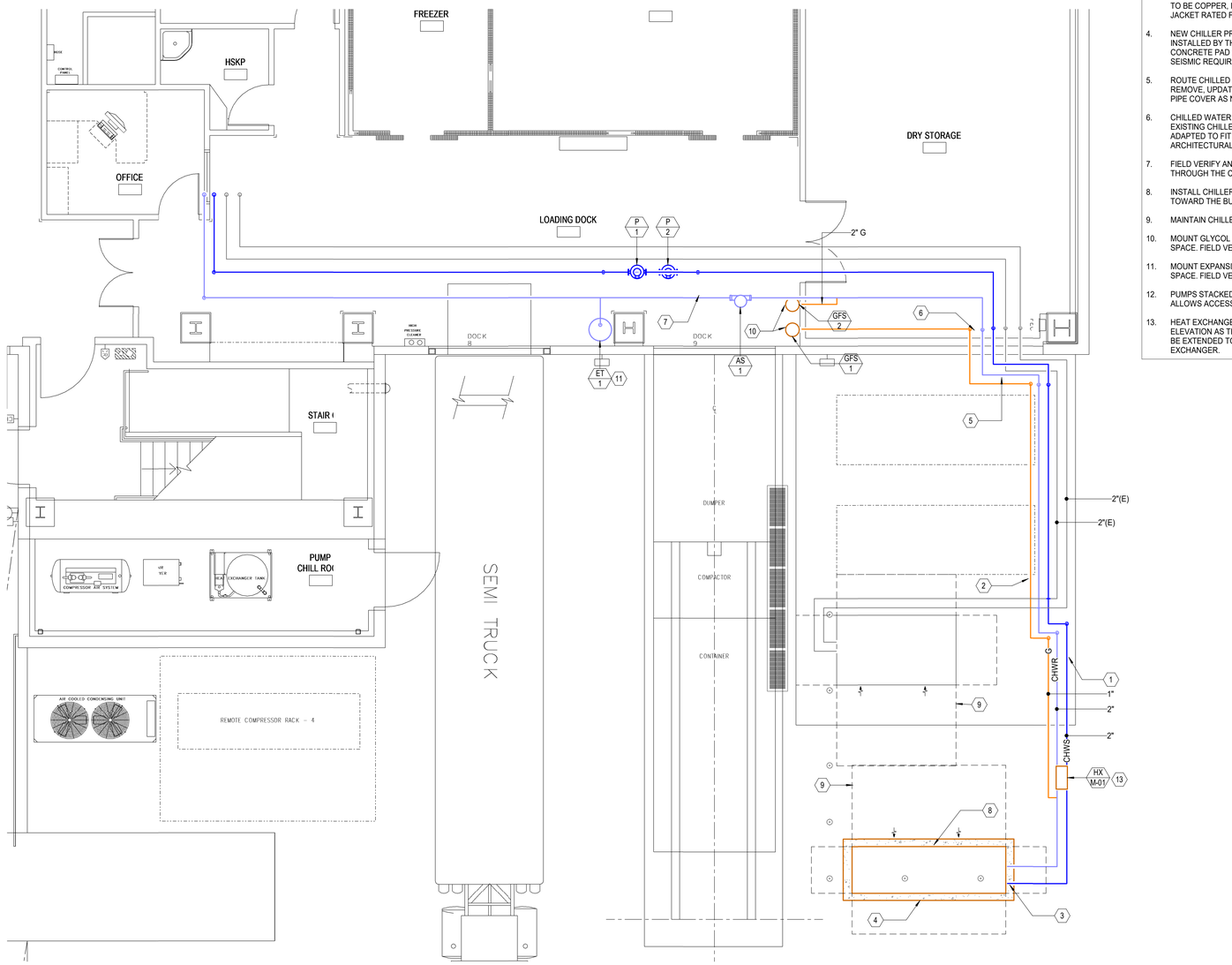

1 LL-2 Mechanical Piping Plan
SCALE: 1/4" = 1'-0"

NORTH

KEYED NOTES

1. STACK PIPING AND ROUTE CHILLED WATER PIPES ALONG SIDE EXISTING STACKED PIPING.
2. ROUTE CHILLED WATER PIPING ALONG EXISTING CONCRETE WALL.
3. MAKE CONNECTIONS TO CHILLER PER MANUFACTURER'S RECOMMENDATIONS. PIPING TO BE COPPER, INSULATED WITH ALUMINUM JACKET RATED FOR EXTERIOR USE.
4. NEW CHILLER PROVIDED BY MRI SUPPLIER AND INSTALLED BY THIS CONTRACTOR. INSTALL ON 6" CONCRETE PAD AND ANCHOR CHILLER TO MEET SEISMIC REQUIREMENTS FOR 1P = 1.5.
5. ROUTE CHILLED WATER ABOVE EXISTING, REMOVE, UPDATE, AND REPLACE EXISTING METAL PIPE COVER AS NEEDED.
6. CHILLED WATER PIPING RISE ALONG WITH EXISTING CHILLED WATER PIPE. SHAFT TO BE ADAPTED TO FIT NEW PIPING, SEE ARCHITECTURAL SHEETS.
7. FIELD VERIFY AND COORDINATE PIPE ROUTING THROUGH THE CEILING SPACE.
8. INSTALL CHILLER WITH FRONT, OR AIRFLOW SIDE, TOWARD THE BUILDING AS SHOWN.
9. MAINTAIN CHILLER CLEARANCES.
10. MOUNT GLYCOL FEEDS ON AVAILABLE WALL SPACE. FIELD VERIFY.
11. MOUNT EXPANSION TANK ON AVAILABLE WALL SPACE. FIELD VERIFY.
12. PUMPS STACKED. VERIFY INSTALL LOCATION ALLOWS ACCESS.
13. HEAT EXCHANGER TO BE INSTALLED AT THE SAME ELEVATION AS THE CHILLER. SNOW SHEILD SHALL BE EXTENDED TO COVER NEW PIPING AND HEAT EXCHANGER.

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VBFA Project Number: 19303

REV	DATE	DESCRIPTION

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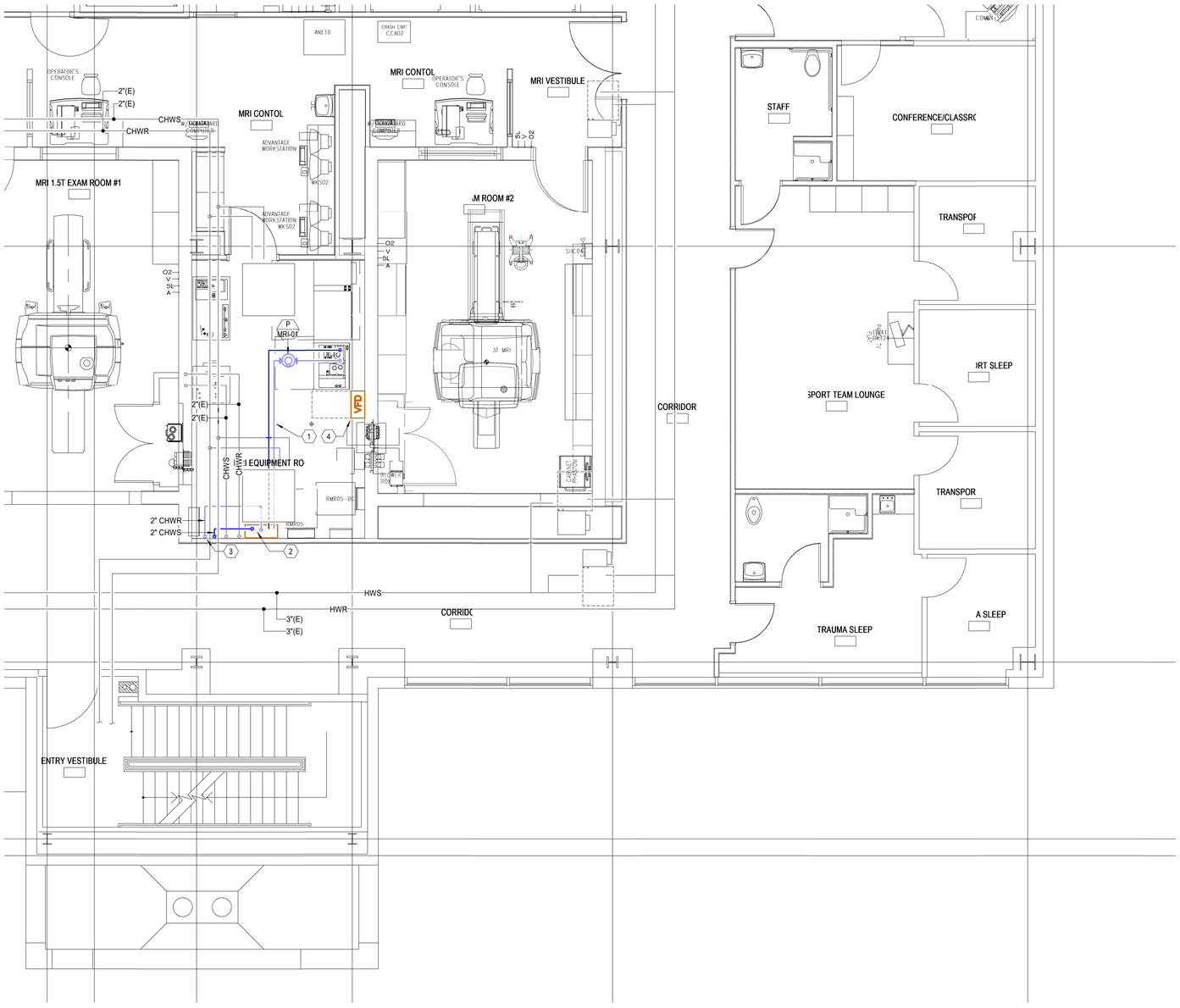
IMED BUILDING 5 - MRI CARING SUITE

INTERMOUNTAIN HEALTHCARE
5125 SOUTH COTTONWOOD STREET, MURRAY UT 84107

BID SET / CONSTRUCTION DOCUMENTS

LL2 MECHANICAL PIPING PLAN

MP101



1 - LL1 Mechanical Piping Plan
SCALE: 1/4" = 1'-0"

NORTH

KEYED NOTES

1. FIELD VERIFY AND COORDINATE PIPE ROUTING THROUGH THE CEILING SPACE.
2. CHILLED WATER PIPES TO SERVE MRI EQUIPMENT. COORDINATE CONNECTION AND ROUTING WITH SITE SPECIFIC MRI DRAWING. SEE DETAIL 5/M501 FOR ALL COMPONENTS.
3. PIPING DOWN TO LL2, SEE SHEET MP101 FOR CONTINUATION.
4. COORDINATE VFD LOCATION WITH AVAILABLE WALL SPACE WITH NEW MRI EQUIPMENT LAYOUT.

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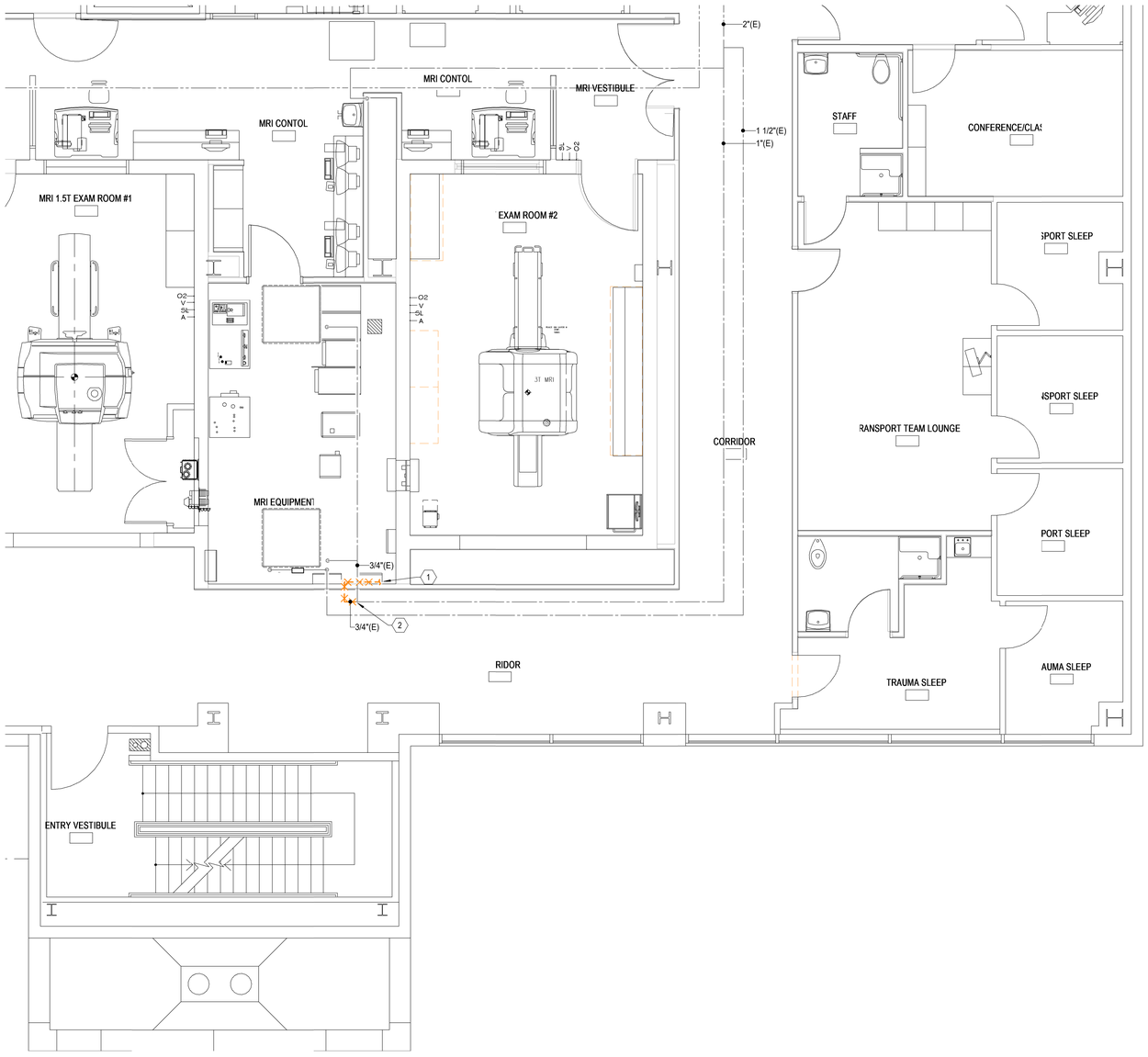
LL1 MECHANICAL PIPING PLAN

