

TERMS AND CONDITIONS FOR DOCUMENT USE

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REVISION #1	04/04/22
BIDS - MECHANICAL	03/28/22
95% OWNER REVIEW	03/11/22

CD's Issued To:
BFS: TBD HFES: TBD
BFS Shop Drawing Submission Req'd:
FA: Yes SUPP: Yes

Project Delivery Method: CS	
UM Design Manager:	B. Merritt
Designed:	J. Richards
Drawn:	R. Zora
Coordination Checked:	J. Richards
Checked:	J. Richards
Approved:	J. Richards
Location	UH - Level 1
Keyword:	Mechanical

Project

UH OR8 UTILITY COLUMN

Sheet Title

UH OR8 UTILITY COLUMN -
DEMOLITION PLAN -
MECHANICAL

Project Number

Sheet Number

PBN 947####
RTN 9520467

MD-2.1

DEMOLITION KEY NOTES:

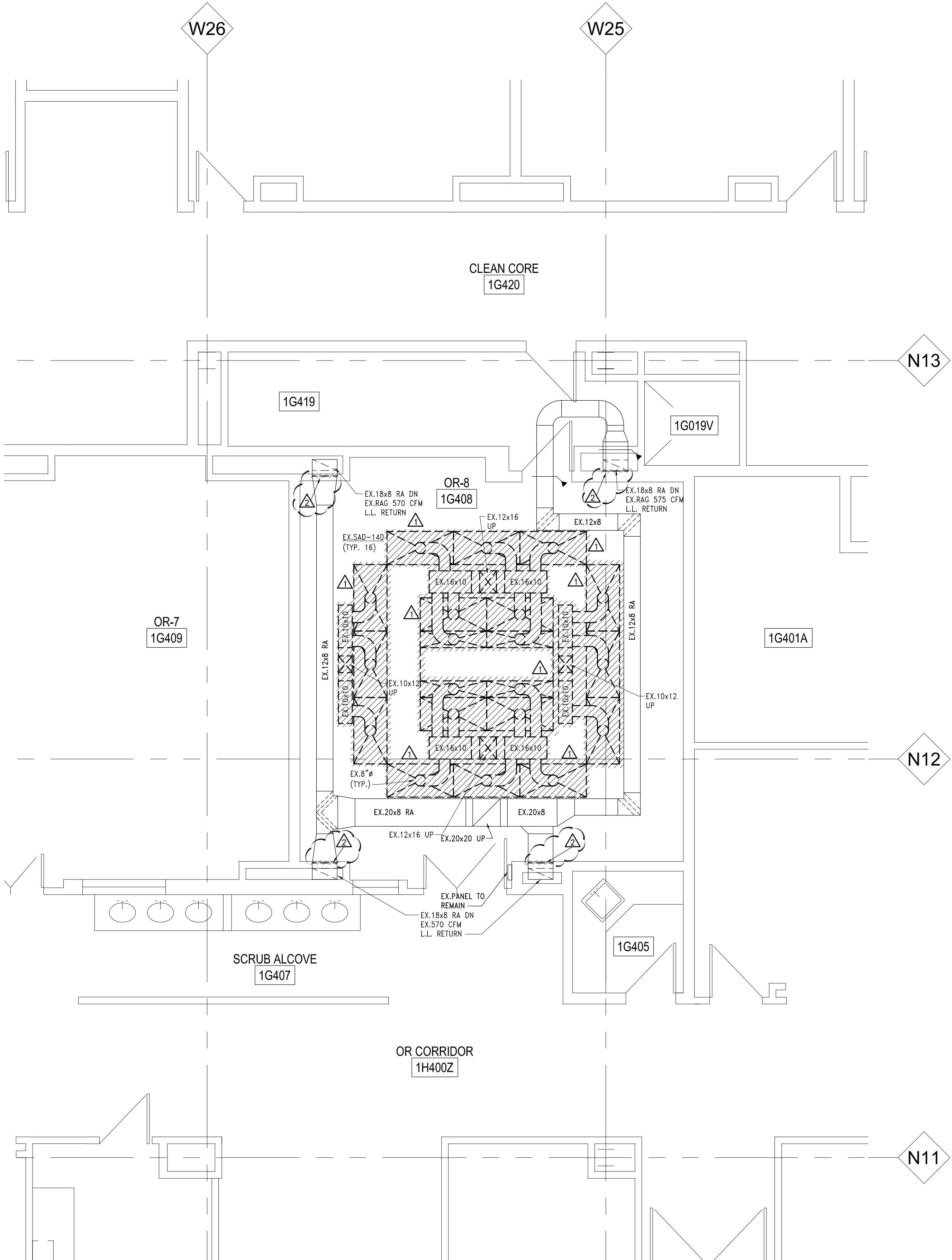
- ⚠

REMOVE SUPPLY DIFFUSERS AND BRANCH DUCTWORK COMPLETE INCLUDING ALL HANGERS AND ACCESSORIES. REMOVE SUPPLY DUCT THROUGH FLOOR ABOVE.
- ⚠

REMOVE RETURN GRILLE AND ALL ACCESSORIES. PREPARE DUCTWORK FOR NEW RETURN GRILLE.

GENERAL NOTES:

- COORDINATE ALL DEMOLITION WORK WITH ARCHITECTURAL AND ELECTRICAL DEMOLITION AND PHASING PLANS, WITH OWNER'S PROJECT REPRESENTATIVE AND WITH OWNER'S FACILITY MANAGER.
- THESE DEMOLITION PLANS ARE DIAGRAMMATIC AND DO NOT FULLY REPRESENT THE EXTENT OF DEMOLITION WORK REQUIRED TO INSTALL NEW WORK. REFER TO ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF INCIDENTAL DEMOLITION WORK NOT INDICATED ON THIS PLAN.
- COORDINATE THE USE OF SALVAGED ITEMS AND COMPONENTS THAT ARE TO BE REUSED ON NEW WORK AS INDICATED ON DRAWINGS AND WITHIN SPECIFICATIONS.
- COORDINATE ANY SHUTDOWNS OF EXISTING SERVICES OR EQUIPMENT WITH OWNER. PERFORM SHUTDOWNS AT A SCHEDULED TIME AS TO MINIMIZE DISRUPTION OF BUILDING OPERATIONS.
- REMOVE ALL PIPING, DUCTWORK AND EQUIPMENT COMPLETELY INCLUDING ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, CONTROLS AND ACCESSORIES. DISPOSE OF ALL MATERIALS IN A LEGAL MANNER.
- CAP ALL OPEN ENDED PIPING AND DUCTWORK. DO NOT LEAVE ANY ABANDONED PIPING OR DUCTWORK IN THE AREA OF WORK.
- NOTE THAT THE CEILING SPACE IS A CONGESTED CEILING SPACE. OFFSET EXISTING DUCTWORK AND PIPING TO FACILITATE NEW INSTALLATION. INCLUDE ALL WORK IN THIS AREA IN BIDS.



