FLOOR LINE.	SYSTEM CABINET
TI	AS REQUIRED	(EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. PROVIDE 4"ø CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR WITH BUSHING AT FLOOR LINE.	TABLE
VD	3 1/2" X 18"	CEILING DUCT MOUNTED ABOVE FINISHED CEILING. PROVIDE DUCT WITH REMOVABLE TOP COVER AND OPENINGS AS SPECIFIED. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS. CONNECT TO "PB1" AND "PB3" AS SHOWN. THIS CEILING DUCT WILL BE USED FOR EXTRA CABLE STORAGE.	CEILING DUCT
HD2	3 1/2" X 10"	(EXISTING) HORIZONTAL DUCT MOUNTED ON FINISHED WALL AT FLOOR LINE. PROVIDE DUCT WITH REMOVABLE FRONT COVER. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS. CONNECT TO VERTICAL DUCT "VD2" AS SHOWN.	HORIZONTAL WALL DUCT
HD3	3 1/2" X 10"	HORIZONTAL DUCT MOUNTED ON FINISHED WALL AT FLOOR LINE. PROVIDE DUCT WITH REMOVABLE FRONT COVER. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS. CONNECT TO VERTICAL DUCT "VD3" AS SHOWN.	HORIZONTAL WALL DUCT
VD1	3 1/2" X 18"	(VERIFY EXISTING) VERTICAL DUCT MOUNTED FLUSH IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND EXTEND UP WALL ABOVE FINISHED CEILING. PROVIDE JUNCTION BOX "PB1" (SIZED BY E.C.) AT TOP OF DUCT FOR CONDUIT TRANSITIONS. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS.	VERTICAL DUCT
VD2	3 1/2" X 10"	(VERIFY EXISTING) VERTICAL DUCT MOUNTED FLUSH IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND EXTEND UP WALL ABOVE FINISHED CEILING. PROVIDE JUNCTION BOX "PB2" (SIZED BY E.C.) AT TOP OF DUCT FOR CONDUIT TRANSITIONS. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS.	VERTICAL DUCT
VD3	3 1/2" X 10"	(VERIFY EXISTING) VERTICAL DUCT MOUNTED FLUSH IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND EXTEND UP WALL ABOVE FINISHED CEILING. PROVIDE JUNCTION BOX "PB3" (SIZED BY E.C.) AT TOP OF DUCT FOR CONDUIT TRANSITIONS. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS.	VERTICAL DUCT
1	EC TO SIZE	CONDUIT FROM PANEL TO "MP"	SEE "POWER SCHEDULE"
2	EC TO SIZE	CONDUIT FROM "MP" TO "PU1"	SEE "POWER SCHEDULE"
3	EC TO SIZE	CONDUIT FROM "MP" TO "SC1"	SEE "POWER SCHEDULE"
4	EC TO SIZE	CONDUIT FROM "MP" TO "EPO"	SEE "POWER SCHEDULE"
5	EC TO SIZE	CONDUIT FROM "EPO" TO "EPO"	
6	EC TO SIZE	CONDUIT FROM "SC1" TO "WL"	
7	EC TO SIZE	CONDUIT FROM "SC1" TO "DS"	
8	2"ø	(EXISTING) CONDUIT FROM "P1" TO "PB1" (PU1)	MAX. CONDUIT LENGTH 25'
9	(2) 3"ø	(EXISTING) CONDUITS FROM "P1" TO "PB1" (PU1)	MAX. CONDUIT LENGTH 25'
10	3"ø	(EXISTING) CONDUIT FROM "P1" TO "PB1" (SC1)	MAX. CONDUIT LENGTH 22'
11	2 1/2"ø	(EXISTING) CONDUIT FROM "P1" TO "CU1" FOR LIQUID COOLING HOSES	MAX. CONDUIT LENGTH 67'
12	(2) 3"ø	(EXISTING) CONDUITS FROM "PB1" (SC1) TO "PB2" (CR1) UNDER FLOOR	MAX. CONDUIT LENGTH 32'
13	3"ø	(EXISTING) CONDUIT FROM "SC" (SC1) TO "T1" UNDER FLOOR	MAX. CONDUIT LENGTH 35'
14	2"ø	(EXISTING) CONDUIT FROM "PB1" (SC1) TO "CU1"	MAX. CONDUIT LENGTH 78'
15	1"ø	(NEW) CONDUIT FROM "PB1" (SC1) TO "D1"	MAX. CONDUIT LENGTH 78'
16	2 1/2"ø	(NEW) CONDUIT FROM "PB1" (SC1) TO "D1"	MAX. CONDUIT LENGTH 42'
17	2"ø	(NEW) CONDUIT FROM "PB3" (IS) TO "D1"	MAX. CONDUIT LENGTH 55'
18	3"ø	(EXISTING) CONDUIT FROM "PB3" (IS) TO "PB2" (CR1)	MAX. CONDUIT LENGTH 33'
19	2"ø	(EXISTING) CONDUIT FROM "PB3" (IS) TO "PB2" (CR1)	MAX. CONDUIT LENGTH 33'
20	3"ø	(NEW) CONDUIT FROM "CRB" TO "T1" UNDER FLOOR (VOLCANO 551 CABLE SET)	MAX. CONDUIT LENGTH 68'
21	3"ø	(EXISTING) CONDUIT FROM "T1" TO "B10" UNDER FLOOR	
22	3"ø	(EXISTING) CONDUIT FROM "CRB" TO "B10" UNDER FLOOR (CUSTOMER PATIENT MONITORING)	
23	2"ø	(NEW) CONDUIT FROM "PB3" (IS) TO "CUSTOMER MONITOR" (LIVE+REF VIDEO TO OEM OPTION)	MAX. CONDUIT LENGTH 86'