MP102

KEYED NOTES

1. REMOVE EXISTING 3/4" RPBP AND ASSOCIATED PIPING SERVING PREVIOUS MRI.
2. CAP REMOVED DOMESTIC COLD WATER LINE.



1 LL1 PLUMBING DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

NORTH

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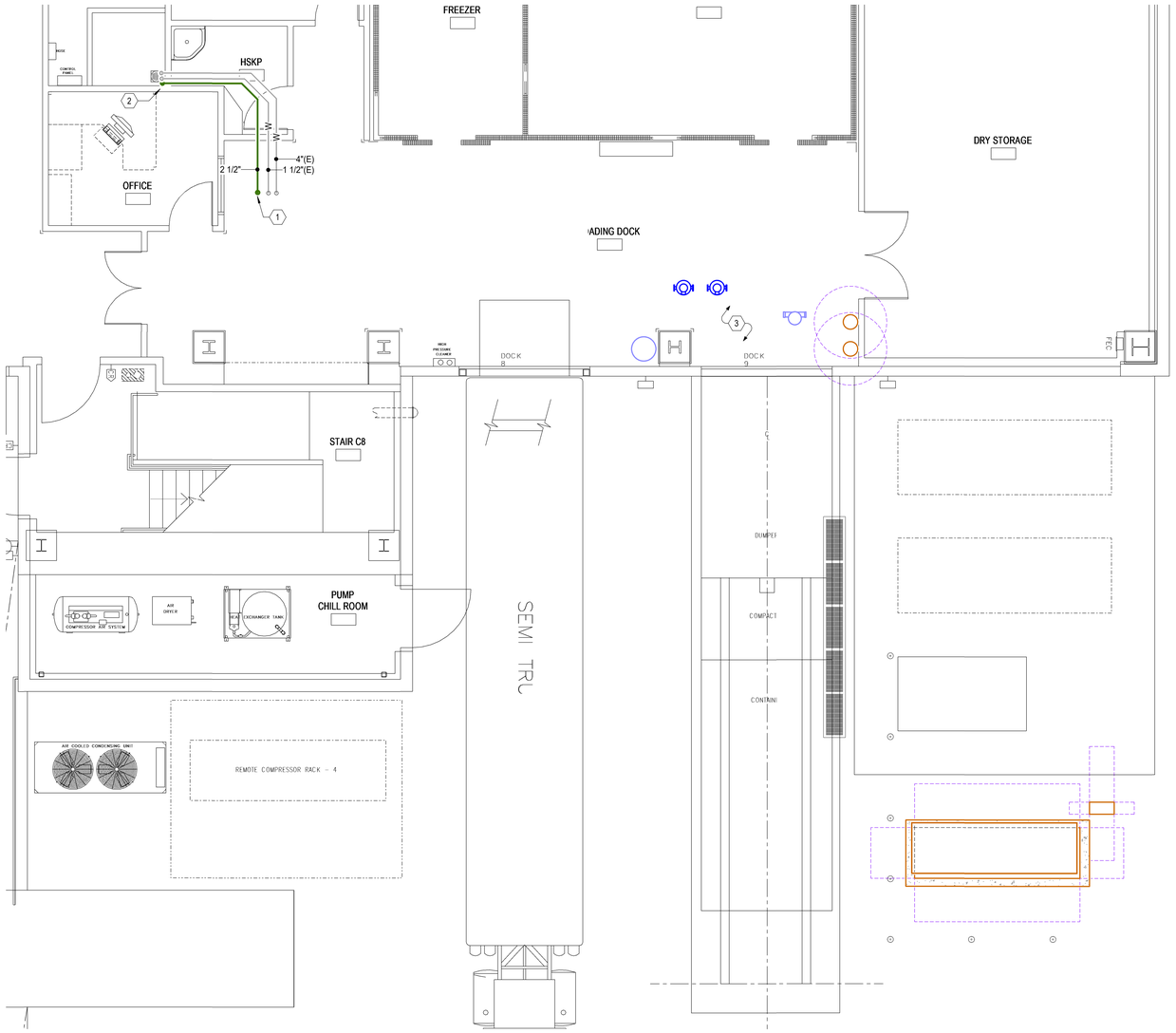
LL1 PLUMBING DEMOLITION PLAN

PD101



1 LL-2 PLUMBING PLAN
SCALE: 1/4" = 1'-0"

KEYED NOTES

1. DISCHARGE FROM EQUIPMENT ROOM ABOVE. COORDINATE EXACT LOCATION WITH EQUIPMENT LAYOUT IN EQUIPMENT ROOM.
2. DROP LINE TO EXISTING FLOOR SINK AND TERMINATE WITH AIR GAP AT FLOOR SINK.
3. MECHANICAL EQUIPMENT. SEE SHEET MP101.

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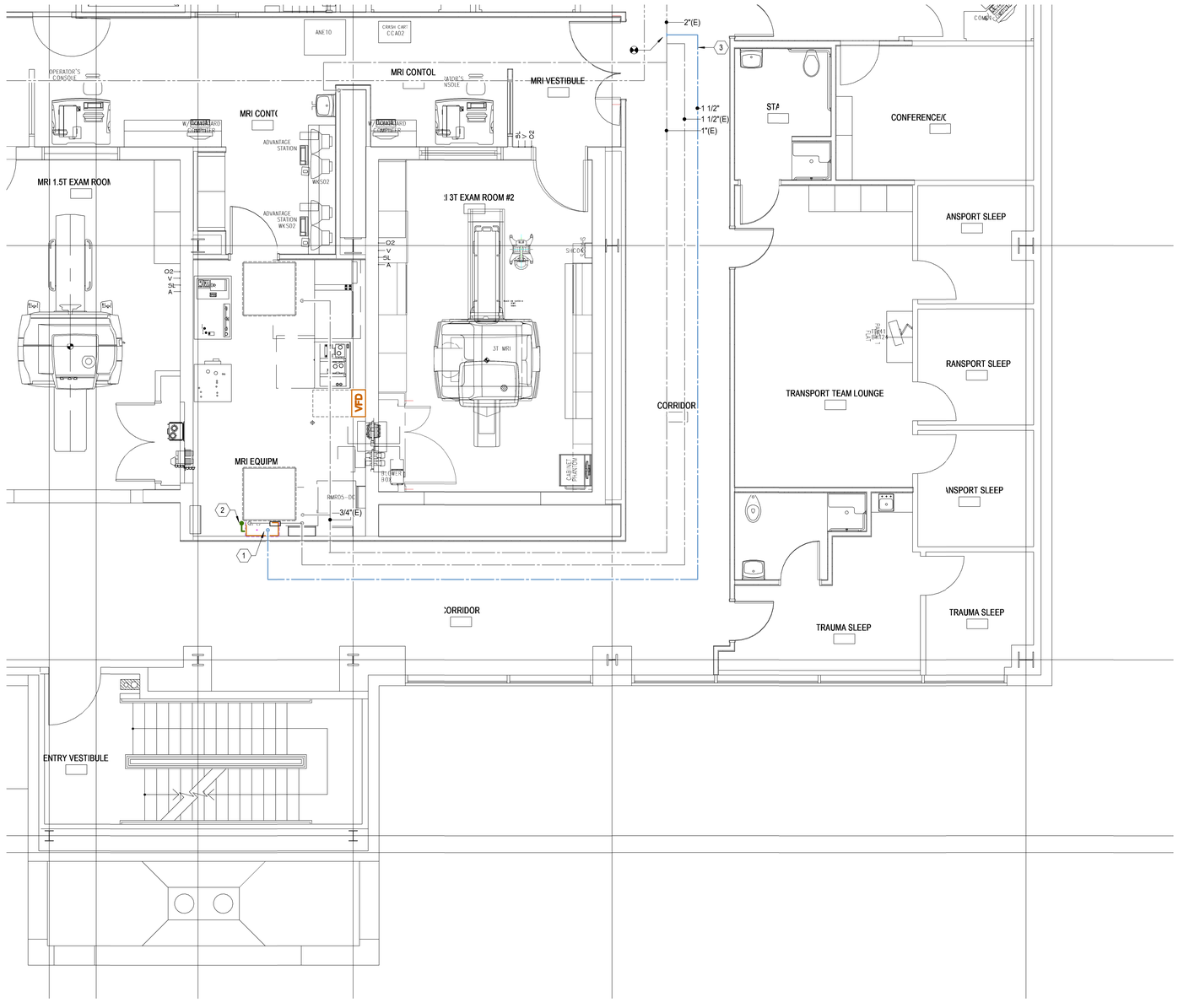
LL2 PLUMBING PLAN

P101



1 LL1 PLUMBING PLAN
SCALE: 1/4" = 1'-0"

NORTH

KEYED NOTES

1. EXTEND WATER LINE TO HEAT EXCHANGER PER MRI SITE SPECIFIC DRAWINGS. SEE DETAIL 5/M501.
2. DISCHARGE LINE FROM HEAT EXCHANGER. DROP LINE DOWN TO FLOOR BELOW AND RUN TO FLOOR SINK. SEE SHEET P101 FOR CONTINUATION.
3. CONNECT TO EXISTING 2" DOMESTIC COLD WATER LINE. FIELD VERIFY EXISTING CONDITIONS AND LOCATION.

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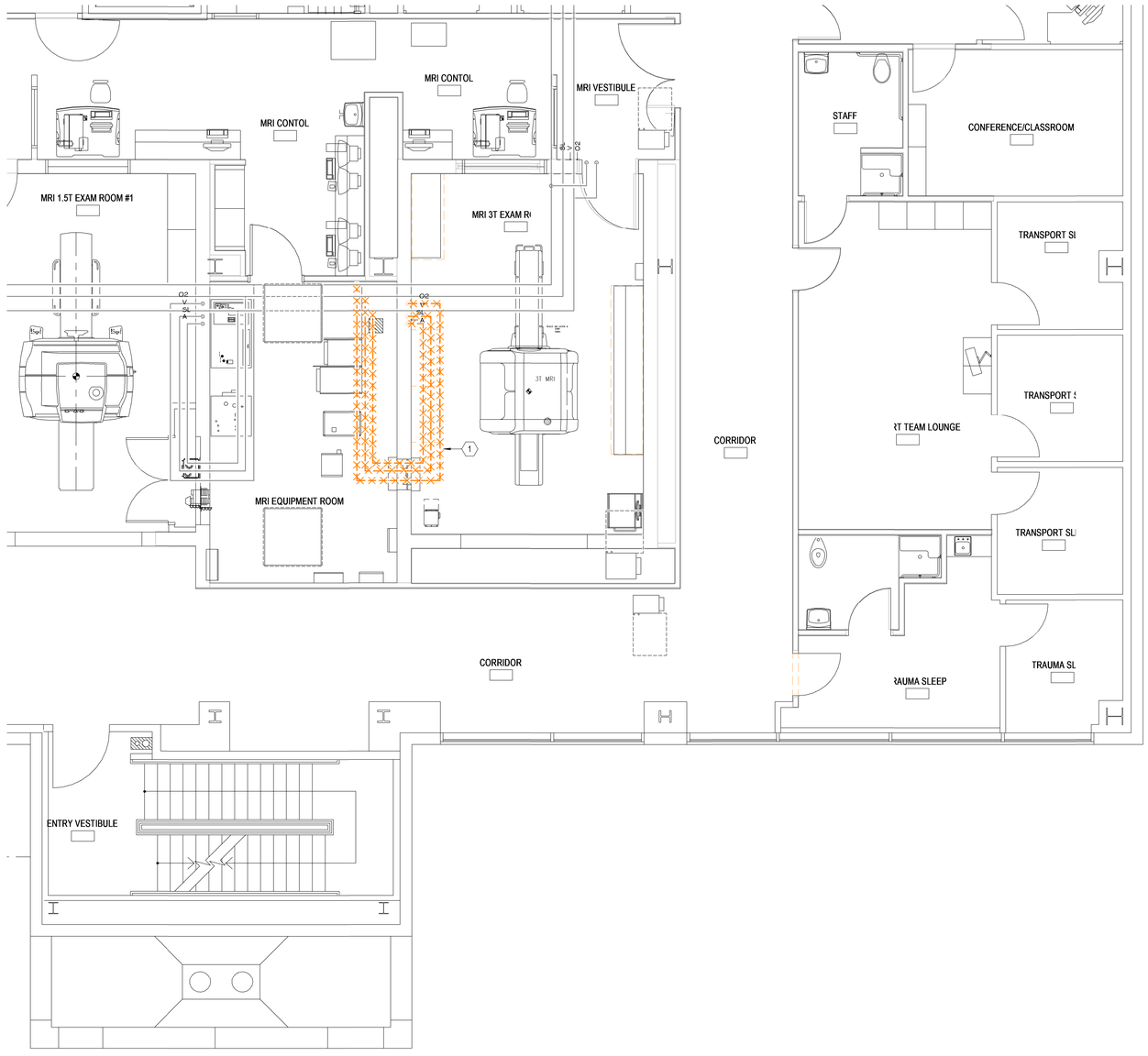
LL1 PLUMBING PLAN

P102

KEYED NOTES

1. REMOVE EXISTING MV, MA, AND O2 BRANCH LINES SERVING MRI ROOM BACK TO MAIN.



1 LL1 MEDICAL GAS DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

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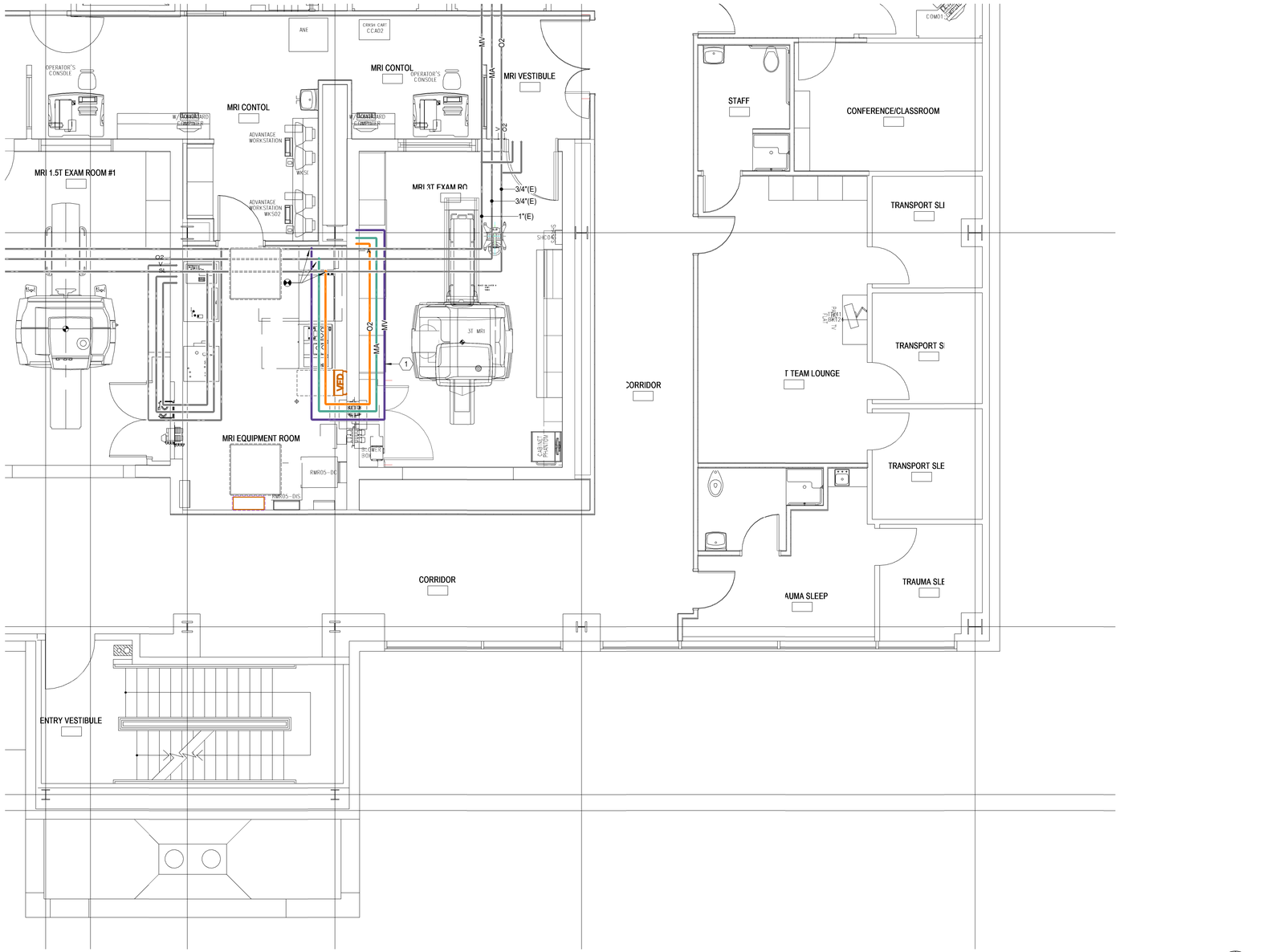
BID SET / CONSTRUCTION DOCUMENTS

LL1 MEDICAL GAS DEMOLITION

PD111

KEYED NOTES

1. ROUTE NEW MV, MA, AND O2 BRANCH LINES SERVING MRI ROOM THROUGH NEW PENETRATION PANEL. TERMINATE AT NEW MEDICAL GAS OUTLET, SEE ARCHITECTURAL ELEVATIONS.