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MD-2.1

UH OR8 UTILITY COLUMN - DEMOLITION PLAN - MECHANICAL

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

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Project
UH OR8 UTILITY COLUMN

Sheet Title
UH OR8 UTILITY COLUMN -
INTERSTITIAL -
DEMOLITION PLAN -
MECHANICAL

Project Number Sheet Number

MD-2.2

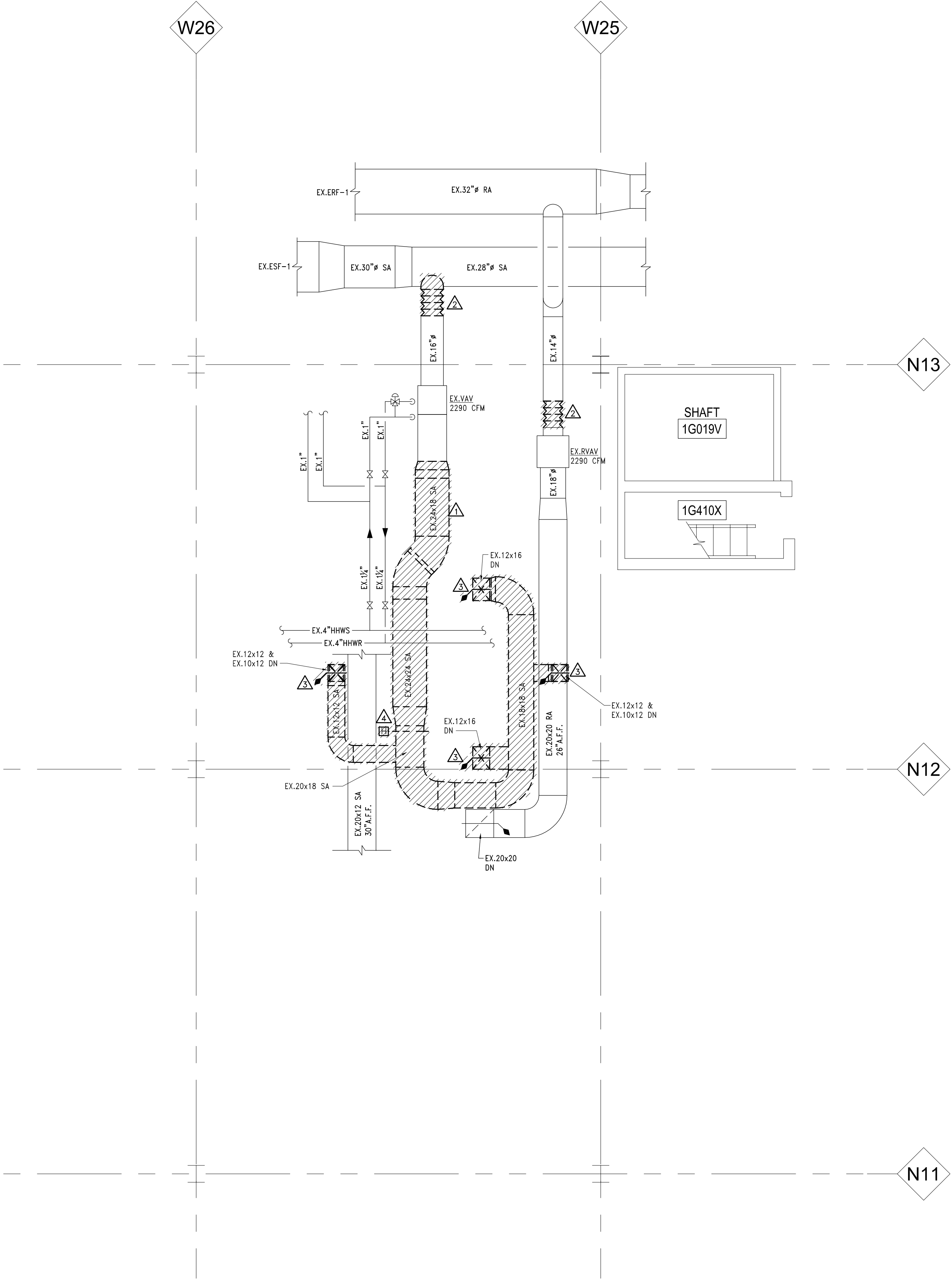
PBN 947####
RTN 9520467

DEMOLITION KEY NOTES:

- REMOVE EXISTING DUCTWORK TO POINT INDICATED
- REMOVE FLEXIBLE DUCTWORK AND PREPARE FOR NEW HARD DUCT CONNECTION.
- REMOVE EXISTING FIRE DAMPER AND ALL ACCESSORIES AND CONTROLS. REFER TO ARCH DRAWINGS FOR FLOOR PATCHING DETAILS.
- REMOVE EXISTING HUMIDIFIER AND ALL RELATED ACCESSORIES AND CONTROLS. CAP STEAM AND COND PIPING AT MAINS. DECOMMISSION HUMIDIFIER.

DEMOLITION GENERAL NOTES:

- COORDINATE ALL DEMOLITION WORK WITH ARCHITECTURAL AND ELECTRICAL DEMOLITION AND PHASING PLANS, WITH OWNER'S PROJECT REPRESENTATIVE AND WITH OWNER'S FACILITY MANAGER.
- THESE DEMOLITION PLANS ARE DIAGRAMMATIC AND DO NOT FULLY REPRESENT THE EXTENT OF DEMOLITION WORK REQUIRED TO INSTALL NEW WORK. REFER TO ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF INCIDENTAL DEMOLITION WORK NOT INDICATED ON THIS PLAN.
- COORDINATE THE USE OF SALVAGED ITEMS AND COMPONENTS THAT ARE TO BE REUSED ON NEW WORK AS INDICATED ON DRAWINGS AND WITHIN SPECIFICATIONS.
- COORDINATE ANY SHUTDOWNS OF EXISTING SERVICES OR EQUIPMENT WITH OWNER. PERFORM SHUTDOWNS AT A SCHEDULED TIME AS TO MINIMIZE DISRUPTION OF BUILDING OPERATIONS.
- REMOVE ALL PIPING, DUCTWORK AND EQUIPMENT COMPLETELY INCLUDING ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, CONTROLS AND ACCESSORIES. DISPOSE OF ALL MATERIALS IN A LEGAL MANNER.
- CAP ALL OPEN ENDED PIPING AND DUCTWORK. DO NOT LEAVE ANY ABANDONED PIPING OR DUCTWORK IN THE AREA OF WORK.
- NOTE THAT THE INTERSTITIAL SPACE IS A CONGESTED SPACE. OFFSET EXISTING DUCTWORK AND PIPING TO FACILITATE NEW INSTALLATION. INCLUDE ALL WORK IN THIS AREA IN BIDS.