ELECTRICAL NOTES

1) COMPLIANCE: ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NFPA-70), O.S.H.A. REGULATIONS, AS WELL AS APPLICABLE REGULATIONS OF CITY, COUNTY, STATE AND FEDERAL AGENCIES. PROVIDE MATERIALS AND EQUIPMENT THAT COMPLY WITH ANSI, IEEE AND NEMA STANDARDS AND ARE U.L. LISTED AND LABELED. THE CUSTOMER'S/CONTRACTOR'S WORK AND ALL EQUIPMENT INSTALLED SHALL COMPLY WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE ADOPTED/ENFORCED BY THE AUTHORITY HAVING JURISDICTION.

2) QUALITY ASSURANCE: THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN THE FIELD TO INSURE THAT THE NEW WORK WILL FIT INTO THE EXISTING STRUCTURE AS SHOWN ON THE DRAWINGS. SHOULD ANY CONDITIONS EXIST OR BE DISCOVERED THAT PREVENT THE INSTALLATION OF WORK AS SHOWN, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO FABRICATION OF EQUIPMENT, OR THE PERFORMANCE OF ANY WORK THAT MAY BE AFFECTED. DO NOT ALTER DRAWINGS, DIMENSIONS, OR SPECIFICATIONS IN ANY WAY WITHOUT CONTACTING AND RECEIVING WRITTEN CONFIRMATION FROM SIEMENS PROJECT MANAGER. ALL DIMENSIONS ARE FROM FINISHED SURFACES. CONDUIT AND PULL BOXES TO BE INSTALLED BY THE CUSTOMER/CONTRACTOR WITH LOCATIONS BEING FIELD VERIFIED BY THE SIEMENS PROJECT MANAGER.

3) POWER SUPPLY SOURCE: POWER SUPPLIES FOR SIEMENS HEALTHCARE EQUIPMENT SHALL BE FROM A MEDICAL IMAGING PANEL OR BUILDING SERVICE EQUIPMENT THAT IS A GROUNDED 3 OR 4-WIRE "WYE" SOURCE PER THE SPECIFIC EQUIPMENT OPERATION REQUIREMENTS. A DEDICATED CIRCUIT SHALL BE PROVIDED THAT IS KEPT ENTIRELY FREE AND INDEPENDENT OF ALL OTHER BUILDING WIRING. NO ELEVATORS, GENERATORS, PUMPS, HVAC OR SIMILAR EQUIPMENT SHALL BE CONNECTED TO THE SAME CIRCUIT OR MEDICAL IMAGING PANEL THAT SERVES THE SIEMENS HEALTHCARE EQUIPMENT. IF THE POWER SUPPLY SOURCE DOES NOT MEET THE SPECIFIC SIEMENS EQUIPMENT POWER REQUIREMENTS, THE CONTRACTOR SHALL PROVIDE THE NECESSARY EQUIPMENT REQUIRED TO ESTABLISH THE POWER SUPPLY IN ACCORDANCE WITH THE REQUIRED POWER SUPPLY PARAMETERS OF THE SIEMENS EQUIPMENT. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CUSTOMER AND/OR UTILITY COMPANY FIELD REPRESENTATIVE.

4) WORK FURNISHED BY CUSTOMER/CONTRACTOR: WORK NOT PROVIDED BY SIEMENS HEALTHCARE BUT SHOWN ON DRAWINGS TO BE FURNISHED AND INSTALLED BY CUSTOMER/CONTRACTOR INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING, UNLESS NOTED OTHERWISE: ELECTRICAL RACEWAYS AND DUCTS, WIRING TROUGHS, PULL BOXES, CONDUITS, CIRCUIT BREAKERS, ACCESS PANELS, EMERGENCY OFF BUTTONS, DOOR SWITCHES, WARNING LIGHTS, WIRING, WIRING DEVICES, CONNECTORS, LIGHTING EQUIPMENT AND GROUNDING.

5) RACEWAY AND CONDUIT NOTES: ALL CONDUITS SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT ENFORCED EDITION OF THE NATIONAL ELECTRICAL CODE.

CONDUIT BODIES SHALL NOT BE USED: WHERE A CONDUIT ENTERS A BOX, FITTING, OR OTHER ENCLOSURE, AN INSULATED THROAT CONNECTOR SHALL BE PROVIDED TO PROTECT THE WIRE FROM ABRASION. ALL CONNECTORS FOR EMT SHALL BE COMPRESSION OR DOUBLE SET SCREW TYPE.

KEEP RACEWAYS AT LEAST 6 INCHES AWAY FROM PARALLEL RUNS OF FLUES OR STEAM AND HOT WATER PIPES. INSTALL RACEWAY RUNS ABOVE WATER AND STEAM PIPES PROVIDED THAT CABLE RUN DISTANCES ARE MAINTAINED. USE TEMPORARY CLOSURES TO PREVENT FOREIGN MATTER FROM ENTERING RACEWAY.