1 LL1 MEDICAL GAS PLAN
SCALE: 1/4" = 1'-0"

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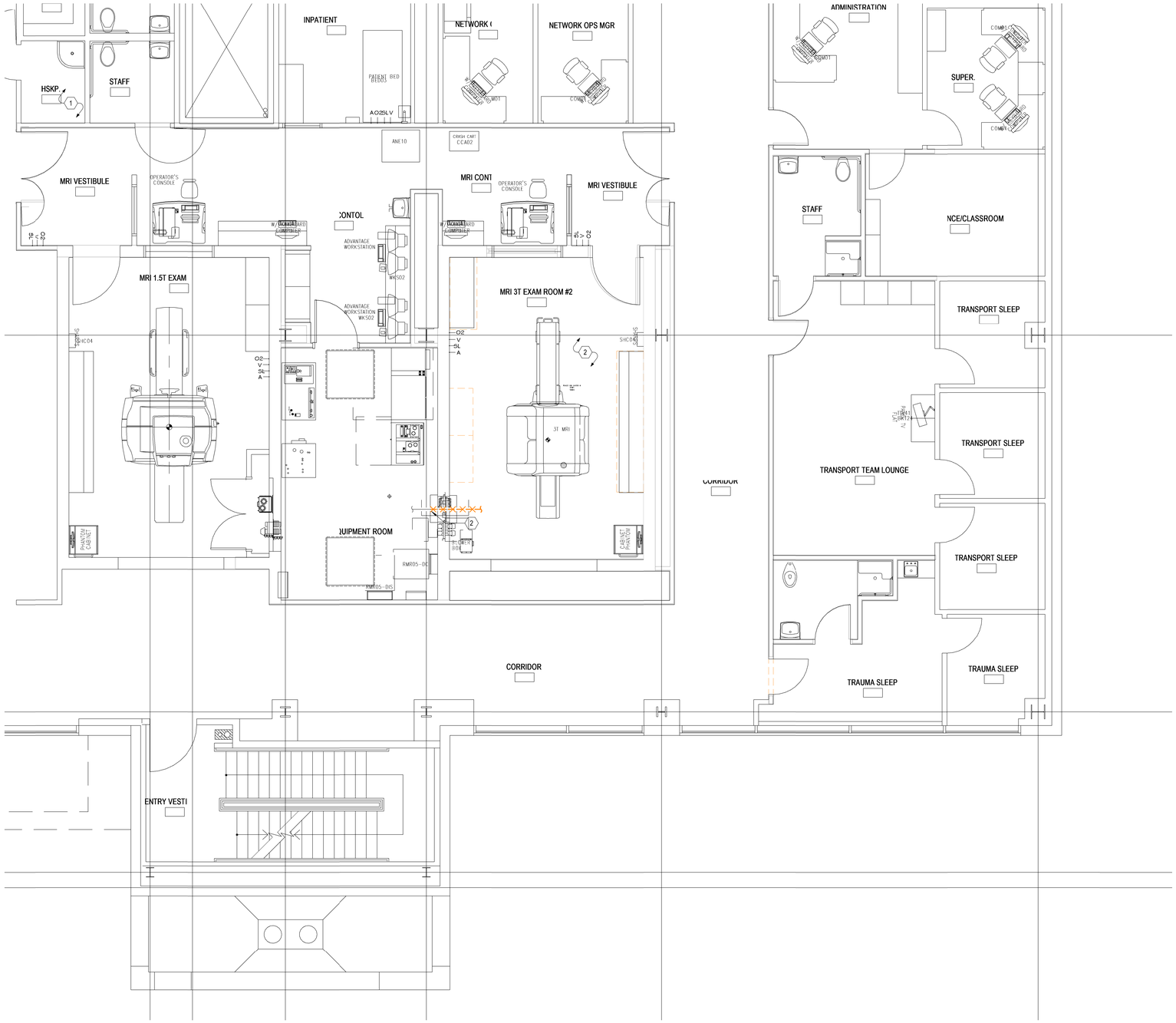
BID SET / CONSTRUCTION DOCUMENTS

LL1 MEDICAL GAS PLAN

P111

KEYED NOTES

1. EXISTING SINGLE INTERLOCK PREACTION SYSTEM VALVE LOCATION.
2. DEMOLISH ALL FIRE PROTECTION PIPING AND HEADS WITHIN THE MRI ROOM.



1 LL1 FIRE PROTECTION DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

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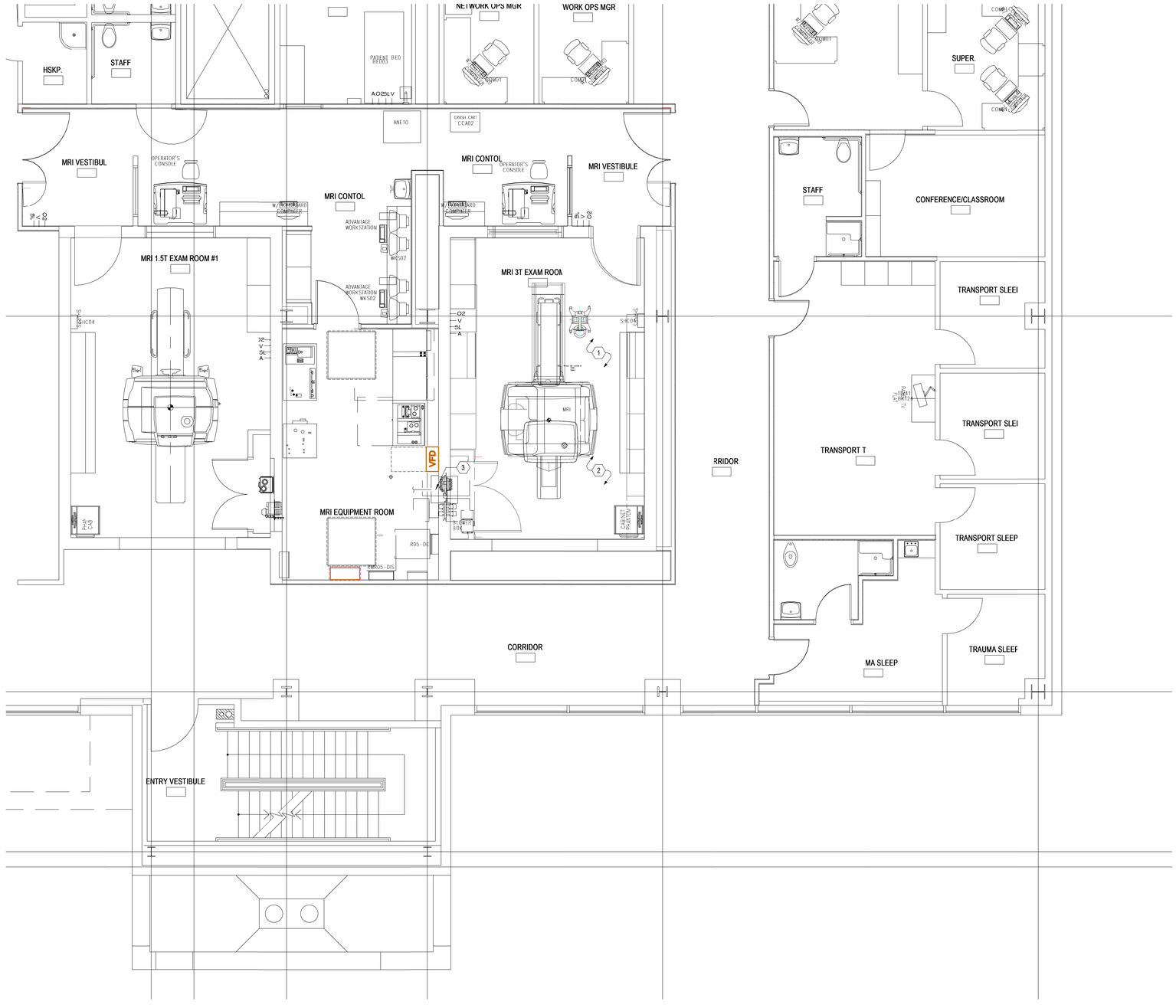
FIRE PROTECTION DEMOLITION PLAN

FPD101



1 LL1 FIRE PROTECTION PLAN
SCALE: 1/4" = 1'-0"

KEYED NOTES

1. PREACTION PIPING SHALL BE GAVLANIZED, TYPICAL. PROVIDE COPPER PIPING AND HARDWARE FOR MRI.
2. AREA PROTECTED BY EXISTING SINGLE INTERLOCK, PREACTION SYSTEM WITH ELECTRIC ACTIVATION. COORDINATE HEAD PLACEMENT WITH ARCHITECTURAL REFLECTED CEILING PLANS AND MRI SPECIFIC SITE DRAWINGS. COORDINATE PIPE ROUTING WITH OTHER CEILING ELEMENTS.
3. CONNECT TO EXISTING FIRE PIPING AND ROUTE THROUGH PENETRATION PANEL.

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BID SET / CONSTRUCTION DOCUMENTS

LL1 FIRE PROTECTION PLAN

FP101

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.
ROOM NAME 04 100	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.
05 1	KEYNOTE INDICATOR.
06 1	REVISION INDICATOR.
07 CU-1	EQUIPMENT INDICATOR.
08 X-X / XMDP	MECHANICAL EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK SHOWN ON EQUIPMENT SCHEDULE. "XMDP" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
09	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING
10	BREAK, ROUND
11 MATCH LINE SEE XX/X-XXX	MATCH LINE INDICATOR: CENTER, EXTRA WIDE LINE.
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
16	PROPERTY LINE: DASHED, WIDE LINE.
17	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
18 XXX / EF-X	ELECTRICAL EQUIPMENT INDICATOR. "XXX" INDICATES TYPE OF EQUIPMENT OR EQUIPMENT ID. "EF-X" IDENTIFIES MECHANICAL EQUIPMENT BEING SERVED. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
19 X-X / XKP	KITCHEN EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK SHOWN ON EQUIPMENT SCHEDULE. "XKP" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
00	**WIRING METHODS**
01	WIRING.
02	WIRING TURNED UP OR TOWARDS OBSERVER.
03	WIRING TURNED DOWN OR AWAY FROM OBSERVER.
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.
06 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. SMALL CROSS LINES INDICATE NUMBER OF CONDUCTORS OR CABLES. LARGER CROSS LINE INDICATES EQUIPMENT GROUND. WAVY CROSS LINE INDICATES INSULATED/ ISOLATED GROUND. FOR BRANCH WIRING, CROSS LINES INDICATE #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; NC = NURSE CALL CCTV = CLOSED CIRCUIT TELEVISION; P = POWER RC = RIGID CONDUIT FA = FIRE ALARM; S = SOUND FO = FIBER OPTICS; T = TELEPHONE I = INTERCOM; 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.
14 SC	JUNCTION BOX, SYSTEMS FURNITURE COMMUNICATION CONNECTION.
15 SE	JUNCTION BOX, SECURITY SYSTEM. PROVIDE CONDUIT AND ROUGH-IN PER SECURITY DRAWINGS.
16	JUNCTION BOX, DUCT, UNDERFLOOR. TRIPLE, DOUBLE OR SINGLE DUCT SYSTEM AS INDICATED BY THE NUMBER OF PARALLEL LINES. DESIGNATIONS AS SHOWN FOR WIRING AND/OR RACEWAY SYMBOLS.
17	DUCT CELL FLOOR HEADER.
18 PB	PULL BOX.
19 C C	CABLE TRAY ABOVE ACCESSIBLE CEILING.
20 W W	WIREWAY.
21	EARTH GROUND (ONE-LINE DIAGRAM).
22 C	JUNCTION BOX, CEILING.
23	LADDER RACK.
24 A A	CABLE TRAY BELOW ACCESSIBLE FLOOR.
25	MECHANICAL EQUIPMENT CONNECTION. REFER TO EQUIPMENT SCHEDULE FOR REQUIREMENTS.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
00	**WIRING DEVICES**
01	RECEPTACLE, SINGLE: NEMA 5-20R.
02	RECEPTACLE, DUPLEX: NEMA 5-20R.
03 A	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
04 C	RECEPTACLE, DUPLEX, CEILING: 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.
07 IG	RECEPTACLE, DUPLEX, ISOLATED GROUND: NEMA 5-20R.
08 S	RECEPTACLE, DUPLEX, SWITCHED: NEMA 5-20R.
09 UC	RECEPTACLE, DUPLEX, FLOOR, UNDER CARPET: NEMA 5-20R.
10 W	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WET LABEL, "WEATHERPROOF IN USE": NEMA 5-20R.
11 WP	RECEPTACLE, DUPLEX, WEATHERPROOF: NEMA 5-20R.
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.
15	RECEPTACLE, DUPLEX, CONNECTED TO UPS: 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.
20	RECEPTACLE, DUPLEX, RECESSED: NEMA 5-20R.
21 S	RECEPTACLE, DUPLEX, SWITCHED, RECESSED: 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.
26	RECEPTACLE, QUADRAPLEX, CONNECTED TO UPS: 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.
30 D	RECEPTACLE, DRYER: NEMA 14-30R.
31 R	RECEPTACLE, RANGE: NEMA 14-50R.
32 C	RECEPTACLE, CLOCK HANGER: NEMA 5-15R.
33	MULTI-OUTLET ASSEMBLY: NEMA 5-20R.
34 D	DROP CORD. SEE DETAIL.
35 T	THERMOSTAT.
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.
45 $K	SWITCH, KEY OPERATED.
46 $LM	SWITCH, LOW VOLTAGE MASTER.
47 $M	SWITCH, MOMENTARY.
48 $OS	SWITCH, OCCUPANCY SENSOR.
49 $P	SWITCH, PILOT LIGHT.
50 $T	SWITCH, TIMER OPERATED.
51 $WP	SWITCH, WEATHERPROOF.
52 T	RECEPTACLE, DUPLEX, TAMPER RESISTANT: NEMA 5-20R.
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.
55	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, CONNECTED TO UPS: NEMA 5-20R.
56	RECEPTACLE, SINGLE PLEX, WITH USB OUTLET
57	RECEPTACLE, DULEX, RECESSED, NEMA 5-20R, AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED CONTROLS (REFER TO PLANS FOR CONTROL METHOD)
58	RECEPTACLE, QUADRAPLEX, RECESSED, NEMA 5-20R, AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED CONTROLS (REFER TO PLANS FOR CONTROL METHOD)
59	INDICATES A RECEPTACLE IS AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED CONTROLS (REFER TO PLANS FOR CONTROL METHOD)

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).
27 225/3 "1H" 225/3 "1H"	PANELBOARD WITH SUB FEED LUGS (ONE-LINE DIAGRAM).
31	TRANSFER SWITCH (ONE-LINE DIAGRAM).
32 DMM	DIGITAL MULTIMETER (ONE-LINE DIAGRAM).
33	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM).
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.
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).