1
MD-2.2

UH OR8 UTILITY COLUMN - INTERSTITIAL - DEMOLITION PLAN - MECHANICAL

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

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Location	UH - Level 1
Keyword:	Med Gas

Project
UH OR8 UTILITY COLUMN

Sheet Title
UH OR8 UTILITY COLUMN -
NEW WORK PLAN -
MEDICAL GAS

Project Number Sheet Number

M-1.1

PBN 947####
RTN 9520467

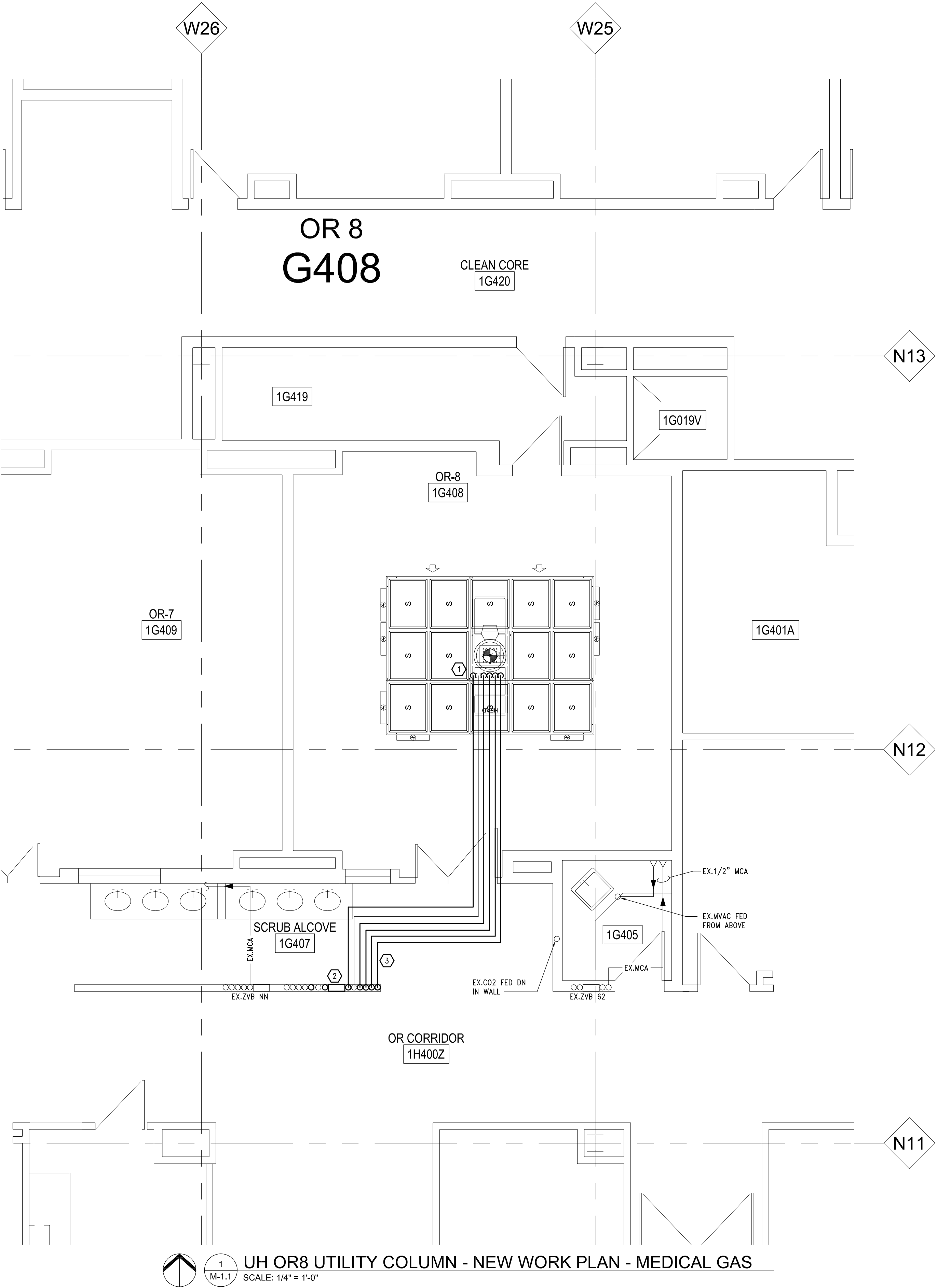
GENERAL NOTES:

THE FOLLOWING GENERAL NOTES APPLY TO ALL MEDICAL GAS SHEETS INCLUDED WITHIN THIS DOCUMENT SET, EXCEPT WHERE OTHERWISE INDICATED.

- PIPING OFFSETS ARE SHOWN TO PROVIDE INDICATION OF PHYSICAL CONDITIONS WITHIN THE SPACE. IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL REQUIRED OFFSETS. THE CONTRACTOR SHALL FULLY COORDINATE THE MECHANICAL WORK WITHIN ITSELF AND WITH THE WORK OF ALL TRADES TO PROVIDE COMPLETE AND OPERABLE SYSTEMS WITHOUT INTERFERENCES.
- COORDINATE ANY SHUTDOWNS OF EXISTING SERVICES OR EQUIPMENT WITH OWNER. PERFORM SHUTDOWNS AT A SCHEDULED TIME AS TO MINIMIZE DISRUPTION OF BUILDING OPERATIONS. REFER TO SHUTDOWN MATRIX ON SHEET M-000 FOR ADDITIONAL INFORMATION.
- ALL NEW PIPING IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A WALL, FURRED CHASE OR SUSPENDED CEILING, UNLESS OTHERWISE NOTED.
- FOR PIPE SIZES TO INDIVIDUAL FIXTURES AND VARIOUS PIECES OF EQUIPMENT, REFER TO SPECIFICATIONS.
- MAINTAIN REQUIRED CLEARANCES IN FRONT OF ELECTRICAL PANELS/EQUIPMENT. DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS/EQUIPMENT.
- ALL MEDICAL GAS WORK SHALL BE IN FULL COMPLIANCE WITH NFPA 99C.
- REFER TO ARCHITECTURE ELEVATIONS FOR MED GAS OUTLET QUANTITY AND LOCATIONS.
- PROVIDE LABELING OF VALVE BOXES AND ALARM PANELS IN ACCORDANCE WITH NFPA AND UM HOSPITAL REQUIREMENTS.
- PROJECT IS CONSTRUCTED IN MULTIPLE SEQUENCES, COORDINATE THE INSTALLATION OF ALL NEW WORK WITH ARCHITECTURAL WORK AREA PLAN. PROVIDE TEMPORARY PIPING AND ACCESSORIES AS NECESSARY TO MAINTAIN SERVICE IN OCCUPIED SPACES. REFER TO SHEET M-000 FOR ADDITIONAL INFORMATION.
- COORDINATE WORK WITH ALL OTHER TRADES. PROVIDE COORDINATION DRAWINGS IN ACCORDANCE WITH SPECIFICATION SECTION 01310 PRIOR TO COMMENCING WORK.

NEW WORK KEY NOTES:

- 1 1/2" MVAC, 1/2" OX, 1" WAGO, 1/2" N2O, 1/2"N2, 1/2" MCA DOWN TO MEDICAL BOOM. PROVIDE (3)OX, (4)MVAC, (3)MCA, (2)N2O, (1)N2, (1)WAGO OUTLETS. COORDINATE FINAL CONNECTION REQUIREMENTS WITH BOOM MANUFACTURER.
- PROVIDE MED GAS VALVE BOX FOR 1 1/2"MVAC, 1/2"OX, 1" WAGO, 1/2"N2O, 1/2"N2, 1/2"MCA.
- PROVIDE PRESSURE TRANSDUCER TO MED GAS AREA ALARM PANEL ON DISCHARGE OF VALVE BOX.