CONDUIT RUNS ARE SHOWN SCHEMATICALLY. INSTALL CONDUIT WITH A MINIMUM OF BENDS IN THE SHORTEST PRACTICAL DISTANCE CONSIDERING THE BUILDING CONSTRUCTION AND OBSTRUCTIONS, EXCEPT AS OTHERWISE INDICATED. THE CONTRACTOR SHALL MAKE CERTAIN THAT ANY CONDUIT/RACEWAY RUNS CONTAINING SIEMENS HEALTHCARE CABLES DO NOT EXCEED THE SPECIFIED MAXIMUM DISTANCES AS SHOWN ON THE ELECTRICAL DETAILS. SIEMENS CONDUIT SIZES FOR SIEMENS-SUPPLIED CABLES MUST BE MAINTAINED IN ORDER TO ENABLE THE TOTAL CABLE BUNDLE INCLUDING CONNECTORS TO BE PULLED THROUGH WITHOUT DAMAGE.

PROVIDE ENCLOSED METAL WIRE DUCT RACEWAY SYSTEM WHERE SHOWN ON DRAWINGS WITH DIVIDERS TO SEPARATE THE DUCT INTO TWO OR THREE SEPARATE COMPARTMENTS AS SHOWN ON THE SIEMENS PLANS (FOR POWER AND SIEMENS HEALTHCARE CABLING). DIVIDERS AND CROSSOVER PIECES TO BE PROVIDED AS NECESSARY. THE CABLE TO CABLE AS WELL AS THE CIRCUIT TO CIRCUIT SEPARATION REQUIREMENT WAS EVALUATED DURING THE UL SYSTEM CERTIFICATION OF THE EQUIPMENT. ADDITIONAL SEPARATION OF THE SYSTEM CABLE ASSEMBLIES INTO SEPARATE OR PARTITIONED RACEWAYS, UNLESS OTHERWISE NOTED, IS NOT NECESSARY TO INSURE SEPARATION OF CIRCUITS.

PROVIDE WIRE DUCT/RACEWAY WITH ACCESSIBLE REMOVABLE COVERS. LOCATIONS OF BUILDING MATERIAL OPENINGS (I.E. ACCESS PANELS) TO BE CUT IN FIELD ARE TO BE COORDINATED WITH THE DRAWING REQUIRMENTS AND BUILDING STRCTURE. THOSE THAT ARE NOT INDICATED OR INTERFER WITH BUILDING ELEMENTS SHALL BE COORDINATED WITH SIEMENS PROJECT MANAGER. ELECTRICAL PULL BOXES AND RACEWAY COVERS SHALL BE INSTALLED IN A MANNER TO ALLOW ACCESSIBILITY FOR INSTALLATION AND MAINTENANCE. CONTRACTORS MUST PROVIDE PULL STRINGS FOR ALL CONDUIT AND WIRE DUCT/RACEWAY. IN-FLOOR TRENCH DUCT AND FLUSH FLOOR BOXES SHALL BE PROVIDED WITH FULLY GASKETED REMOVABLE COVERS.

WHEN JUNCTION BOXES AND WIRE DUCT/RACEWAY ARE MOUNTED HIGHER THAN 14 FEET ABOVE FINISHED FLOOR, THE ELECTRICAL CONTRACTOR SHALL PROVIDE TWO ELECTRICIANS TO HELP THE SIEMENS INSTALLERS PULL SIEMENS SUPPLIED CABLES AT CUSTOMER'S EXPENSE. WHEN JUNCTION BOXES AND WIRE DUCT/RACEWAY ARE MOUNTED ABOVE A HARD CEILING (I.E. SHEET ROCK), A 24" x 24" ACCESS PANEL IS REQUIRED AT EACH JUNCTION BOX AND WITHIN 2 FEET OF EACH RACEWAY TRANSITION (SUCH AS A 90 DEGREE ELBOW OR TEE) IN DUCT/RACEWAY. THERE MUST BE FREE AND CLEAR ACCESS TO JUNCTION BOXES AND WIRE DUCT/RACEWAY. WHEN ACCESS PANELS ARE LOCATED MORE THAN 3 FEET FROM JUNCTION BOXES AND WIRE DUCT/RACEWAY THE ELECTRICAL CONTRACTOR SHALL PROVIDE TWO ELECTRICIANS TO HELP SIEMENS INSTALLERS PULL SIEMENS SUPPLIED CABLES AT CUSTOMER'S EXPENSE.

6) WIRING: ALL WIRING INSTALLED SHALL BE 600 VOLT CLASS, STRANDED TYPE THHN/THWN-2, SINGLE CONDUCTOR ANNEALED COPPER FOR A MAXIMUM OPERATING TEMPERATURE OF 90° C (194° F), SIZED AS INDICATED, INSTALLED IN METAL RACEWAYS. THE CUSTOMER/CONTRACTOR SHALL LEAVE A MINIMUM 10 FEET OF WIRE TAILS AT ALL OUTLET POINTS WITH WIRE IDENTIFICATION TAGGED AT BOTH ENDS FOR FINAL CONNECTION BY THE CUSTOMER/ELECTRICAL CONTRACTOR.