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
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).
06 LV	LOW VOLTAGE LIGHTING TRANSFORMER.
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.
04 U	OCCUPANCY SENSOR, ULTRASONIC, OMNI-DIRECTIONAL, CEILING.
05 R	OCCUPANCY SENSOR CONTROL RELAY.
06	VACANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
07	VACANCY SENSOR, DUAL TECHNOLOGY, WALL.
08 P	PHOTOCELL.
09 TC	TIME CLOCK.
13 SP	OCCUPANCY SENSOR, SWITCH PACK.
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
23 RC	DIGITAL LIGHTING ROOM CONTROLLER
26 L X	LIGHTING SPACE CONTROL TYPE. X INDICATES TYPE. SEE SCHEDULE / DIAGRAM.
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.
	JUNCTION BOX.
D	DUTY STATION.
E	EMERGENCY ASSISTANCE CALL STATION.
E CB	EMERGENCY ASSISTANCE CODE BLUE CALL STATION.
P	PATIENT STATION.
S	STAFF STATION.
NCM	TOUCH SCREEN NURSE CALL MASTER STATION.
00	**TV DISTRIBUTION**
01 T	TV DISTRIBUTION CABLE, INDIVIDUAL DROPS.
02 TR	TV DISTRIBUTION CABLE, TRUNK.
03 CMB	COMBINER.
04 DC	DIRECTIONAL COUPLER.
05 DA	DISTRIBUTION AMPLIFIER (ONE-LINE DIAGRAM).
06 SPL	SPLITTER (ONE-LINE DIAGRAM).
07	TV OUTLET.
08	SATELLITE ANTENNA.
09	TV ANTENNA (ONE-LINE DIAGRAM).
10	TERMINATOR, 75 OHM (TV DISTRIBUTION).
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.

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

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

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
00	**TECHNOLOGY SYSTEMS**
02 S#	SPEAKER, CEILING MOUNTED.
03 S#	SPEAKER, WALL MOUNTED.
21	EQUIPMENT CABINET.
40 CP#	CONNECTION PANEL.
00	**FIRE ALARM**
02 FCP	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
03 FPS	FIRE ALARM NOTIFICATION POWER SUPPLY.
07 CM	CONTROL MODULE.
08 MM	MONITOR MODULE.
09 P	FIRE ALARM MANUAL PULL STATION.
11	MAGNETIC DOOR HOLDER.
15	DETECTOR, SMOKE.
22	DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE.
23	DETECTOR, HEAT.
25	STROBE.
28	ALARM, HORN/STROBE, ONE ASSEMBLY.
37 SD	SMOKE DAMPER.
38 FSD	FIRE AND SMOKE DAMPER.

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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REV | DATE | DESCRIPTION

VCBO NUMBER: 19480
CLIENT NUMBER: 00000
DATE: 07/15/2019

IMED BUILDING 5 - MRI CARING SUITE

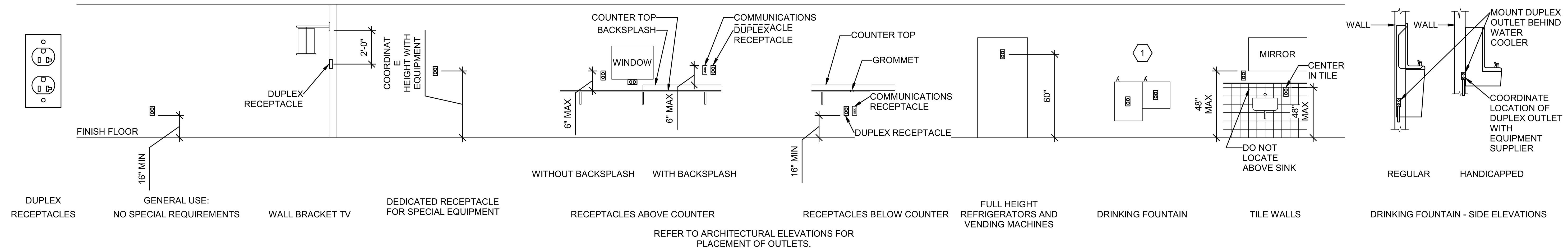
INTERMOUNTAIN HEALTHCARE
5125 SOUTH COTTONWOOD STREET, MURRAY UT 84107

BID SET / CONSTRUCTION DOCUMENTS

SHEET INDEX, ABBREVIATIONS, AND GENERAL NOTES

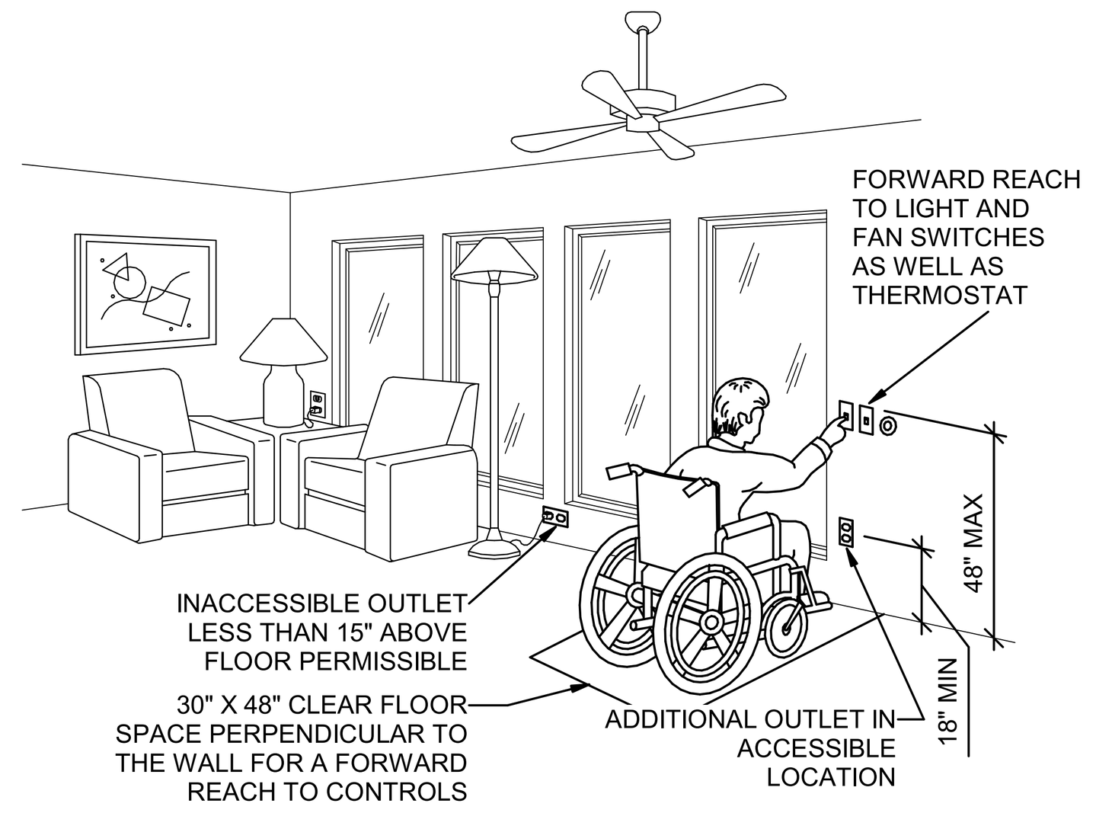
7/15/2019 12:52:04 PM

EE001



E2 RECEPTACLE MOUNTING DETAILS

SCALE: NTS



D2 ADA DETAIL

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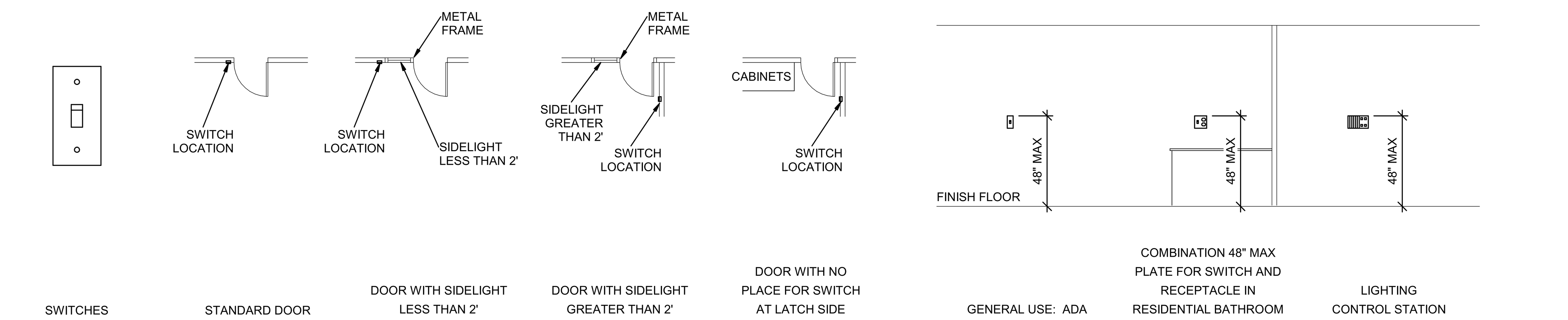
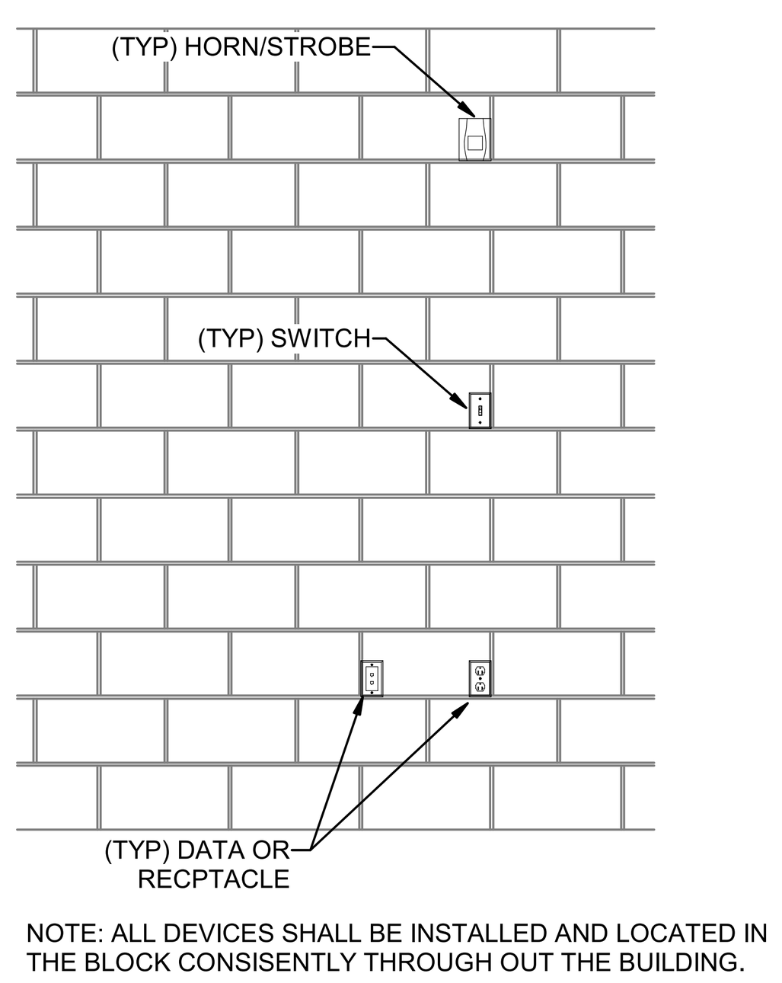