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M-1.1

UH OR8 UTILITY COLUMN - NEW WORK PLAN - MEDICAL GAS

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

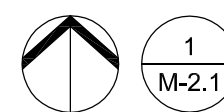


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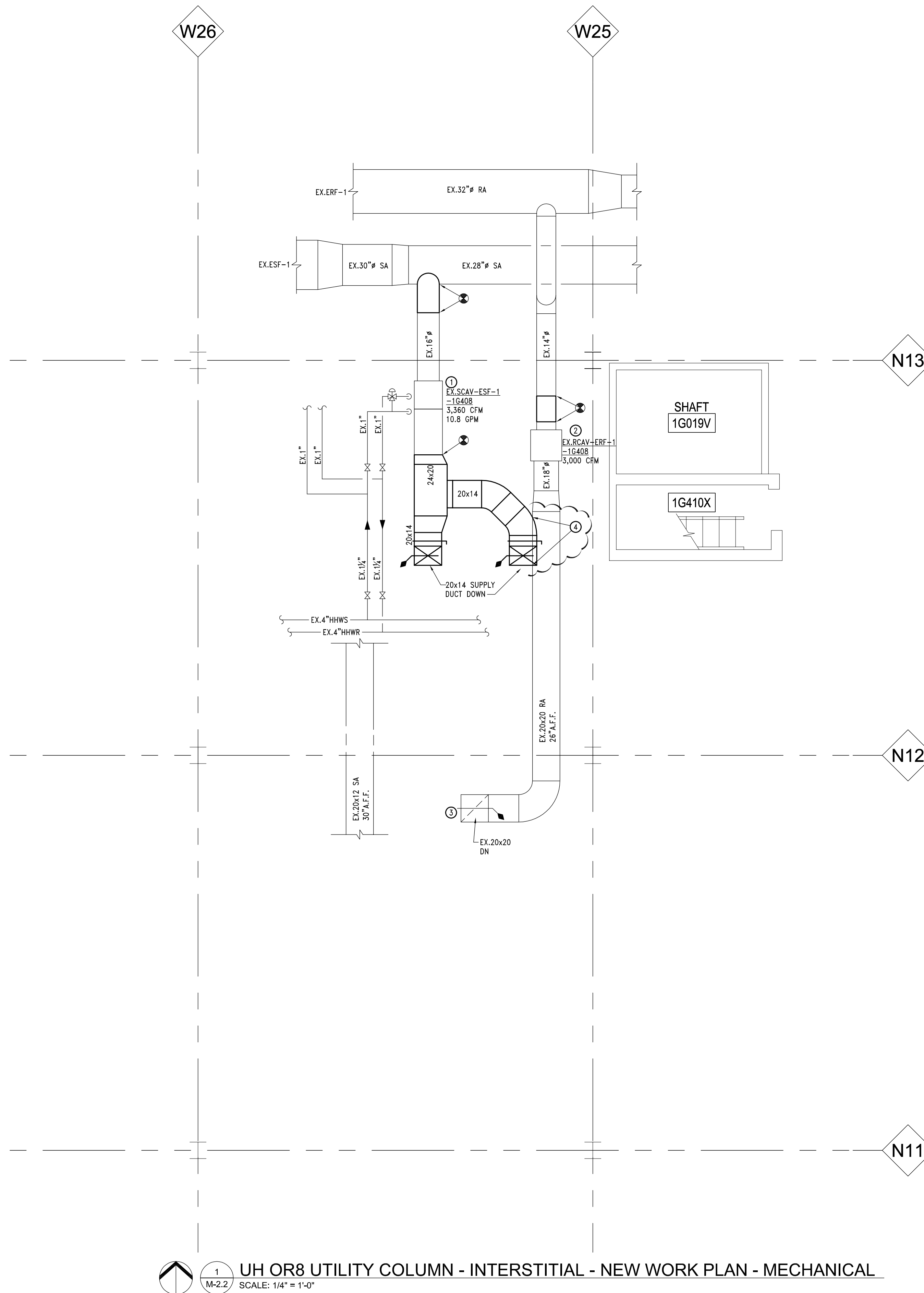
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Project
UH OR8 UTILITY COLUMN

Sheet Title
UH OR8 UTILITY COLUMN -
INTERSTITIAL - NEW WORK
PLAN - MECHANICAL

Project Number	Sheet Number
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PBN 947####
RTN 9520467





2101 Commonwealth, Suite B
Ann Arbor, Michigan 48105-5759
www.med.umich.edu/facilities/plan/

File Name / Archive No.

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SUPPLY VARIABLE AIR VOLUME SCHEDULE											
TAG	MANUFACTURER & MODEL NO.	AREA SERVED	INLET SIZE (IN.)	MAX. CFM	MIN. CFM	HOT WATER HEATING COIL				ASSOCIATED RETURN BOX	NOTES/ACCESSORIES
						MBH	GPM	WPD FT. W.G.	APD IN. W.G.		
EX.SCAV-ESF-1-1G408	TITUS DESV	OR-8 1G408	24x16	3,360	3,360	108.0	10.8	0.5	0.3	EX.RCAV-ERF-1-1G408	A
NOTES AND ACCESSORIES DESIGNATION											
A	CLEAN EXISTING CAV BOX, CLEAN COIL AND BLOWDOWN EXISTING STRAINER. VERIFY PROPER OPERATION OF BOX AND CONTROLS, NOTIFY OWNER OF ANY MALFUNCTIONING CONTROLS. RENAME CAV BOX TO NEW NAMING CONVENTION.										

RETURN VARIABLE AIR VOLUME SCHEDULE							
TAG	MANUFACTURER & MODEL NO.	AREA SERVED	INLET SIZE (IN.)	MAX. CFM	MIN. CFM	ASSOCIATED SUPPLY BOX	NOTES/ACCESSORIES
EX.RCAV-ERF-1-1G408	TITUS DESV	OR-8 1G408	16"	3,000	3,000	EX.SCAV-ESF-1-1G408	A
NOTES AND ACCESSORIES DESIGNATION							
A	CLEAN EXISTING CAV BOX. VERIFY PROPER OPERATION OF BOX AND CONTROLS, NOTIFY OWNER OF ANY MALFUNCTIONING CONTROLS. RENAME CAV BOX TO NEW NAMING CONVENTION.						