7) SHORT CIRCUIT REQUIREMENTS: ALL CIRCUIT BREAKERS SUPPLIED FOR THE SIEMENS EQUIPMENT REQUIREMENTS SHALL BE RATED HIGHER THAN THE SHORT CIRCUIT AVAILABLE AT THE TERMINALS OF THE ELECTRICAL EQUIPMENT AS DETERMINED BY THE ENGINEER OF RECORD, BUT NOT LESS THAN 35,000A RMS SYMMETRICAL AT 480V, 3-PHASE, 60 HERTZ. THE CONTRACTOR SHALL OBTAIN THE CORRECT SHORT CIRCUIT CURRENT RATING OF ALL THE NEW EQUIPMENT FOR INSTALLATION FROM THE ENGINEER OF RECORD.

CONDUIT LENGTH CALCULATIONS

IF SITE-SPECIFIC CONDITIONS EXCEED THE FOLLOWING ASSUMED VALUES, THEN ADDITIONAL LENGTH MUST BE SUBTRACTED BY THE ELECTRICAL CONTRACTOR FROM THE MAXIMUM CONDUIT LENGTHS LISTED.

IF DUCT LOCATIONS ARE ALTERED FROM THE SHOWN LAYOUT, IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO RECALCULATE THE MAXIMUM CONDUIT LENGTHS.

ASSUMED VALUES USED IN CALCULATING STATED MAXIMUM CONDUIT LENGTHS:
VERTICAL DUCTS – 12'-0"
FLOOR PENETRATIONS – 3'-0"

ARTIS Q-FLEX/ZEE CEILING REV. 23

CEILING HEIGHT REQUIREMENT

8 FT. – 11 IN.

ATTENTION:

- THIS DRAWING IS DESIGNED TO CONFORM TO FEATURES AND EQUIPMENT REQUIREMENTS PRESENTED AT THE TIME OF THEIR PREPARATION. SINCE BOTH THESE FACTORS ARE SUBJECT TO DESIGN MODIFICATION, THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES.
- THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED.
- IT IS RECOMMENDED THAT THE SIEMENS DRAWINGS BE INCORPORATED WITH THE CONSTRUCTION DOCUMENTS FOR REFERENCE.
- ALL DIMENSIONS SHOWN ON THIS DRAWING ARE FROM FINISHED SURFACES.
- THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST TO SPECIFY RADIATION PROTECTION.

SYM	DATE	DESCRIPTION
1	03/08/20	R-1918(A) VERSION DATED 02/26/20 APPROVED BY CUSTOMER FOR PERMITS

—ISSUE BLOCK—

PROJECT MANAGER: CHRISTOPHER THOMAS
TEL: (801) 209-6582 EXT:
CELL:
FAX:
EMAIL: christopher.thomas@siemens-healthineers.com

SIEMENS

INTERMOUNTAIN MEDICAL CENTER
5121 COTTONWOOD STREET, MURRAY, UT. 84107
CATH LAB #2 – ARTIS Q.ZEN CEILING

PROJECT #: 2000965

SHEET: E-101

SCALE: AS NOTED | REF. #: CPO-133078 | SHEET 5 OF 7 | DRAWN BY: M. GONZALEZ | DATE: 03/08/20

Intermountain Healthcare

IMC - Cath Lab 2 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

SIEMENS DRAWINGS

EP702

NJRA ARCHITECTS
NJRA Architects, Inc.
5272 S. College Drive, Suite104
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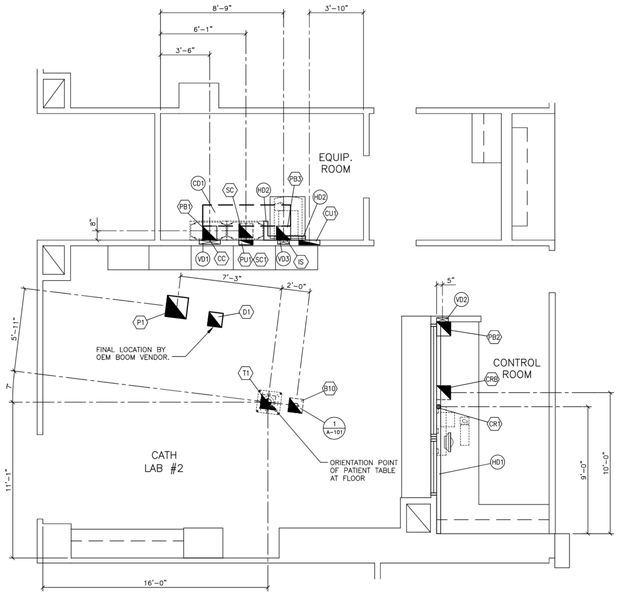
801.364.9259
www.njraarchitects.com

PROFESSIONAL ENGINEER
No. 11783731-2202
JASON R. WORTHEN
STATE OF UTAH
07/15/20

7/14/2020 3:29:21 PM



ELECTRICAL DIMENSION PLAN

SCALE: 1/4" = 1'-0"

CEILING HEIGHT REQUIREMENT

8 FT. - 11 IN.

ARTIS Q.ZEN/EE CEILING REV. 2.3

ATTENTION:

- THIS DRAWING IS DESIGNED TO CONFORM TO FEATURES AND EQUIPMENT REQUIREMENTS PRESENTED AT THE TIME OF THEIR PREPARATION. SINCE BOTH THESE FACTORS ARE SUBJECT TO DESIGN MODIFICATION, THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES.
- THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED.
- IT IS RECOMMENDED THAT THE SIEMENS DRAWINGS BE INCORPORATED WITH THE CONSTRUCTION DOCUMENTS FOR REFERENCE.
- ALL DIMENSIONS SHOWN ON THIS DRAWING ARE FROM FINISHED SURFACES.
- THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST TO SPECIFY RADIATION PROTECTION.