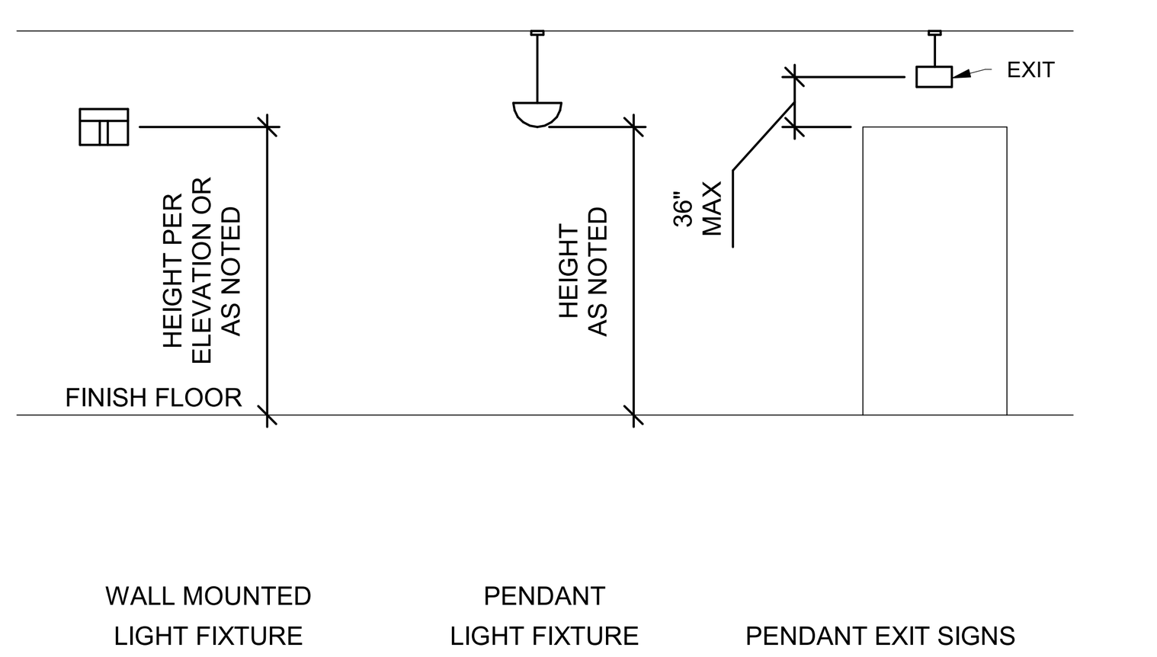
D3 SWITCH MOUNTING DETAILS

SCALE: NTS



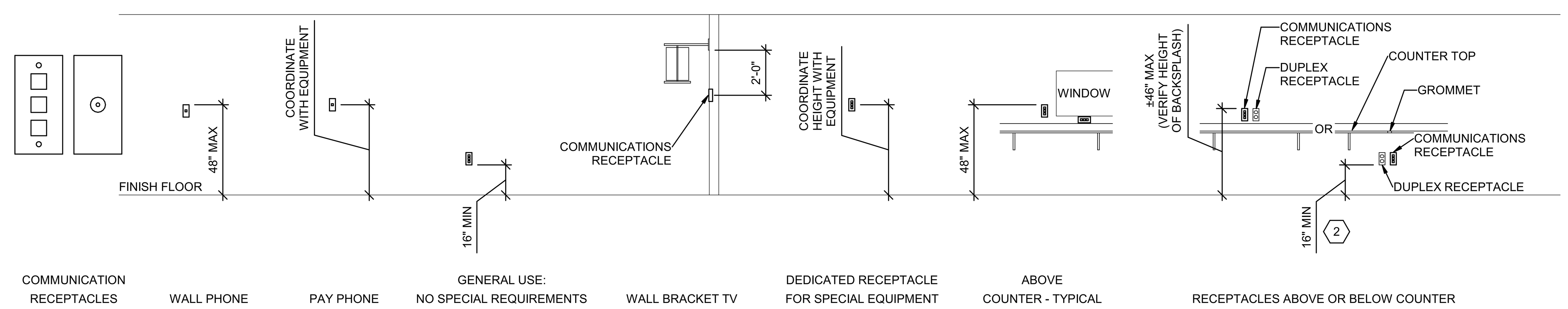
C1 CMU DEVICE MOUNTING ALIGNMENT DETAIL

SCALE: NTS



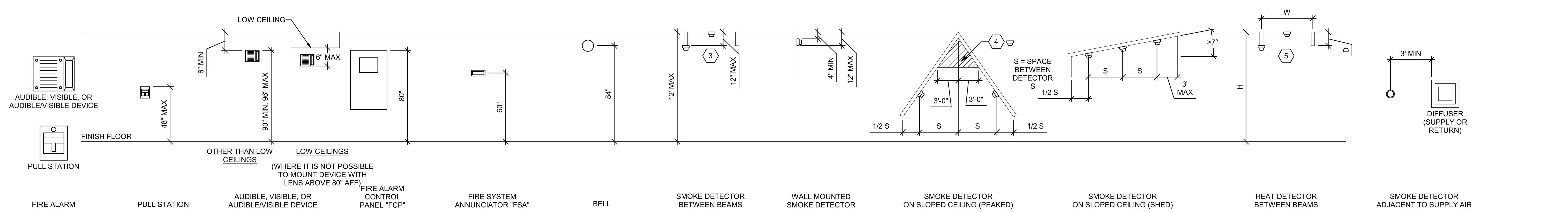
C2 LIGHTING MOUNTING DETAILS

SCALE: NTS



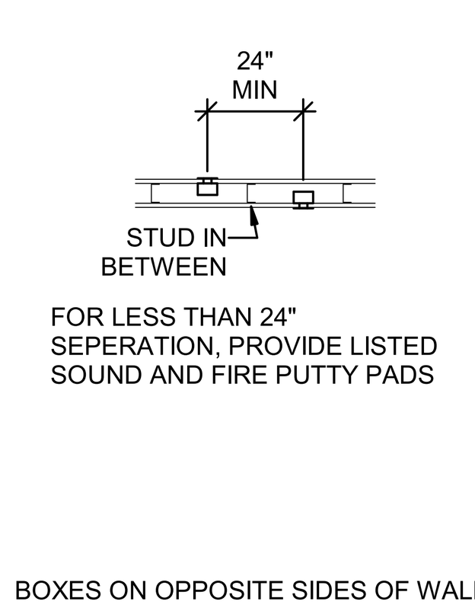
C3 COMMUNICATIONS MOUNTING DETAILS

SCALE: NTS



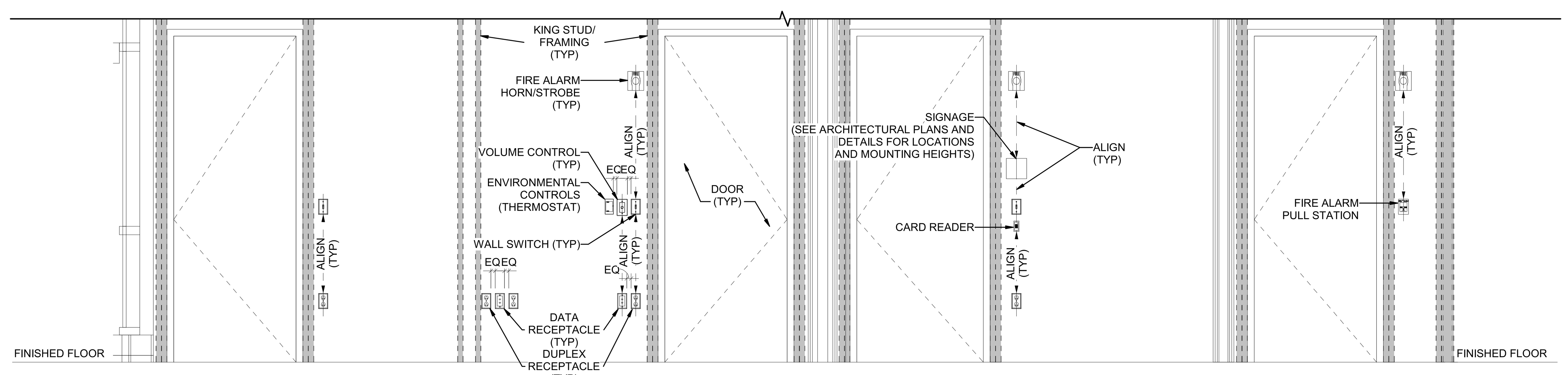
B1 FIRE ALARM MOUNTING DETAILS

SCALE: NTS



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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VCBO NUMBER: 19480
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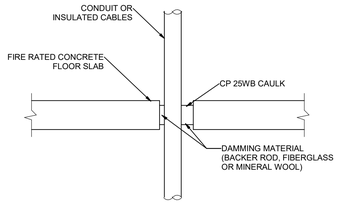
DATE: 07/15/2019

IMED BUILDING 5 - MRI CARING SUITE

INTERMOUNTAIN HEALTHCARE
5125 SOUTH COTTONWOOD STREET, MURRAY UT 84107
BID SET / CONSTRUCTION DOCUMENTS

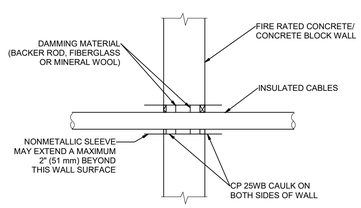
TYPICAL MOUNTING HEIGHT DETAILS

EE501



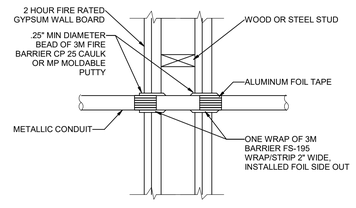
C1 TYPICAL FIRE STOP FOR CABLES/CONDUIT THROUGH CONCRETE FLOORING

SCALE: NTS



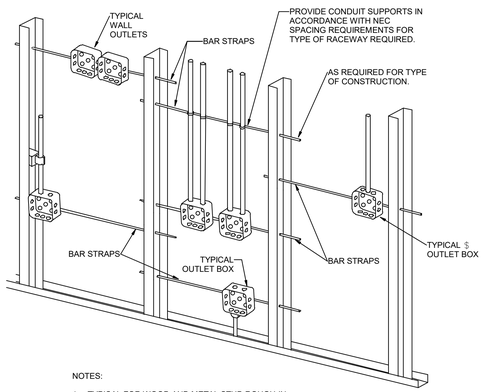
C2 TYPICAL FIRE STOP FOR CABLES/CONDUIT THROUGH CONCRETE WALLS

SCALE: NTS



C3 FIRE STOP FOR METAL CONDUIT THROUGH GYPSUM WALL BOARD

SCALE: NTS

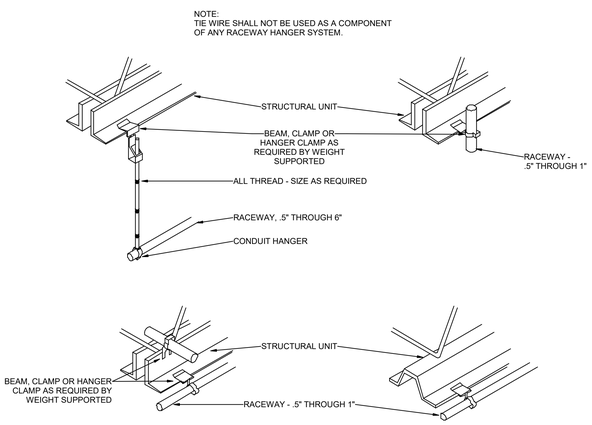


NOTES:

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.

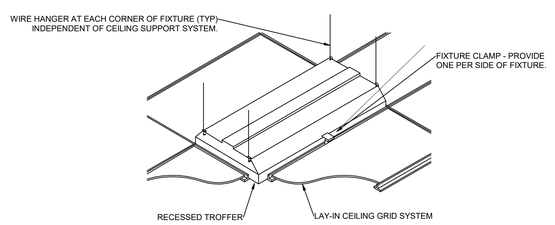
A1 TYPICAL ROUGH-IN REQUIREMENTS DETAIL

SCALE: NTS



A2 TYPICAL RACEWAY SUPPORT METHODS DETAIL

SCALE: NTS



A4 RECESSED FIXTURE MOUNTING DETAIL

SCALE: 1/8" = 1'-0"

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IMED BUILDING 5 - MRI CARING SUITE

INTERMOUNTAIN HEALTHCARE
5125 SOUTH COTTONWOOD STREET, MURRAY UT 84107

BID SET / CONSTRUCTION DOCUMENTS

ELECTRICAL DETAILS

EE502

LIGHTING REQUIREMENTS

- All lighting fixtures and associated components must meet all RF shielded room and RF grounding requirements (e.g., track lighting is not recommended due to possible RF noise).
- All lighting must use direct current (the DC must have less than 5% ripple).
- 300 lux must be provided at the front of the magnet for patient access and above the magnet for servicing.
- Fluorescent lighting must not be used in the magnet room.
- Lighting must be adjusted using a discrete switch or a variable DC lighting controller.
- Scr dimmers or rheostats must not be used.
- DC led lighting may be used if the power source is located outside the magnet room RF.
- Battery chargers (e.g., used for emergency lighting) must be located outside the magnet RF room.
- Short filament length bulbs are recommended.
- Linear lamps are not recommended due to the high burnout rate.

CONNECTIVITY REQUIREMENTS

Broadband Connections are necessary during the installation process and going forward to ensure full support from the Engineering Teams for the customers system. Maximum performance and availability for the customers system is maintained and closely monitored during the lifetime of the system. Proactive and reactive maintenance is available utilising the wide range of digital tools using the connectivity solutions listed below:

- Site-to-Site VPN/GE Solution
- Site-to-Site VPN/Customer Solution
- Connection through Dedicated Service Network
- Internet Access - connectivity for InSite 2.0

The requirements for these connectivity solutions are explained in the broadband solutions catalogue (separate document).

ELECTRICAL NOTES

1. All wires specified shall be copper stranded, flexible, thermo-plastic, color coded, cut 10 foot long at outlet boxes, duct termination points or stubbed conduit ends. All conductors, power, signal and ground, must be run in a conduit or duct system. Electrical contractor shall ring out and tag all wires at both ends. Wire runs must be continuous copper stranded and free from splices.

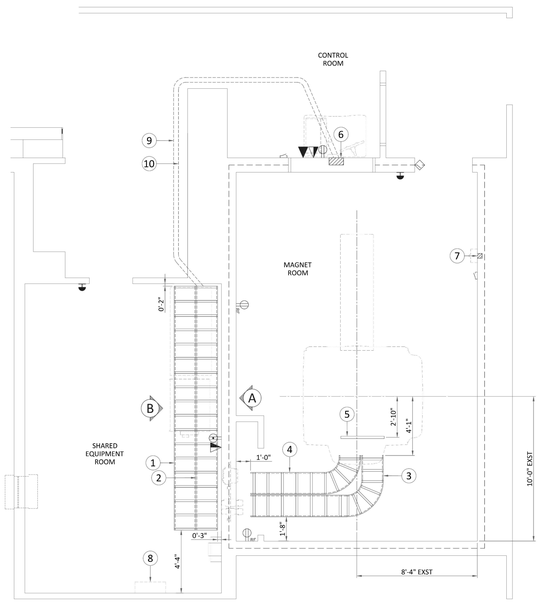
1.1. Aluminum or solid wires are not allowed.

2. Wire sizes given are for use of equipment. Larger sizes may be required by local codes.
3. It is recommended that all wires be color coded, as required in accordance with national and local electrical codes.
4. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or national codes.
5. Convenience outlets are not illustrated. Their number and location are to be specified by others. Locate at least one convenience outlet close to the system control, the power distritbution unit and one on each wall of the procedure room. Use hospital approved outlet or equivalent.
6. General room illumination is not illustrated. Caution should be taken to avoid excessive heat from overhead spotlights. Damage can occur to ceiling mounting components and wiring if high wattage bulbs are used. Recommend low wattage bulbs no higher than 75 watts and use dimmer controls (except mr). Do not mount lights directly above areas where ceiling mounted accessories will be parked.
7. Routing of cable ductwork, conduits, etc., must run direct as possible otherwise may result in the need for greater than standard cable lengths (refer to the interconnection diagram for maximum usable lengths point to point).
8. Conduit turns to have large, sweeping bends with minimum radius in accordance with national and local electrical codes.
9. A special grounding system is required in all procedure rooms by some national and local codes. It is recommended in areas where patients might be examined or treated under present, future, or emergency conditions. Consult the governing electrical code and confer with appropriate customer administrative personnel to determine the areas requiring this type of grounding system.
10. The maximum point to point distances illustrated on this drawing must not be exceeded.
11. Physical connection of primary power to GE equipment is to be made by customers electrical contractor with the supervision of a GE representative. The GE representative would be required to identify the physical connection location, and insure proper handling of GE equipment.
12. GEHC conducts power audits to verify quality of power being delivered to the system. The customer's electrical contractor is required to be available to support this activity.

- All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be supplied and installed by customers electrical contractor.
- Conduit and duct runs shall have sweep radius bends
- Conduits and duct above ceiling or below finished floor must be installed as near to ceiling or floor as possible to reduce run length.
- Ceiling mounted junction boxes illustrated on this plan must be installed flush with finished ceiling.
- All ductwork must meet the following requirements:

1.Ductwork shall be metal with dividers and have removable, accessible covers.
2.Ductwork shall be certified/rated for electrical power purposes.
3.Ductwork shall be electrically and mechanically bonded together in an approved manner.
4.PVC as a substitute must be used in accordance with all local and national codes.

- All openings in access flooring are to be cut out and finished off with grommet material by the customers contractor.
- General contractor to insert pull cords for all cable run conduits between the equipment room and the operators control room.
- 10 foot pigtails at all junction points.
- Grounding is critical to equipment function and patient safety. Site must conform to wiring specifications shown on this plan.