ROOM AIRFLOW RATE SCHEDULE													
ROOM NAME	ROOM NO.	ASSOCIATED AIR HANDLING UNIT	ASSOCIATED SVAV UNIT	ASSOCIATED RETURN FAN	ASSOCIATED RVAV UNIT	FLOOR AREA (SQUARE FEET)	CEILING HEIGHT	ROOM VOLUME (CUBIC FEET)	MIN. UNOCCUPIED AC/HR	MIN. UNOCCUPIED AIRFLOW (CFM) ⓐ	MAX. OCCUPIED AC/HR	MAX. OCCUPIED AIRFLOW (CFM) ⓑ	NOTES
OR-8	G408	AC-1	41	RF-1	15	554	10'-6"	5,817	6.0	582	34.65	3,360	ⓐ
NOTES AND ACCESSORIES DESIGNATION													
ⓐ	REPROGRAM SUPPLY BOX MINIMUM SETTING FOR UNOCCUPIED MODE. NOTE: RETURN BOX WILL TRACK TO MAINTAIN ROOM PRESSURE DIFFERENTIAL.												
ⓑ	MAX VOLUME IS FROM HISTORICAL BALANCE DATA OR MOST RECENT DESIGN DATA- MAINTAIN AT CURRENT SETTING												
ⓒ	THIS ACTUAL VOLUME WILL BE DETERMINED BY SYSTEM BALANCER AND UMH ENGINEER. PROVIDE ACTUAL DATA ON AS BUILT RECORD DRAWINGS												

GRILLE, REGISTER AND DIFFUSER SCHEDULE							
TAG	MANUFACTURER & MODEL NO.	SERVICE	TYPE	MOUNTING	NECK SIZE	OVERALL SIZE	NOTES/ACCESSORIES
R-1	TITUS 350RLF-SS	RETURN	GRILLE	SURFACE	24" x 12"	-	A B C D
NOTES AND ACCESSORIES DESIGNATION							
A	STANDARD WHITE FINISH						
B	STAINLESS STEEL GRILLE WITH 1" FILTER AND HINGED ACCESS PANEL						
C	PROVIDE WITH ANTI-MICROBIAL POWDER COATED WHITE FINISH						
D	CONTRACTOR TO VERIFY EXACT NECK SIDE PRIOR TO ORDERING						

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Location UH - Level 1
Keyword: Schedules

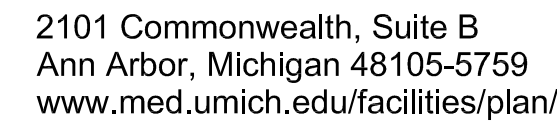
Project
UH OR8 UTILITY COLUMN

Sheet Title
MECHANICAL SCHEDULES

Project Number Sheet Number

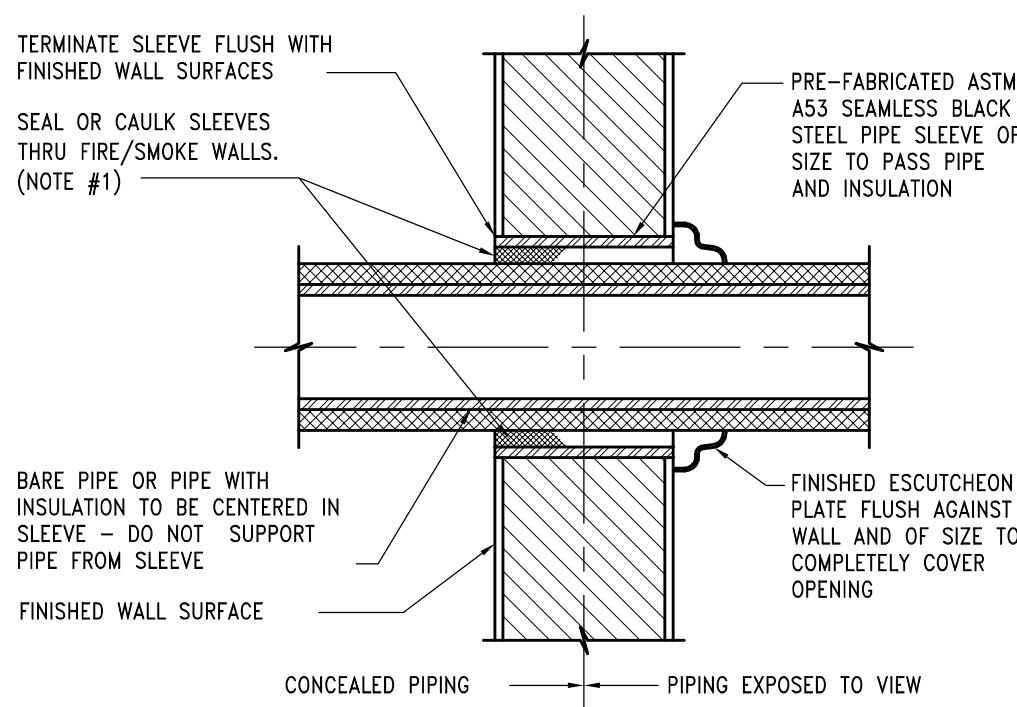
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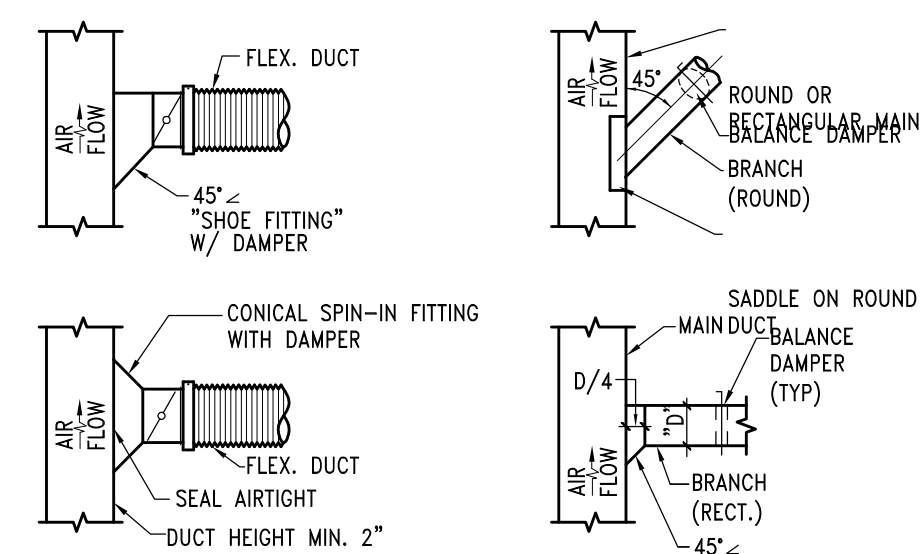


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NOTE:
1. ALL PIPE PENETRATIONS THRU FIRE RATED ASSEMBLIES SHALL BE SEALED IN ACCORDANCE WITH AN APPROVED UL LISTED INSTALLATION.



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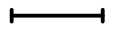












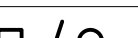



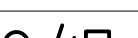



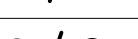































































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Keyword:	Details

Sheet Title
MECHANICAL DETAILS

PBN 947####
RTN 9520467

M-4.1

ELECTRICAL LEGEND THIS IS STANDARD SYMBOL LIST - SOME OF THESE SYMBOL MAY NOT APPEAR ON DRAWINGS.