SYM	DATE	DESCRIPTION
1	03/08/20	R-101(A) VERSION DATED 02/29/20 APPROVED BY CUSTOMER FOR FINALS

-ISSUE BLOCK-

PROJECT MANAGER: CHRISTOPHER THOMAS
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INTERMOUNTAIN MEDICAL CENTER
5121 COTTONWOOD STREET, MURRAY, UT, 84107
CATH LAB #2 - ARTIS Q.ZEN CEILING

PROJECT #: 2000965

SHEET: E-102

SHEET 6 OF 8

DRAWN BY: M. GONZALEZ

SCALE: AS NOTED

REF. #: CPQ-133078

DATE: 03/08/20

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

NJRA Architects, Inc.
5272 S. College Drive, Suite104
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PROFESSIONAL ENGINEER
No. 11783731-2202
JASON R. WORTHEN
STATE OF UTAH
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Intermountain Healthcare

IMC - Cath Lab 2 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

SIEMENS DRAWINGS

EP703

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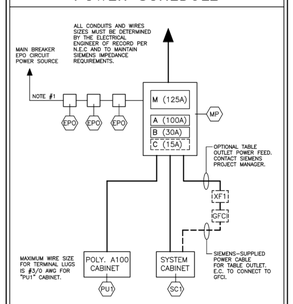
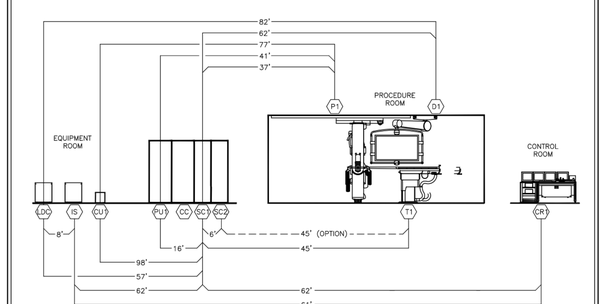
POWER SCHEDULE



ITEM	QTY	DESCRIPTION				
MP	1	MAIN PANEL WITH CIRCUIT BREAKERS FLUSH OR SURFACE MOUNTED.				
M	1	MAIN BREAKER MUST HAVE TRIPPING DEVICE SO WHEN ANY EPO IS PRESSED, THE MAIN BREAKER TRIPS.				
		MAIN BREAKER AMPS: 125				
		VOLTS	PHASES	NEUTRAL	GROUND	TOTAL WIRES
		480/277Y	3	1	1	5 (NOTE 1)
A	1	BREAKER AMPS: 100 (FOR PU1)				
		VOLTS	PHASES	NEUTRAL	GROUND	TOTAL WIRES
		480Y	3	0	1	4 (NOTE 1)
B	1	BREAKER AMPS: 30 (FOR SC1)				
		VOLTS	PHASES	NEUTRAL	GROUND	TOTAL WIRES
		480/277Y	3	1	1	5 (NOTE 1)
C	1	BREAKER AMPS: 15 (FOR STEP-DOWN XFMR "XF1")				
		VOLTS	PHASES	NEUTRAL	GROUND	TOTAL WIRES
		480	1 (L1,L2)	0	1	3
XF1	1	750VA, 480V PRIMARY, 120V GROUNDED SECONDARY STEP-DOWN SINGLE-PHASE TRANSFORMER WITH PRIMARY AND SECONDARY FUSE PROTECTION FOR TABLE OUTLET POWER, CONNECTED TO AN ADJACENT FLUSH WALL-MOUNTED 15A, 125VAC UL 943 GFCI WITH BLANK FACE (NO CONTACT OPENINGS OR NEMA CONFIGURATION) WITH LED INDICATION, PUSH-TO-TEST AND PUSH-TO-RESET BUTTONS, AND A CLEAR LEXAN HINGED COVER TO AVOID INADVERTENT MANUAL TRIP.				
1) PHASE AND NEUTRAL TO BE THE SAME SIZE. GROUND SIZED PER NEC. NOTE: UNLESS OTHERWISE NOTED, ALL BREAKERS WILL BE 80% RATED						
EPO	VARIES	NOTE 1 — EPO CIRCUIT #1 MAIN CIRCUIT BREAKER EMERGENCY POWER OFF BUTTON WITH PROTECTIVE COVER THAT PREVENTS ACCIDENTAL ACTIVATION. THE EPO MUST BE OF FAIL-SAFE DESIGN. ALL EPO'S TO HAVE MECHANICAL LATCHING MECHANISM. EPO MUST BE RESET BEFORE MAIN BREAKER CAN RESUME OPERATION. CONTACTS AND WIRING CONFIGURATION TO BE DESIGNED BY ELECTRICAL ENGINEER OF RECORD. THE EPOs MUST BE INSTALLED BY A QUALIFIED ELECTRICAL CONTRACTOR ACCORDING TO NATIONAL ELECTRICAL CODE, STATE AND LOCAL REGULATIONS. MEASURES SHOULD BE TAKEN TO DESIGN THE CIRCUIT IN SUCH A WAY THAT IT WILL ALWAYS WORK WHEN THE MEDICAL EQUIPMENT IS POWERED. THE CUSTOMER IS SOLELY RESPONSIBLE FOR THE IMPLEMENTATION OF THE EPOs AND THEIR ASSOCIATED CIRCUITS AND MUST MAKE THE FINAL DETERMINATION CONSIDERING ALL SITE CONDITIONS AND REGULATORY FACTORS.				
ALL ITEMS LISTED IN THIS SCHEDULE SHALL BE SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR.						