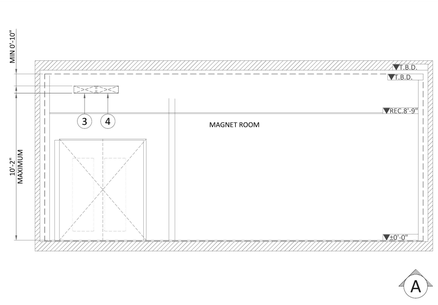
ITEM	DESCRIPTION (CONTRACTOR SUPPLIED & INSTALLED)
1	Cable ladder 18" x 6"
2	Cable ladder 18" x 6" for gradient cables
3	Non-ferrous cable ladder 18" x 6"
4	Non-ferrous cable ladder 18" x 6" for gradient cables
5	Non-ferrous unistrut cable support
6	Existing 12" x 8" x 6" Junction box
7	Existing 4" x 4" x 4" Junction box
8	Main disconnect panel (reuse existing location)
9	Existing 2" conduit above RF screen
10	Existing 3" conduit above RF screen

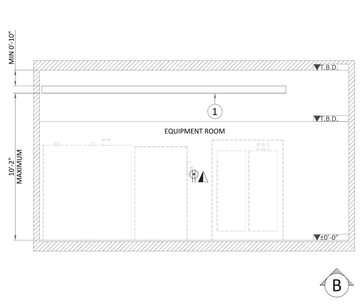
ITEM	Outlet Legend for GE Equipment
	System emergency off (SEO), (recommended height 48" above floor)
	Door interlock switch (needed only if required by state/local codes)
	Emergency exhaust fan switch, (recommended height 48" above floor)
	Duplex hospital grade, dedicated wall outlet 120-v, single phase power
	Network outlet
	Dedicated telephone lines/network connection
	Duplex hospital grade, dedicated outlet 120-v emergency, single phase power, 15a
	Duplex hospital grade, dedicated outlet 120-v, single phase outlet routed through RF filter

EXISTING ELECTRICAL NOTE:
USE EXISTING DUCT/CONDUITS WHERE POSSIBLE. ADDITIONAL DUCT/CONDUIT RUNS MAY BE NECESSARY IF EXISTING SYSTEM IS INADEQUATE IN SIZE AND/OR LOCATION FOR THIS INSTALLATION. VERIFY EXISTING SIZE AND LOCATION

Additional Conduit Runs
(Contractor Supplied and Installed)

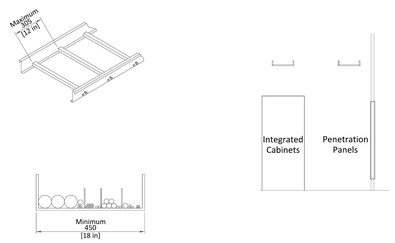
From	To	Qty	Size (in)	Size (mm)
Main Disconnect Panel	Facility power	1	as Req'd	
Main Disconnect Panel	Integrated Systems Cabinet	1	as Req'd	
	Integrated Cooling Cabinet	1	as Req'd	
	System emergency off	1	1/2	16
System emergency off	Cooling Penetration Panel	1	1/2	16
Door Switch	Integrated Systems Cabinet	1	3/4	20
System emergency off	Cooling Penetration Panel	1	3/4	20
Magnet Rundown Unit	Magnet	1	1	25
	RF filter	1	as Req'd	
RF filter	120-V 1Ø Power	1	as Req'd	
Room Light	RF filter	1	as Req'd	
RF filter	Facility emergency power	1	as Req'd	





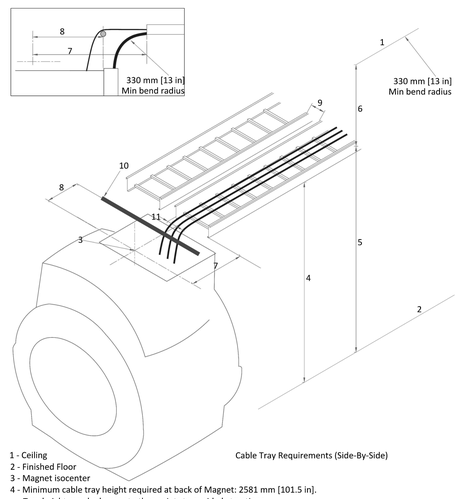
CABLE TRAYS IN EQUIPMENT ROOM

CABLE TRAY DETAIL



NOT TO SCALE

CABLE TRAYS REQUIREMENTS IN MAGNET ROOM



Cable Tray Requirements (Side-By-Side)

1 - Ceiling
2 - Finished Floor
3 - Magnet isocenter
4 - Minimum cable tray height required at back of Magnet: 2581 mm [101.5 in].
Tray height may be lower at other points to avoid obstructions.
5 - Maximum height from floor to top of tray (anywhere in Magnet room): 3251 mm [128 in].
6 - Minimum distance from top of cable tray to ceiling: 254 mm [10 in].
Minimum distance on either side of an obstruction: 254 mm [10 in], minimum distance from top of cable tray to Obstruction: 178 mm [7 in].
7 - Tray end to isocenter: 1245 ±12 mm [49 ±0.5 in].
8 - Other cable termination to isocenter: 864 ±12 mm [34 ±0.5 in].
9 - Minimum distance between trays: 12 mm [0.5 in].
10 - Non-ferrous cable support
11 - The center of the gradient cable group is 89 mm [3.5 in] from the inside edge of the tray, in line with the magnet center.

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IMED BUILDING 5 - MRI CARING SUITE

INTERMOUNTAIN HEALTHCARE
5125 SOUTH COTTONWOOD STREET, MURRAY UT 84107

BID SET / CONSTRUCTION DOCUMENTS

GE DRAWINGS

E701

1 2 3 4 5 6

POWER REQUIREMENTS

INTRODUCTION

The system requires two independent power inputs:

- main power supply
- uninterrupted power supply

SPECIFICATIONS OF MAIN POWER INPUT

POWER SUPPLY	380/400/415/480V +/-10%, THREE-PHASE + G
FREQUENCIES	50/60Hz ± 3Hz
MAXIMUM INPUT POWER (50 msec MAX)	349kVA
INSTALLED LOAD	181kVA
STAND-BY POWER	< 17 kVA

- Power input must be separated from any others which may generate transients (elevators, air conditioning, radiology rooms equipped with high speed film changers...).
- Total harmonic distortion less than 2.5%.
- Phase imbalance must not exceed 2%.

SPECIFICATIONS OF EMERGENCY POWER REQUIREMENT

Magnet Monitor	
POWER INPUT	EMERGENCY LIFE-SAFETY POWER, SINGLE PHASE + G
POWER DEMAND	2.0 A
VOLTAGE	110/220
FREQUENCY	50/60Hz
Shield Cryocooler Compressor	
POWER INPUT	AC 380, 400, 415, 460, 480 3Ø
POWER DEMAND	Minimum 9kVA / Recommended 12kVA
FREQUENCY	50/60Hz ± 3Hz

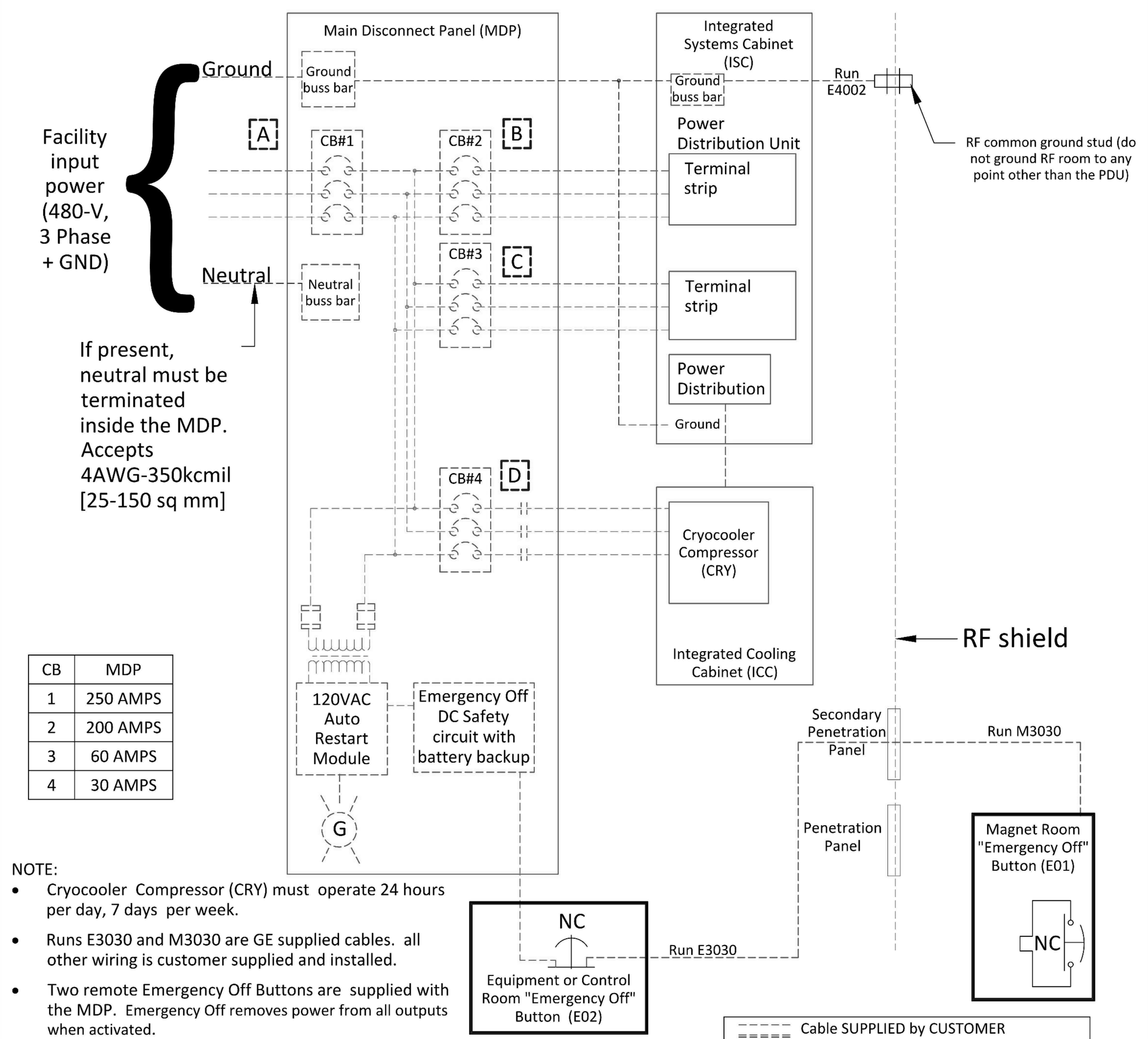
CABLES

- Power and cable installation must comply with the distribution diagram.
- Size of the MDP power input cable is determined by the customer, taking its length and admissible voltage drops into consideration.
- All cables must be isolated and flexible, cable color codes must comply with standards for electrical installation.
- The cables from signaling and remote control (Y,EO#,L...) will go to MDP with a pigtail length of 1.5m, and will be connected during installation.
- Each conductor will be identified and isolated (screw connector).

GROUND SYSTEM

- The equipotential link will be by means of an equipotential bar.
- The grounding point of MDP is directly connected to the building's ground by an isolated copper cable.

POWER DISTRIBUTION



CB	MDP
1	250 AMPS
2	200 AMPS
3	60 AMPS
4	30 AMPS

NOTE:

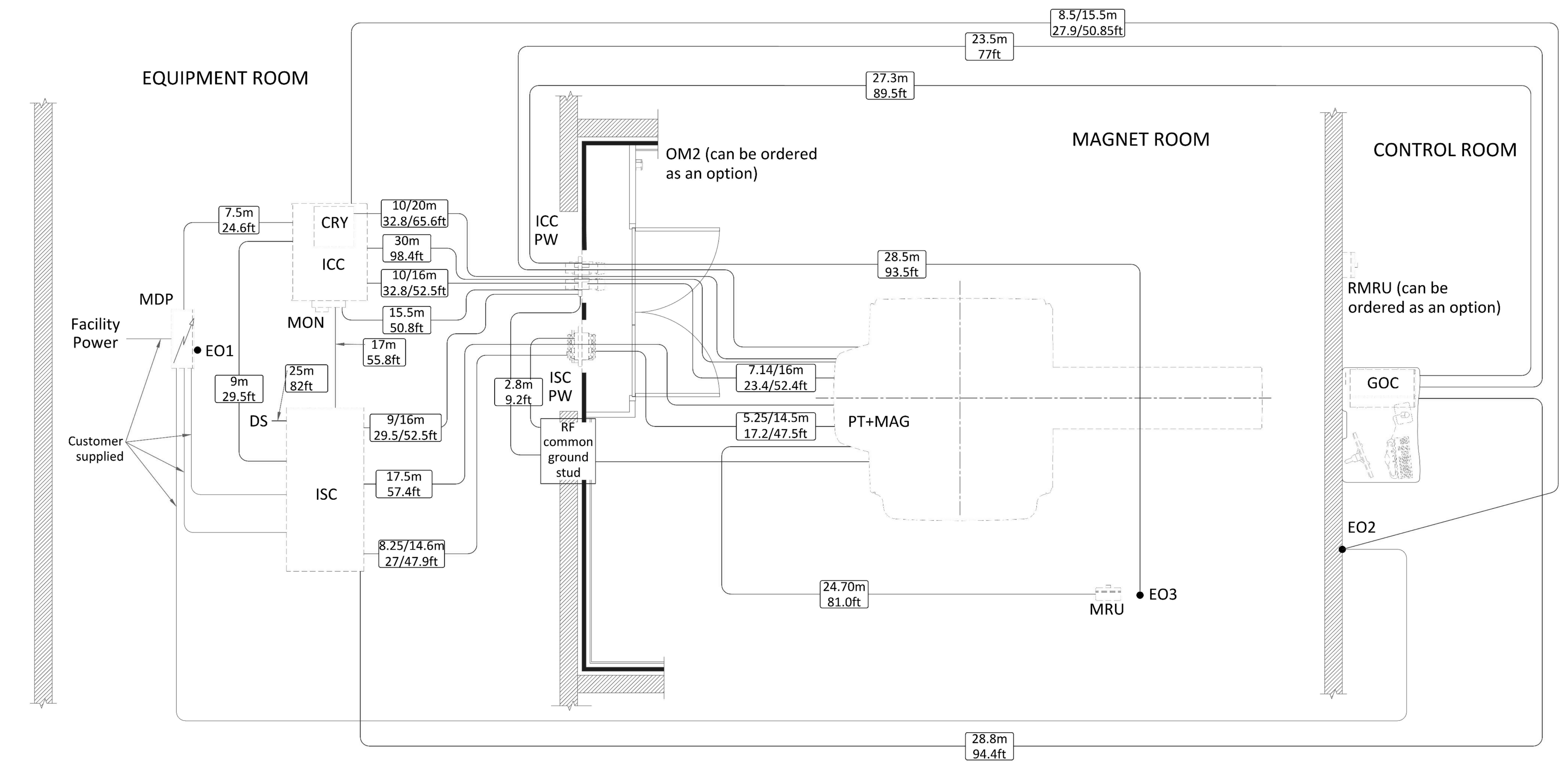
- Cryocooler Compressor (CRY) must operate 24 hours per day, 7 days per week.
- Runs E3030 and M3030 are GE supplied cables. all other wiring is customer supplied and installed.
- Two remote Emergency Off Buttons are supplied with the MDP. Emergency Off removes power from all outputs when activated.
- All MDP output circuits drop out on loss of power. the Cryocooler (CRY) circuit will automatically restart upon restoration of power.
- GE MDP Short circuit current rating is 25,000 amperes at 480 VAC.
- GE MDP is NRTL labeled.
- All feeder circuits require ground wires.

Accepts following range of stranded conductors . All wire types, color and sizing to be selected in accordance with governing electrical code(s).