<div>A"</div>	<div>FIXTURE TYPE</div>	<div></div>	<div>FLOOR MOUNTED SERVICE FITTING – COMBINATION TYPE F1 – FLUSH POKE THROUGH</div>	<div>A</div>	<div>ABOVE COUNTER</div>	<div>H</div>	<div>HORIZONTALLY MOUNTED</div>	<div></div>	<div>FIRE ALARM CONTROL PANEL</div>
<div></div>	<div>FLUORESCENT/LED STRIP LIGHTING FIXTURE</div>	<div></div>	<div>FLOOR MOUNTED SERVICE FITTING – COMBINATION TYPE F2</div>	<div>A/E</div>	<div>ARCHITECT / ENGINEER</div>	<div>HG</div>	<div>HOSPITAL GRADE</div>	<div></div>	<div>REMOTE FIRE ALARM PANEL</div>
<div></div>	<div>FLUORESCENT/LED LIGHTING FIXTURE</div>	<div></div>	<div>FLOOR MOUNTED SERVICE FITTING – COMBINATION TYPE F3</div>	<div>AFCI</div>	<div>ARC FAULT CIRCUIT INTERRUPTER</div>	<div>HITS</div>	<div>HEALTH INFORMATION & TECHNOLOGY SERVICES (PREVIOUSLY MCIT)</div>	<div></div>	<div>NOTIFICATION APPLIANCE CONTROL PANEL</div>
<div></div> <div>/</div>	<div>EMERGENCY FIXTURE (NIGHT LIGHT) UNSWITCHED</div>	<div></div>	<div>SAME AS TYPE F1, EXCEPT WITH PLUG-IN SERVICE AT FLOOR. PROVIDE DUAL-SERVICE COMBINATION POKE THROUGH, SUB PLATE, AND COVER WITH TWO FLIP-TOP LIDS AND TWO RECTANGULAR OPENINGS, ONE WITH GFCI DUPLEX RECEPTACLE AND ONE FOR DATA/TELECOM TO BE FIT OUT BY TELECOMMUNICATIONS INSTALLER.</div>	<div>AFF</div>	<div>ABOVE FINISH FLOOR</div>	<div>HOA</div>	<div>HAND-OFF-AUTOMATIC</div>	<div></div>	<div>FIRE ALARM RELAY / INPUT TO DOOR HARDWARE OR AUXILIARY SYSTEMS.</div>
<div></div> <div>/</div> <div></div>	<div>EMERGENCY FIXTURE SAME AS NIGHT LIGHT EXCEPT SWITCHED</div>	<div></div>	<div>SAME AS TYPE F1, EXCEPT WITH PLUG-IN SERVICE AT FLOOR. PROVIDE DUAL-SERVICE COMBINATION POKE THROUGH, SUB PLATE, AND COVER WITH TWO FLIP-TOP LIDS AND TWO RECTANGULAR OPENINGS, ONE WITH GFCI DUPLEX RECEPTACLE AND ONE FOR DATA/TELECOM TO BE FIT OUT BY TELECOMMUNICATIONS INSTALLER.</div>	<div>AHJ</div>	<div>AUTHORITY HAVING JURISDICTION</div>	<div>IG</div>	<div>ISOLATED GROUND</div>	<div></div>	<div>FIRE ALARM CONNECTION</div>
<div></div> <div>/</div> <div></div>	<div>LIGHTING FIXTURE WITH EMERGENCY EGRESS POWER LGT. FIXTURE</div>	<div></div>	<div>TV OUTLET – DOUBLE GANG DEEP OUTLET BOX WITH GROMMETED FACEPLATE AND 1 1/4" EMT CONDUIT TO CABLE TRAY, COORDINATE WITH ARCHITECT FOR MOUNTING LOCATION PRIOR TO INSTALLATION. PROVIDE COAXIAL CABLE FROM FACEPLATE TO COMM ROOM. WITH 3' SLACK AT FACEPLATE AND 30" SLACK COILED IN COMM ROOM.</div>	<div>AHU</div>	<div>AIR HANDLING UNIT</div>	<div>IP</div>	<div>ISOLATED POWER SYSTEM</div>	<div></div>	<div>FIRE ALARM CONNECTORS FOR COMBINATION PNUMATIC FIRE/SMOKE DAMPER. PROVIDE CONNECTION TO FIRE ALARM SYSTEM TO SIGNAL DAMPER TO CLOSE. PROVIDE CONNECTION TO FIRE ALARM SYSTEM TO SIGNAL DAMPER POSITION TO FIRE ALARM SYSTEM</div>
<div></div> <div>/</div> <div></div>	<div>WALL MOUNTED LIGHTING FIXTURE</div>	<div></div>	<div>SPECIAL PURPOSE RECEPTACLE</div>	<div>AV OR A/V</div>	<div>AUDIO VISUAL</div>	<div>MCIT</div>	<div>MEDICAL CENTER INFORMATION TECHNOLOGY (NOW HITS)</div>	<div></div>	<div>SMOKE DETECTOR</div>
<div></div> <div>/</div> <div></div>	<div>EXIT LIGHTING FIXTURE (WALL / CEILING MOUNTED) – SHADING INDICATES ILLUMINATED FACE–CHEVRONS AS INDICATED</div>	<div></div>	<div>PUSH BUTTON STATION</div>	<div>C</div>	<div>CEILING MOUNTED</div>	<div>NIC</div>	<div>NOT IN CONTRACT</div>	<div></div>	<div>DUCT SMOKE DETECTOR</div>
<div></div> <div>/</div> <div></div>	<div>EMERGENCY LIGHTING UNIT EQUIPMENT</div>	<div></div>	<div>EMERGENCY POWER OFF PUSHBUTTON. PROVIDE CLEAR PLASTIC HINGED COVER. MOUNT AT 60" AFF UNLESS OTHERWISE NOTED.</div>	<div>DW</div>	<div>DISHWASHER</div>	<div>NL</div>	<div>NIGHT LIGHT</div>	<div></div>	<div>MANUAL FIRE ALARM STATION</div>
<div>S</div>	<div>SINGLE POLE LIGHT SWITCH, IVORY. HUBBELL HBL1221 OR APPROVED EQUAL</div>	<div></div>	<div>EMERGENCY MECHANICAL STOP WITH SAME COVER AND MOUNTING HEIGHT AS EPO.</div>	<div>EF</div>	<div>EXHAUST FAN</div>	<div>N.O./N.C.</div>	<div>NORMALLY OPEN/NORMALLY CLOSED</div>	<div></div>	<div>FIRE ALARM STROBE</div>
<div>S3</div>	<div>THREE WAY LIGHT SWITCH (SAME SERIES AS SINGLE POLE SWITCH)</div>	<div></div>	<div>SYNCHRONIZED CLOCK</div>	<div>EG</div>	<div>EQUIPMENT GROUND</div>	<div>OR</div>	<div>OPERATING ROOM</div>	<div></div>	<div>FIRE ALARM AUDIBLE/STROBE, "A" INDICATES AUDIBLE ONLY</div>
<div>S4</div>	<div>FOUR WAY LIGHT SWITCH (SAME SERIES AS SINGLE POLE SWITCH)</div>	<div></div>	<div>ELECTRIC CLOCK OUTLET</div>	<div>(E)</div>	<div>EXISTING TO REMAIN</div>	<div>(R)</div>	<div>RELOCATE</div>	<div></div>	<div>FIRE ALARM AUDIBLE/STROBE – CEILING MOUNTED, "A" INDICATES AUDIBLE ONLY, "V" INDICATES STROBE ONLY</div>