ARTIS Q/Q.ZEN/ZEE CEILING MAXIMUM CABLE LENGTHS (TYPICAL EQUIPMENT)

POWER REQUIREMENTS

WIRING SYSTEM:	480Y/277V, 3 PHASE, 5-WIRE, 60 HZ.
MINIMUM POWER SUPPLY:	
IF AN ON-SITE TRANSFORMER IS REQUIRED TO OBTAIN OPERATING VOLTAGE, IT MUST BE OF SUFFICIENT CAPACITY AND CHARACTERISTICS TO MAINTAIN SUPPLY VOLTAGE AND IMPEDANCE REQUIREMENTS (TRANSFORMER AND CONDUCTORS).	
X-RAY GENERATOR (PU1) MOMENTARY RATING: (RADIOGRAPHIC EXPOSURE)	162 KVA
X-RAY GENERATOR (PU1) LONG-TIME RATING: (FLUOROSCOPY)	14 KVA
SYSTEM CABINET (SC1) LONG-TIME RATING:	8.5 KVA
LINE IMPEDANCE	≤ 120 (mΩ)
POWER QUALITY PARAMETERS	
MAXIMUM LINE VOLTAGE VARIATION	±10% OF SYSTEM VOLTAGE
PHASE IMBALANCE:	2%
FREQUENCY VARIATION:	± 1 HZ

POWER SUPPLY NOTES:

1. INCOMING POWER SUPPLIES FOR SIEMENS EQUIPMENT SHOULD BE DEDICATED (BACK TO SOURCE), ISOLATED AND INSULATED FROM ANY OTHER EQUIPMENT SUCH AS ELEVATORS, GENERATORS, HVAC SYSTEMS, ETC.
2. SIEMENS HEALTHCARE REQUIRES THAT THE INCOMING POWER MEETS THE POWER QUALITY REQUIREMENTS.

GROUNDING NOTES

EQUIPMENT GROUND CONDUCTOR TO COMPLY WITH THE FOLLOWING:

1) SIZE GROUNDING WIRE TO SIEMENS EQUIPMENT PER POWER SCHEDULE REQUIREMENTS.
2) DERIVED FROM THE ELECTRICAL SERVICE, TRANSFORMER OR MAIN DISTRIBUTION PANEL FEEDING THE SIEMENS EQUIPMENT.
3) RUN IN THE SAME CONDUIT, TROUGH OR RACEWAY AS THE PHASE CONDUCTORS.
4) CONTINUOUS, WITH NO BREAKS OR USE OF CONDUIT, CHASSIS OR EARTH AS THE SOLE GROUNDING PATH.
5) BONDED TO CHASSIS AND/OR CONDUIT IN ACCORDANCE WITH THE NEC REQUIREMENTS.
6) MINIMIZE CONNECTIONS OR TERMINALS TO ENSURE CONTINUITY OVER THE LIFE OF THE INSTALLATION.
7) AS A NORM, THERE SHOULD NOT BE ANY CURRENT PRESENCE ON THE GROUND CONDUCTOR, BUT IT IS ACCEPTABLE TO HAVE <500mA DURING OPERATION OF THE IMAGING EQUIPMENT.

TABLE POWER OUTLET SAFETY

NOTE: LIFE-SUSTAINING EQUIPMENT MUST NOT BE CONNECTED TO THE TABLE POWER OUTLET (IF INSTALLED) IN THE SIEMENS PATIENT TABLE. POWER WILL BE DISCONNECTED IF EPO BUTTON IS PRESSED. TABLE OUTLET IS 120V, FUSED AT 5A.

NOTES:

1. 24 VDC RELAYS MUST INCLUDE A FREE-WHEELING DIODE (P/N 1N4002 OR EQUIVALENT).
2. ALL ITEMS PROVIDED BY CUSTOMER ELECTRICAL CONTRACTOR EXCEPT CONTACTS INSIDE SIEMENS "SC1" CABINET (ITEMS INSIDE DOTTED LINES).
3. ALL WIRING THAT CONNECTS TO SIEMENS "SC1" CABINET MUST BE 14-18 AWG STRANDED WIRE.
4. ONLY 3 WIRES LABELED "24 VDC", "ROOM LIGHTS" AND "X-RAY ON" SHOULD BE SENT TO SIEMENS "SC1" CABINET.
5. 24 VDC RELAYS ARE TO BE SELECTED BY ELECTRICAL CONTRACTOR TO HANDLE THE VOLTAGE AND AMPERAGE OF LIGHTING CURCUIT.
6. IF NEEDED, A SWITCH TO BLOCK RADIATION CAN BE INSTALLED IN SERIES WITH THE DOOR CONTACT.
   * THE SWITCH (24 VDC / 20 MA) MUST BE PROVIDED ON SITE.
   * CONTROL USING +24 V FROM THE SYSTEM CONTROL CABINET
   * PLAN THE SWITCH SO THAT UNINTENTIONAL OPERATION IS NOT POSSIBLE.
   * THE SWITCH MUST BE PROVIDED WITH AN APPROPRIATE SYMBOL (OR DESIGNATION) FROM WHICH THE FUNCTION CAN BE RECOGNIZED.