Item	Phase		Ground	
	AWG/kcmil	sq mm	AWG/kcmil	sq mm
A	8-350	6-150	6-250	16-120
B	8-350	6-150	6-250	16-120
C	12-3/0	2.5-70		
D	10-14	4-1.5		

MAIN FEEDER CALCULATION	
Irms =	Continuous Power
	Vph-ph * √3
FLA =	Irms * 1.25
Ipk =	Peak Power
	Vph-ph * √3
Vloss =	Vph-ph * 4%
Rtotal =	Vloss
	Ipk * √3
Cable Resistance =	Rtotal
	Cable length

INTERCONNECTIONS



CABLES ROUTING		
Configuration	Equipment Room	Magnet Room
A	Short	Short
B	Long	Short
C	Short	Long

CABLES ROUTING FOR OPTIONS			
OPTION	FROM	TO	CABLE LENGTH m (ft)
MRE	MRE	Magnet Isocenter	Nominal: 7.31 (24) Maximum: 10.06 (33)
	MRE	ISC cabinet	15.24 (50)
	MRE	Ethernet Hub in ISC	15.24 (50)
	MRE	Customer Supplied Outlet	60Hz: 6.10 (20) 50Hz: 7.62 (25)

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BID SET / CONSTRUCTION DOCUMENTS

GE DRAWINGS

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EE702

E D C B A

GENERAL SHEET NOTES

1 UNLESS OTHERWISE INDICATED, REMOVE ALL LIGHTING FIXTURES, OUTLETS, DEVICES AND EQUIPMENT IN HATCHED AREAS. REMOVE ASSOCIATED CONDUIT AND WIRING BACK TO THE PANELBOARD OF ORIGINATION. SYSTEMATICALLY CHECK EACH BRANCH PANELBOARD CIRCUIT TO VERIFY EACH THAT CIRCUIT BREAKER NO LONGER HAS ANY ACTIVE LOADS, DISCONNECT THE WIRING AND TURN THE CIRCUIT BREAKER OFF. ANY REMAINING ACTIVE LOADS SHALL BE LABELED AT THE PANELBOARD AS TO WHAT LOAD IS SERVED.

2 UNLESS NOTED OTHERWISE REMOVE ALL LIGHTING FIXTURES DEVICES AND EQUIPMENT SHOWN DASHED. REMOVE CONDUIT AND WIRING BACK TO PANELBOARD OF ORIGIN OR TO FIRST ACTIVE DEVICE THAT REMAINS.

3 SALVAGE ALL POWER POLES, LIGHT FIXTURES, TWIST-LOCK RECEPTACLES AND WALLPLATES, CEILING SPEAKERS AND SECURITY AND FIRE ALARM DEVICES TO OWNER. PROTECT SALVAGED EQUIPMENT FROM DAMAGE.

4 PRIOR TO SUBMITTING BID, VISIT THE SITE AND FIELD VERIFY THE EXTENT OF ELECTRICAL DEMOLITION WORK TO MEET THE INTENT OF THE BID DOCUMENTS AND INCLUDE ALL COSTS IN BID.

5 PRIOR TO REMOVAL OF ANY ELECTRICAL EQUIPMENT OR WIRING, FIELD VERIFY THAT THE EQUIPMENT OR WIRING IS INACTIVE OR NO LONGER IN USE.

6 REMOVE ALL DEVICES, RACEWAYS AND WIRING FROM WALLS TO BE REMOVED. WHERE ACTIVE RACEWAYS OCCUR IN WALLS TO BE REMOVED, REROUTE THE RACEWAY WITH ASSOCIATED WIRING TO KEEP THE CIRCUIT OPERATIONAL.

7 REMOVE ALL FIRE ALARM DEVICES WHERE EXISTING WALLS AND CEILINGS ARE BEING REMOVED, WITH ASSOCIATED CONDUIT AND WIRING. EXISTING FIRE ALARM DEVICES AND SYSTEM NOT INDICATED FOR REMOVAL SHALL REMAIN ACTIVE THROUGHOUT DEMOLITION AND CONSTRUCTION UNTIL THE NEW SYSTEM IS TESTED AND OPERATIONAL. MAINTAIN ALL CLASS A FIRE ALARM INITIATING AND INDICATING LOOPS WHERE EXISTING DEVICES ARE REMOVED.

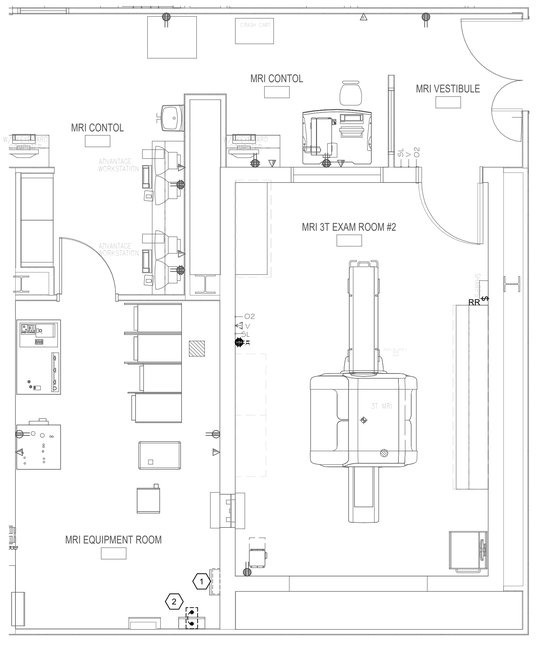
8 REMOVE ALL ABANDONED RACEWAY, CONDUIT, WIRING AND CABLING WHETHER ABANDONED PREVIOUS TO THIS PROJECT OR AS A RESULT OF THIS PROJECT. NOT ALL ABANDONED ITEMS ARE SHOWN ON THESE PLANS AND FIELD VERIFICATION OF DEMOLITION SCOPE EXTENT IS REQUIRED.

9 DEVICES MARKED "RR" ARE TO BE REMOVED AND RELOCATED PER NEW PLANS. EXTEND CIRCUITING AS REQUIRED FOR RELOCATION.

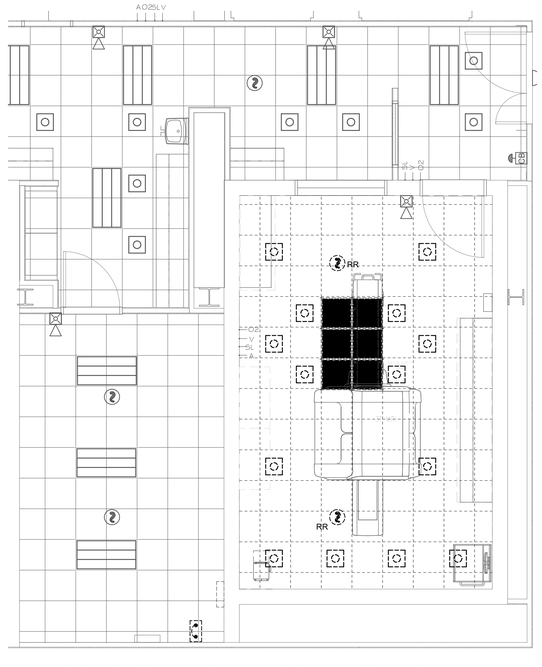
⬡ SHEET KEYNOTES

1 REMOVE EXISTING LIGHTING CONTROLS FOR MRI 3T EXAM ROOM #2.

2 REMOVE EXISTING DISCONNECT PANEL FOR MRI.



A2 LOWER LEVEL 1 ELECTRICAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



A4 LOWER LEVEL 1 CEILING DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

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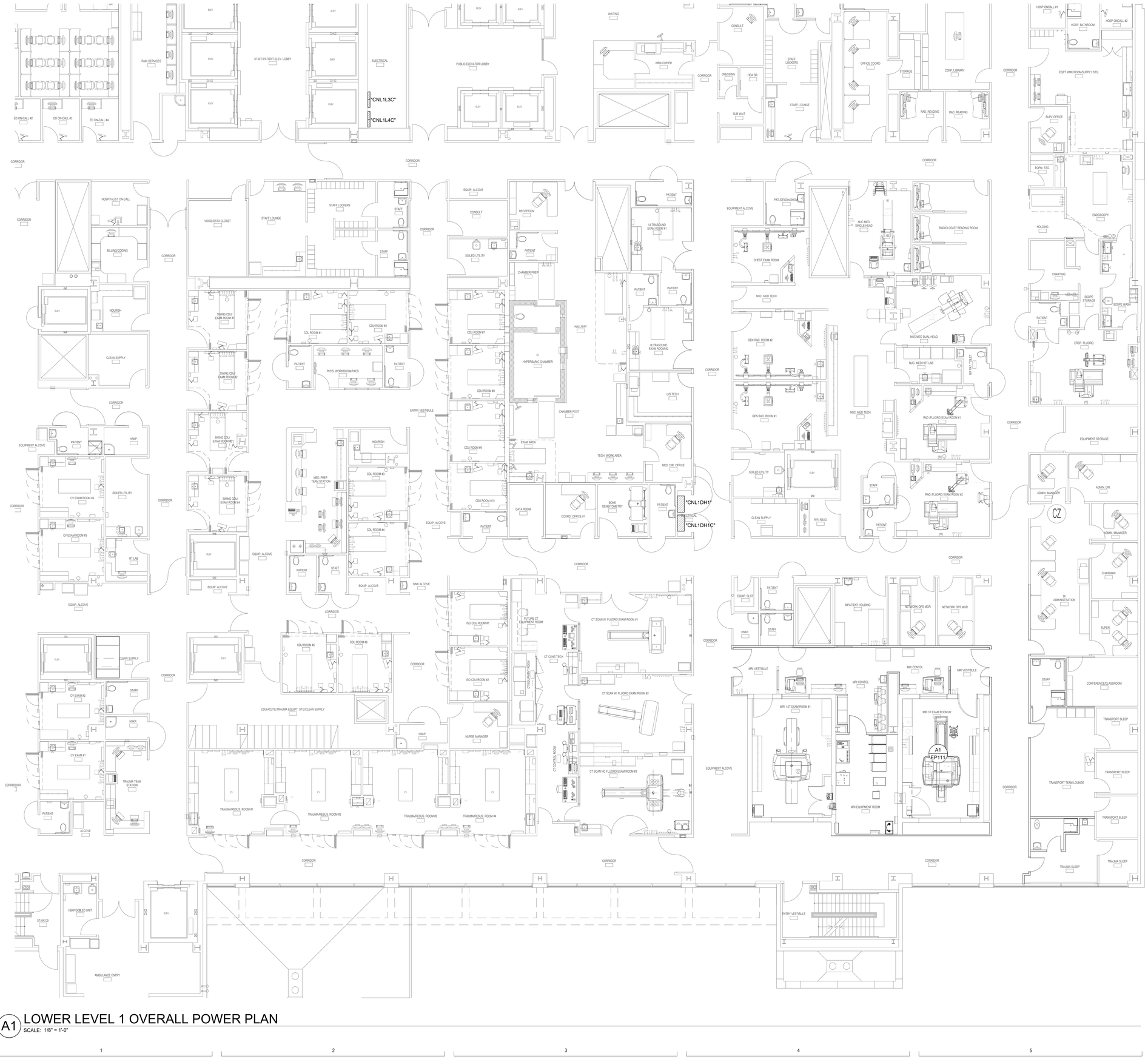
BID SET / CONSTRUCTION DOCUMENTS

LOWER LEVEL 1
ELECTRICAL DEMOLITION
PLAN

ED111



A1 LOWER LEVEL 1 OVERALL POWER PLAN

SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

1 ALL RECEPTACLES LOCATED WITHIN 6' OF THE EDGE OF A SINK MUST BE GFCI PROTECTED.

2 PROVIDE A DEDICATED NEUTRAL FOR ALL BRANCH CIRCUITS.

3 PROVIDE NEW TYPED PANEL SCHEDULES FOR ALL PANELS AFFECTED DURING CONTSTRUCTION.

4 REFER TO GE AND PDC DRAWINGS FOR ADDITIONAL CONTRACTOR RESPONSIBILITIES.

SHEET KEYNOTES

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REV	DATE	DESCRIPTION

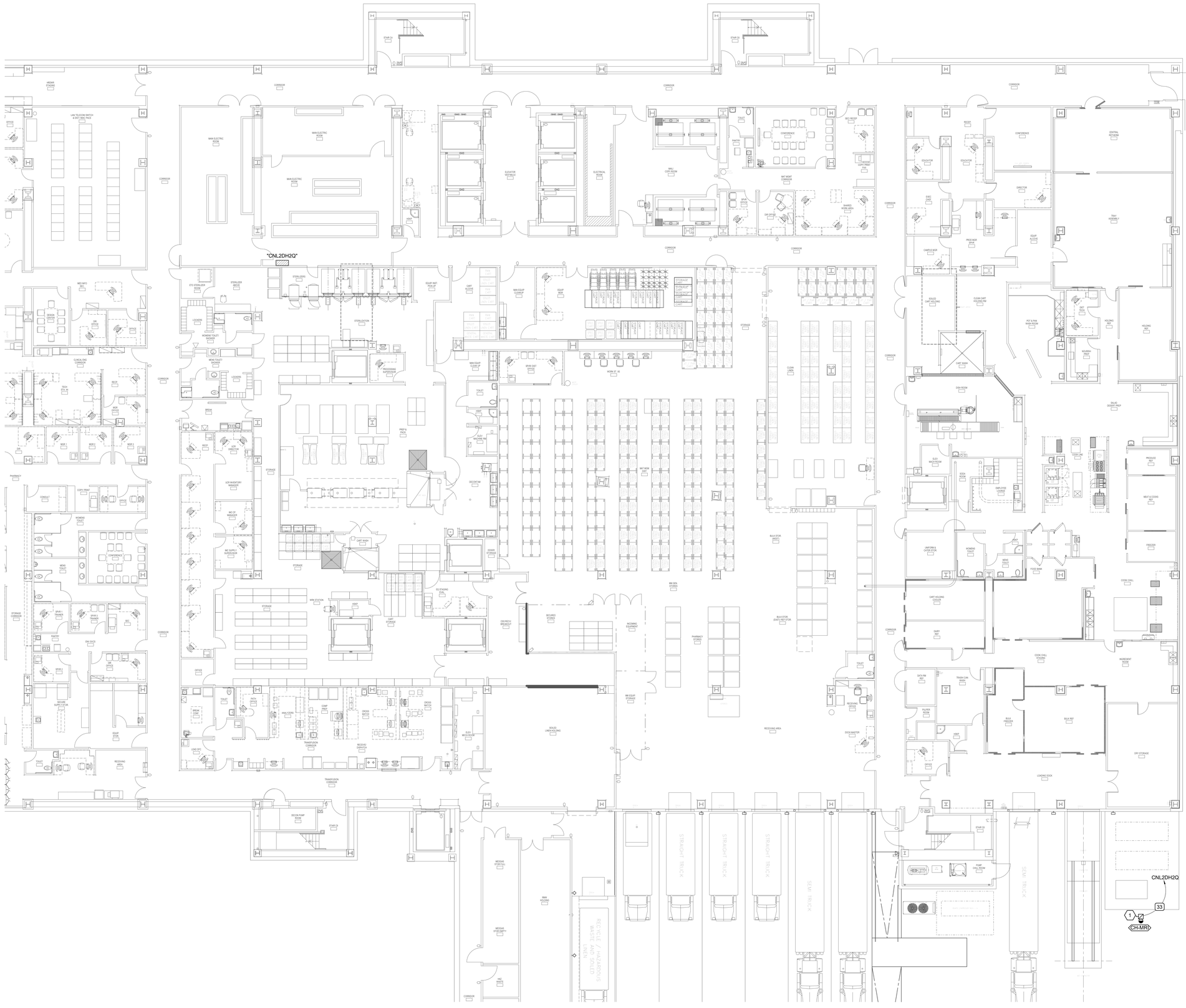
VCBO NUMBER:	19480
CLIENT NUMBER:	00000
DATE:	07/15/2019