<div>S4</div>	<div>KEY OPERATED SWITCH – MATCH EXISTING KEYING</div>	<div></div>	<div>COMMUNICATIONS OUTLET. REFER TO TYPICAL COMMUNICATIONS OUTLET DETAIL FOR REQUIREMENTS</div>	<div>(ER)</div>	<div>EXISTING RELOCATED</div>	<div>REF</div>	<div>REFRIGERATOR</div>	<div></div>	<div>WORKING CLEARANCE AROUND ELECTRICAL EQUIPMENT</div>
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>PHONE OUTLET SAME AS COMMUNICATIONS OUTLETS (W: WALL MOUNTED AT +48")</div>	<div>EWC</div>	<div>ELECTRICAL WATER COOLER</div>	<div>RT</div>	<div>RAINTIGHT</div>	<div></div>	<div>SECURITY CAMERA. PROVIDE JUNCTION BOX ABOVE CAMERA LOCATION AND 1" TO CABLE TRAY. PROVIDE CAT 5E TO COMMUNICATIONS CLOSET SECURITY PANEL</div>
<div>S4</div>	<div>FOUR WAY LIGHT SWITCH (SAME SERIES AS SINGLE POLE SWITCH)</div>	<div></div>	<div>WIRELESS ACCESS POINT – SAME AS COMMUNICATIONS OUTLET EXCEPT LOCATE BOX ABOVE FINISHED CEILING IN LOCATION AS DIRECTED BY HITS</div>	<div>FRE</div>	<div>FIBERGLASS REINFORCED EPOXY</div>	<div>SPD</div>	<div>SURGE PROTECTIVE DEVICE</div>		
<div>S4</div>	<div>KEY OPERATED SWITCH – MATCH EXISTING KEYING</div>	<div></div>	<div>CELLULAR ANTENNA</div>	<div>G</div>	<div>GROUND / EQUIPMENT GROUNDING CONDUCTOR</div>	<div>UH</div>	<div>UNIT HEATER</div>		
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>MANUAL SINGLE PHASE MOTOR STARTER WITH PILOT LIGHT, LOCKABLE OFF, FOR MOTOR APPLICATIONS. MANUAL SINGLE PHASE MOTOR SWITCH WITH PILOT LIGHT, LOCKABLE OFF AND WITHOUT OVERLOADS FOR DISCONNECT APPLICATIONS TO EQUIPMENT NOT REQUIRING OVERLOADS AND FOR APPLICATIONS WHERE OVERLOADS ARE INTEGRAL TO MOTOR–BASED LOADS. FLUSH MOUNT STARTERS / SWITCHES IN FINISHED SPACES. SURFACE MOUNT IN UNFINISHED SPACES.</div>	<div>GD</div>	<div>GARBAGE DISPOSAL</div>	<div>UMH</div>	<div>UNIVERSITY OF MICHIGAN HOSPITALS & HEALTH CENTERS</div>		
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>COMBINATION MAGNETIC FUSIBLE MOTOR STARTER</div>	<div>GFP</div>	<div>GROUND FAULT PROTECTION</div>	<div>UM</div>	<div>UNIVERSITY OF MICHIGAN</div>		
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>FUSIBLE DISCONNECT SWITCH</div>	<div>GFI/GFR</div>	<div>GROUND FAULT CIRCUIT INTERRUPTER – WIRE GFR RECEPTACLES FOR SELF PROTECTION AND NOT DOWNSTREAM PROTECTION OF OTHER WIRING DEVICES</div>	<div>UON</div>	<div>UNLESS OTHERWISE NOTED</div>		
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>NON-FUSIBLE DISCONNECT SWITCH</div>	<div>GRS</div>	<div>GALVANIZED RIGID STEEL</div>	<div>WP</div>	<div>WEATHERPROOF – PROVIDE COVER RATED WEATHERPROOF WHILE IN USE</div>		
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>BUS DUCT PLUG-IN UNIT</div>	<div>GTD</div>	<div>GENERATOR TRANSFER DEVICE</div>	<div>1G / 2G</div>	<div>1-GANG / 2-GANG</div>		
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>MOTOR – SINGLE PHASE</div>	<div>S</div>	<div>SPEAKER</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>MOTOR – THREE PHASE</div>	<div>M</div>	<div>MICROPHONE</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>MOLDED CASE CIRCUIT BREAKER (FLUSH/SURFACE MOUNTED IN NEMA ENCLOSURE)</div>	<div>I-V</div>	<div>VOLUME CONTROL</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>TRANSFORMER</div>	<div>I-INT</div>	<div>INTERCOM STATION</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>CONTACTOR</div>	<div>NT</div>	<div>NURSE CALL NICU TEAM PUSHBUTTON STATION.</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>BUS DUCT PLUG-IN TYPE</div>	<div>C</div>	<div>NURSE CALL CODE BLUE PUSHBUTTON STATION. PROVIDE SINGLE GANG, NON-GANGABLE, 3 1/2" DEEP OUTLET BOX AND 1" CONDUIT TO DOME LIGHT. MOUNT BOX AT 48" AFF UNLESS OTHERWISE NOTED. PROVIDE CLEAR PLASTIC HINGED COVER. STEEL CITY 58371-3/4 OR EQUAL</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>LIGHTING AND/OR RECEPTACLE PANEL (FLUSH/SURFACE MOUNTED)</div>	<div>T</div>	<div>NURSE CALL PATIENT TOILET PULL CORD STATION. PROVIDE SINGLE GANG, NON-GANGABLE, 3 1/2" DEEP OUTLET BOX AND 1" CONDUIT TO DOME LIGHT. MOUNT BOX AT 48" AFF UNLESS OTHERWISE NOTED. STEEL CITY 58371-3/4 OR EQUAL</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>DISTRIBUTION PANEL</div>	<div>D</div>	<div>NURSE CALL DUTY STATION. PROVIDE 3-GANG, NON-GANGABLE, 3 1/2" DEEP OUTLET BOX AND 1" TO CABLE TRAY. MOUNT AT 48" AFF UNLESS OTHERWISE NOTED. RACO 697 OR EQUAL</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>FUSIBLE SWITCH "A/3P/AF" DENOTES SWITCH SIZE (AMPS)/POLES/FUSE SIZE (AMPS)</div>	<div>P</div>	<div>NURSE CALL PATIENT BED STATION. PROVIDE 3-GANG, NON-GANGABLE 3 1/2" DEEP OUTLET BOX AND 1" CONDUIT TO DOME LIGHT.</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>GROUND BUS 1/4"x2"x12" COPPER, PANDUIT GB2B0306TPI-1</div>	<div>A</div>	<div>NURSE CALL STAFF ASSIST STATION (PUSHBUTTON). PROVIDE SINGLE GANG, NON-GANGABLE 3 1/2" DEEP OUTLET BOX AND 1" TO DOME LIGHT. MOUNT BOX AT 48" AFF UNLESS OTHERWISE NOTED. RACO 561 BOX OR EQUAL.