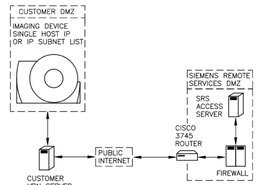
WARNING LIGHT/ROOM LIGHT SCHEMATIC

1	LIGHTING DETAIL	SCALE: NONE

SIEMENS REMOTE SERVICE

TO ENSURE THE UPTIME OF YOUR SYSTEM DURING THE WARRANTY PERIOD (AND BEYOND WITH A SERVICE AGREEMENT), SIEMENS REMOTE SERVICES (SRS) REQUIRES REMOTE LOCAL AREA NETWORK ACCESS TO SIEMENS' SYSTEMS.

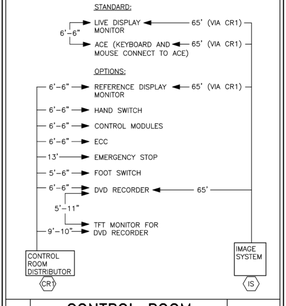
THE PREFERRED CONNECTION METHOD IS (VPN) VIRTUAL PRIVATE NETWORK (WHERE THE CUSTOMER HAS AVAILABLE A VPN CAPABLE FIREWALL OR OTHER VPN APPLIANCE). THIS METHOD PROVIDES THE POSSIBILITY FOR REMOTE SYSTEM DIAGNOSTICS WITHOUT ADDITIONAL HARDWARE. PLEASE CONTACT SIEMENS REMOTE SERVICES (800-888-SIEM) TO DETERMINE IF THIS METHOD IS SUITABLE FOR YOUR SITE.



NETWORK REQUIREMENT

A GIGABIT NETWORK IS REQUIRED FOR ADEQUATE IMAGE DATA TRANSFER SPEED BETWEEN THE IMAGER AND 3D RECONSTRUCTION WORKSTATION. WORKFLOW AND CLINICAL NEEDS DEMAND 3D IMAGES BE AVAILABLE FOR REVIEW BY CLINICAL STAFF IMMEDIATELY UPON ACQUISITION.

AXIS IMAGE SYSTEM
(REMOTE CONFIGURATION)



2	CONTROL ROOM SYSTEM CONNECTIONS	SCALE: NONE

POWER QUALITY

POOR POWER WILL ALTER EQUIPMENT PERFORMANCE

IT IS IN THE CUSTOMER'S INTEREST THAT THE ELECTRICAL CONTRACTOR BE RESPONSIBLE FOR TESTING AND VERIFYING THAT THE EQUIPMENT POWER SUPPLY COMPLIES WITH THE SIEMENS SPECIFICATIONS.

CONTRACTOR SUPPLIED CABLES

FROM	VIA	TO	DESCRIPTION	REMARKS
PANEL	1	MP	ELECTRICAL CONTRACTOR TO SIZE PLUS GROUND	SEE "POWER SCHEDULE"
MP	2	PU1	3#2, 1#2 GROUND AND CONNECT	SEE "POWER SCHEDULE"
MP	3	SC1	3#6, 1#6 NEUTRAL, 1#6 GROUND AND CONNECT	SEE "POWER SCHEDULE"
MP	4	EPO	2#12, PLUS GROUND	SEE "POWER SCHEDULE"
EPO	5	EPO	2#12, PLUS GROUND	EMERGENCY POWER
SC1	6	WL	2#14-18 AWG	SEE "LIGHTING DETAIL," SHEET E-501
SC1	7	DS	24V SIGNAL, 2#14-18 AWG	DOOR SWITCH

SIEMENS SUPPLIED CABLES

FROM	VIA	TO	DESCRIPTION	REMARKS
P1	8, PB1, VD1	PU1	P1 LEFT SIDE	MAXIMUM LENGTH 41'
P1	9, PB1, VD1	PU1	(2) HIGH VOLTAGE CABLES P1 LEFT SIDE	MAXIMUM LENGTH 41'
P1	10, PB1, VD1	SC1	P1 LEFT SIDE	MAXIMUM LENGTH 37'
P1	11	CU1	FOR LIQUID COOLING HOSES (P1 LEFT SIDE)	MAXIMUM LENGTH 77'
SC1	VD1, PB1, 12, PB2, VD2, HD1	CR1	FOR CONTROL ROOM OPTIONS (CONTROL MODULES, FOOT SWITCH, DISPLAY, ECC)	MAXIMUM LENGTH 62'
SC1	SC, 13	T1	NOT WITH OR TABLE	MAXIMUM LENGTH 45'
SC1	VD1, PB1, 14	CU1		MAXIMUM LENGTH 98'
SC1	BETWEEN CABINETS	PU1		MAXIMUM LENGTH 16'
SC1	HD2	IS	62' CABLES SELECTABLE ON FACTORY CHECKLIST	MAXIMUM LENGTH 28'
SC1	VD1, PB1, 15	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 98'
SC1	VD1, PB1, 16	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 62'
IS	HD2, VD3, PB3, 17	D1	OEM DISPLAY CONNECTION	MAXIMUM LENGTH 75'
IS	HD2, VD3, PB3, 18, PB2, VD2, HD1	CR1		MAXIMUM LENGTH 61'
IS	HD2, VD3, PB3, 19, PB2, VD2, HD1	CR1		MAXIMUM LENGTH 61'
CRB	20	T1	VOLCANO IVUS (VOLCANO S51 CABLE SET)	MAXIMUM LENGTH 98'
T1	21	B10		
CRB	22	B10	CUSTOMER PATIENT MONITORING, ETC.	
IS	HD2, VD3, PB3, 23	CUSTOMER MONITOR	LIVE+REF VIDEO INTERFACE TO OEM (OPTION)	MAXIMUM LENGTH 110'