IMED BUILDING 5 - MRI CARING SUITE

INTERMOUNTAIN HEALTHCARE
5125 SOUTH COTTONWOOD STREET, MURRAY UT 84107
BID SET / CONSTRUCTION DOCUMENTS

LOWER LEVEL 1 OVERALL POWER PLAN

EP101



A1 LOWER LEVEL 2 OVERALL POWER PLAN
SCALE: 3/32" = 1'-0"

GENERAL SHEET NOTES

1 ALL RECEPTACLES LOCATED WITHIN 6' OF THE EDGE OF A SINK MUST BE GFCI PROTECTED.

2 PROVIDE A DEDICATED NEUTRAL FOR ALL BRANCH CIRCUITS.

3 PROVIDE NEW TYPED PANEL SCHEDULES FOR ALL PANELS AFFECTED DURING CONTSTRUCTION.

4 REFER TO GE AND PDC DRAWINGS FOR ADDITIONAL CONTRACTOR RESPONSIBILITIES.

SHEET KEYNOTES

1 PROVIDE 200/3 FUSED DISCONNECT AND A FRS-125 FUSE WITH A NEMA 3R ENCLOSURE MOUNTED ADJACENT TO EQUIPMENT.

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IMED BUILDING 5 - MRI CARING SUITE

INTERMOUNTAIN HEALTHCARE
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BID SET / CONSTRUCTION DOCUMENTS

LOWER LEVEL 2 OVERALL POWER PLAN

EP102

GENERAL SHEET NOTES

1 ALL RECEPTACLES LOCATED WITHIN 6' OF THE EDGE OF A SINK MUST BE GFCI PROTECTED.

2 PROVIDE A DEDICATED NEUTRAL FOR ALL BRANCH CIRCUITS.

3 PROVIDE NEW TYPED PANEL SCHEDULES FOR ALL PANELS AFFECTED DURING CONTSTRUCTION.

4 REFER TO GE AND PDC DRAWINGS FOR ADDITIONAL CONTRACTOR RESPONSIBILITIES.

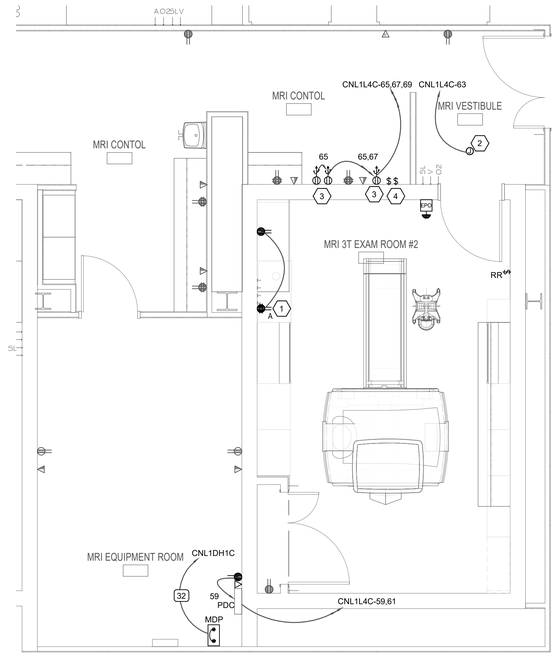
SHEET KEYNOTES

1 CIRCUIT NEW FOUR-PLEX TO THE SAME CIRCUIT THAT FED THE FOUR-PLEX THAT WAS DEMOLISHED.

2 PROVIDE 120V CIRCUIT TO RF DOOR CONTROL BOX.

3 PROVIDE UBS8200XX WALL OUTLETS.

4 PROVIDE LEVITON 1081 OR EQUIVALENT WALL SWITCHES.



A1 LOWER LEVEL 1 POWER PLAN
SCALE: 1/4" = 1'-0"

VCBO ARCHITECTURE

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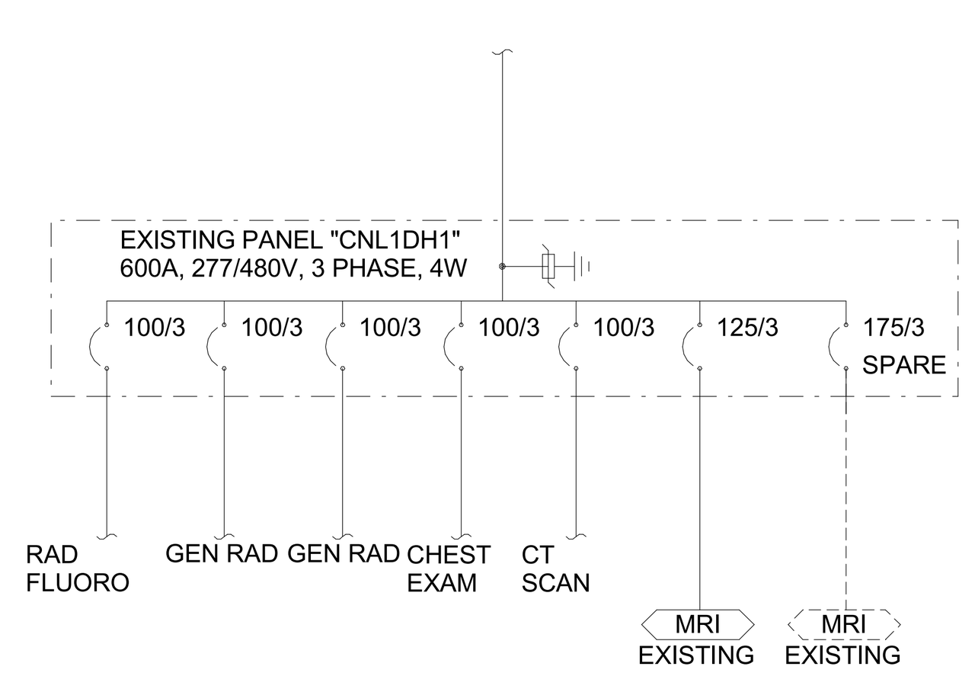
IMED BUILDING 5 - MRI CARING SUITE

INTERMOUNTAIN HEALTHCARE
5125 SOUTH COTTONWOOD STREET, MURRAY UT 84107

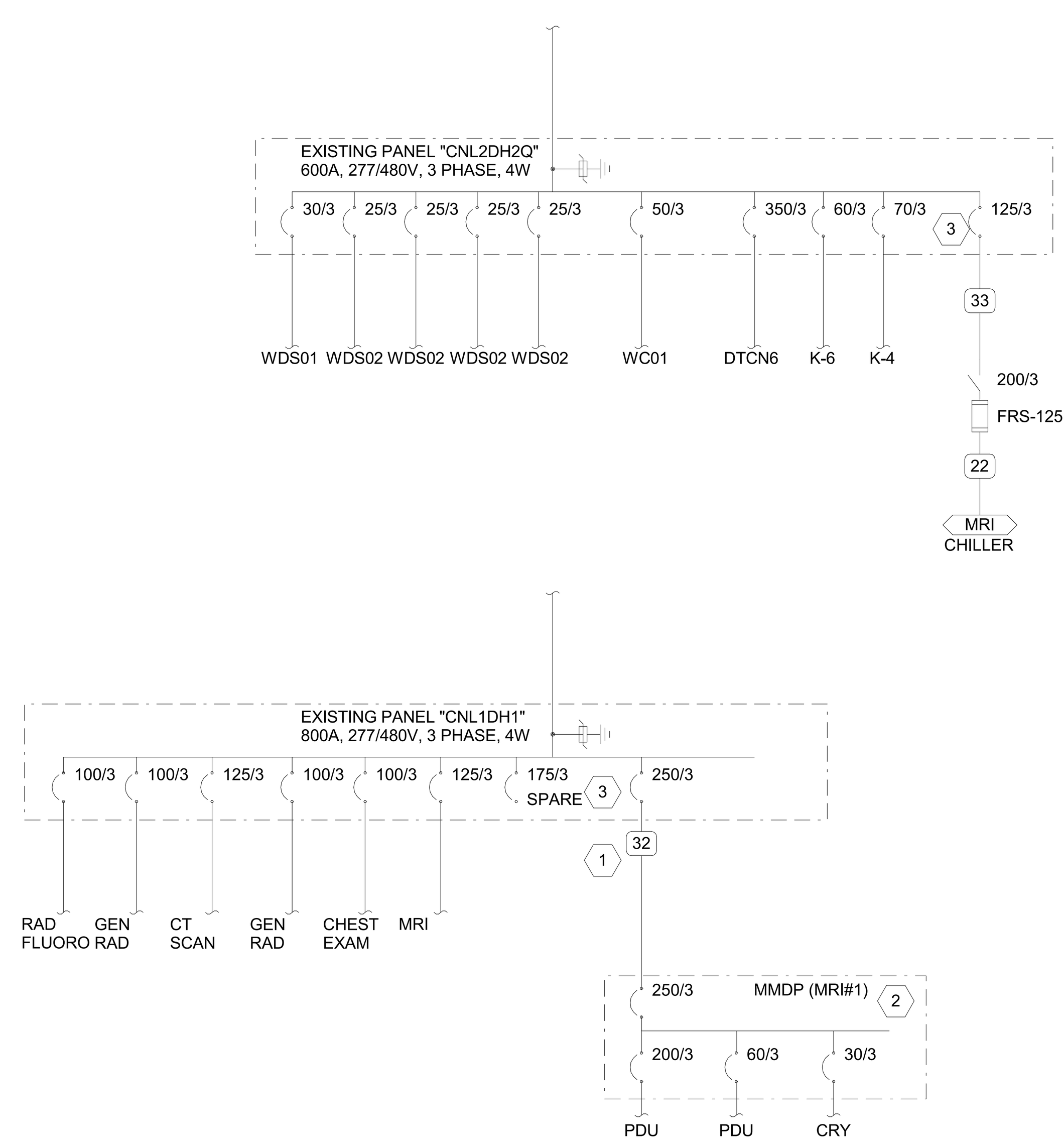
BID SET / CONSTRUCTION DOCUMENTS

LOWER LEVEL 1 POWER PLAN

EP111



1 DEMOLITION ONE-LINE
SCALE: NTS



2 NEW WORK ONE-LINE
SCALE: NTS

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.

COPPER CONDUCTOR AND CONDUIT SCHEDULE

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

SYM	AMP	CONDUIT SIZE	CONDUCTOR(NOTE 1) QTY	SIZE	G	IG/HH	SBJ	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 5. 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. GROUND CONDUCTOR SHALL BE OMITTED BETWEEN THE UTILITY TRANSFORMER AND THE FIRST OVERCURRENT PROTECTIVE DEVICE.
5. 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.

   "SBJ": SUBSTITUTE "SBJ" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE SYSTEM BONDING JUMPER OF THE SEPARATELY DERIVED SYSTEM.
6. RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY.

SHEET KEYNOTES

1. GROUNDING CONDUCTOR TO BE THE SAME SIZE AS CURRENT CARRYING CONDUCTORS.
2. MRI MDP WILL BE FURNISHED WITH MRI EQUIPMENT, AND INSTALLED BY ELECTRICAL CONTRACTOR.
3. PROVIDE NEW CIRCUIT BREAKER IN EXISTING GE DISTRIBUTION PANEL.

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REV	DATE	DESCRIPTION

VCBO NUMBER: 19480
CLIENT NUMBER: 00000
DATE: 07/15/2019

IMED BUILDING 5 - MRI CARING SUITE

INTERMOUNTAIN HEALTHCARE
5125 SOUTH COTTONWOOD STREET, MURRAY UT 84107

BID SET / CONSTRUCTION DOCUMENTS

ONE-LINE DIAGRAM

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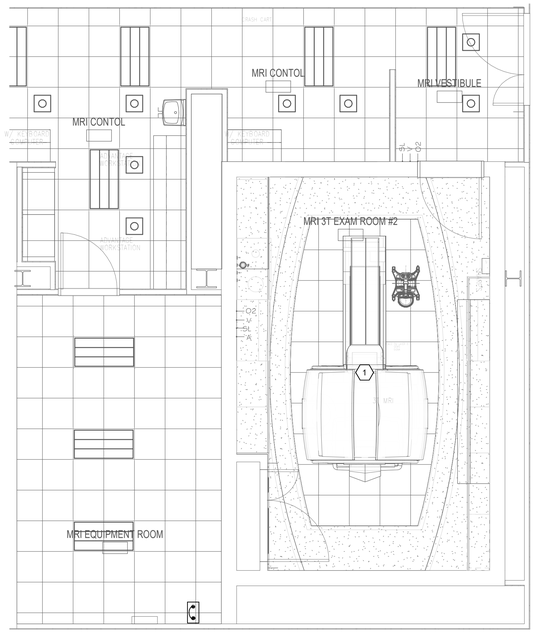
GENERAL SHEET NOTES

SHEET KEYNOTES

1 LIGHTING TO BE PROVIDED BY PDC AND INSTALLED BY CONTRACTOR. REFER TO PDC DRAWINGS.



A4 LOWER LEVEL 1 LIGHTING PLAN
SCALE: 1/4" = 1'-0"

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IMED BUILDING 5 - MRI CARING SUITE

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5125 SOUTH COTTONWOOD STREET, MURRAY UT 84107

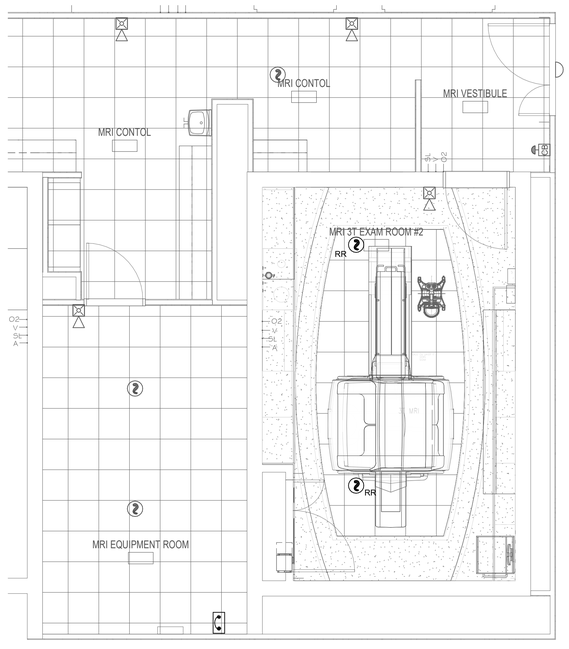
BID SET / CONSTRUCTION DOCUMENTS

LOWER LEVEL 1 LIGHTING PLAN

EL111

GENERAL SHEET NOTES

⬡ SHEET KEYNOTES



A4 LOWER LEVEL 1 AUXILIARY PLAN
SCALE: 1/4" = 1'-0"

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BID SET / CONSTRUCTION DOCUMENTS

LOWER LEVEL 1 AUXILIARY PLAN

FY111