ARTIS Q/Q.ZEN/ZEE CEILING REV. 23

SYM	DATE	DESCRIPTION
1	03/08/20	R-1018(A) VERSION DATED 02/28/20 APPROVED BY CUSTOMER FOR FINALS

—ISSUE BLOCK—

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SIEMENS

INTERMOUNTAIN MEDICAL CENTER
5121 COTTONWOOD STREET, MURRAY, UT. 84107
CATH LAB #2 – ARTIS Q.ZEN CEILING

PROJECT #: 2000965
SHEET: E-501
SHEET 7 OF 8
DRAWN BY: M. GONZALEZ
SCALE: AS NOTED
REF #: CPC-133078
DATE: 03/08/20

ATTENTION:

- THIS DRAWING IS DESIGNED TO CONFORM TO FEATURES AND EQUIPMENT REQUIREMENTS PRESENTED AT THE TIME OF THEIR PREPARATION. SINCE BOTH THESE FACTORS ARE SUBJECT TO DESIGN MODIFICATION, THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES.
- THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED.
- IT IS RECOMMENDED THAT THE SIEMENS DRAWINGS BE INCORPORATED WITH THE CONSTRUCTION DOCUMENTS FOR REFERENCE.
- ALL DIMENSIONS SHOWN ON THIS DRAWING ARE FROM FINISHED SURFACES.
- THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST TO SPECIFY RADIATION PROTECTION.

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PROFESSIONAL ENGINEER
No. 11783731-2202
JASON R. WORTHEN
STATE OF UTAH
07/15/20

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

Intermountain Healthcare

IMC - Cath Lab 2 Remodel Project

5121 South Cottonwood Street
Murray, UT 84107

NJRA Project # 19205.00
Construction Documents July 15, 2020

SIEMENS DRAWINGS

EP704

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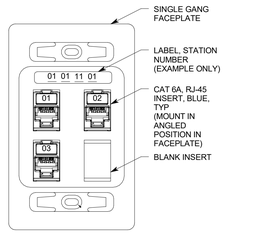

8 TYPICAL 3-PORT DATA OUTLET

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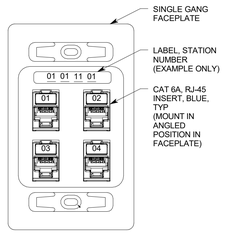

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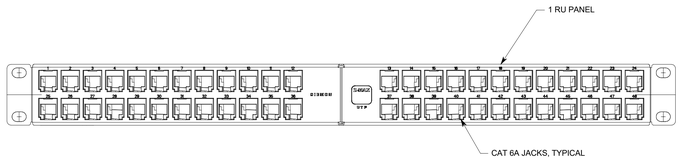

6 STATION PATCH PANEL, (SPP1), TDR

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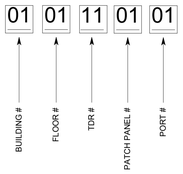

7 CABLE ID EXAMPLE DETAIL

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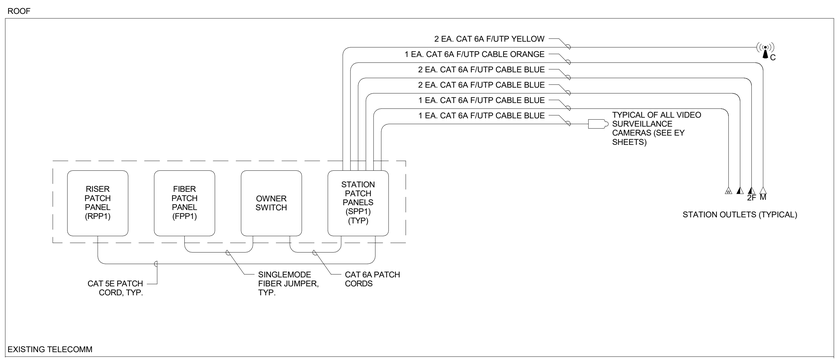

1 TELECOM CABLE RISER DIAGRAM

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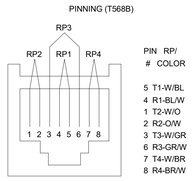

4 TYPICAL VOICE-DATA OUTLET PINNING DETAIL

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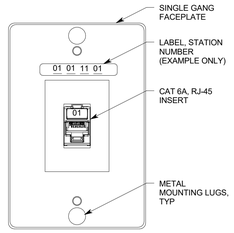

5 TYPICAL WALL PHONE OUTLET

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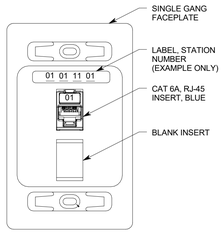

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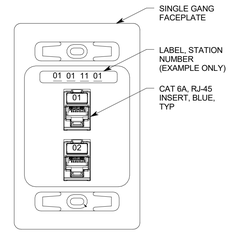

3 TYPICAL 2-PORT DATA OUTLET

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TELECOM CONDUIT RISER DIAGRAM

ET601