</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>TELEPHONE BACKBOARD, 3/4"C FIRE RATED PLYWOOD. 8' TALL BY WIDTH AS INDICATED. NOT PAINTED.</div>	<div>S</div>	<div>NURSE CALL STAFF STATION. PROVIDE THREE GANG, NON-GANGABLE, 3 1/2" DEEP OUTLET BOX AND 1" CONDUIT TO DOME LIGHT. MOUNT BOX AT 48" AFF UNLESS OTHERWISE NOTED. RACO 697 OR EQUAL</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>GROUND</div>	<div></div>	<div>NURSE CALL DOME LIGHT. PROVIDE SINGLE GANG OUTLET BOX 3 1/2" DEEP. CENTER HORIZONTALLY ABOVE DOOR WHEN PRESENT. PROVIDE 1"C TO CABLE TRAY. WHERE INDICATED, A MAXIMUM OF FOUR DOME LIGHTS MAY BE INTERCONNECTED WITH 1"C, WITH A SINGLE 1"C HOMERUN TO CABLE TRAY. WHERE DOME LIGHTS ARE NOT SHOWN INTERCONNECTED ON PLAN, PROVIDE DEDICATED 1"C FROM EACH DOME LIGHT TO CABLE TRAY.</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>HOMERUN TO PANEL: 3/4"C, 2#12 & 1#12G UNLESS OTHERWISE NOTED FOR ONE 20A. 1P BRANCH CIRCUITS FOR CIRCUITS UP TO 100' IN LENGTH. INCREASE CONDUIT AND WIRE SIZE FOR CIRCUITS OVER 100' IN LENGTH.</div>	<div></div>	<div>NURSE CALL CODE BLUE TRIAL LIGHT, CEILING MOUNTED. PROVIDE DOUBLE GANG JUNCTION BOX WITH SINGLE GANG PLASTER RING AND 1"C TO CABLE TRAY. PROVIDE 6"-0" OF FLEXIBLE METAL CONDUIT FOR FINAL CONNECTION TO BOX FROM THE EMT CONDUIT RUN TO TRAY. MOUNT BOX FLUSH IN FINISHED CEILING.</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>HOMERUN TO PANEL: 3/4"C, 4#10 & 1#10G UNLESS OTHERWISE NOTED FOR TWO 20A. 1P BRANCH CIRCUITS FOR CIRCUITS UP TO 100' IN LENGTH. INCREASE CONDUIT AND WIRE SIZE FOR CIRCUITS OVER 100' IN LENGTH.</div>	<div></div>	<div>SAME AS NURSE CALL CODE BLUE TRAIL LIGHT. (PROGRAMMING DIFFERS).</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>HOMERUN TO PANEL: 3/4"C, 6#10 & 1#10G UNLESS OTHERWISE NOTED FOR THREE 20A. 1P BRANCH CIRCUITS FOR CIRCUITS UP TO 100' IN LENGTH. INCREASE CONDUIT AND WIRE SIZE FOR CIRCUITS OVER 100' IN LENGTH.</div>	<div></div>	<div>NURSE CALL MASTER STATION</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>PLUG-IN STRIP</div>	<div></div>	<div>DOOR HOLD OPEN CONNECTED TO FIRE ALARM SYSTEM</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>SURFACE RACEWAY</div>	<div></div>	<div>CARD READER CONTROLLED DOOR</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>CABLE TRAY</div>	<div></div>	<div>ELECTRONIC ACCESS CONTROL – SAME AS CARD READER CONTROLLED DOOR EXCEPT WITHOUT CARD READER</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>ALUMINUM DUAL COMPARTMENT WITH BARRIER BETWEEN POWER AND TELECOMMUNICATIONS COMPARTMENTS. COORDINATE LENGTH FOR FLOOR TO CEILING INSTALLATION. PROVIDE WITH ONE 20A, 120V RECTANGULAR FACE DUPLEX RECEPTACLE, AND ONE TELECOMMUNICATIONS OUTLET, BOTH AT 18" AFF. PROVIDE IVORY FINISH, WITH T-BAR ASSEMBLY FOR MOUNTING IN CEILING TILE AND CEILING TILE TRIM KIT. HUBBELL SP SERIES OR APPROVED EQUAL.</div>	<div></div>	<div>ISTAR ACCESS CONTROL PANEL</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>COMBINATION FIRE/SMOKE DAMPER – WIRE TO 120V CIRCUIT INDICATED ON DRAWING.</div>	<div></div>	<div>REQUEST TO EXIT CONTROL</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>COMBINATION FIRE/SMOKE DAMPER – WIRE TO 120V CIRCUIT INDICATED ON DRAWING.</div>	<div></div>	<div>DOOR MONITOR</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>COMBINATION FIRE/SMOKE DAMPER – WIRE TO 120V CIRCUIT INDICATED ON DRAWING.</div>	<div></div>	<div>MOTORIZED DOOR PUSH PLATE.</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>COMBINATION FIRE/SMOKE DAMPER – WIRE TO 120V CIRCUIT INDICATED ON DRAWING.</div>	<div></div>	<div>AUTO DOOR OPERATOR</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>COMBINATION FIRE/SMOKE DAMPER – WIRE TO 120V CIRCUIT INDICATED ON DRAWING.</div>	<div></div>	<div>CONTROL PANEL</div>				
<div>S4</div>	<div>SWITCH WITH PILOT LIGHT – FOR EMERGENCY CIRCUITS. RED TOGGLE ILLUMINATED WHEN LIGHTS ARE OFF, HUBBELL HBL 1221ILR OR APPROVED EQUAL</div>	<div></div>	<div>COMBINATION FIRE/SMOKE DAMPER – WIRE TO 120V CIRCUIT INDICATED ON DRAWING.</div>	<div></div>	<div>DIGITAL TIME SWITCH WITH ASTRONOMICAL CONTROL AND AUTO DAYLIGHT SAVING ADJUSTMENT, 120V, 4-CHANNEL</div>				

SHUTDOWNS REQUIRED

ELECTRICAL PANELS SERVING AREA OF WORK WHICH REQUIRE SHUTDOWN:
1. ORP-J
2. ORP-J1
3. LP-G1
4. CLP-G1
5. RP-GC-1

ELECTRICAL DRAWING INDEX

SHEET	DESCRIPTION
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E0.2	ELECTRICAL GENERAL NOTES
E0.3	ELECTRICAL KEY PLAN – LEVEL 01
E0.4	ELECTRICAL DETAILS – 1
E0.5	ELECTRICAL DETAILS – 2
E0.6	ELECTRICAL DETAILS – 3
E0.7	ELECTRICAL DETAILS – 4
E0.8	ELECTRICAL ABOVE CEILING PHOTOGRAPHS
ED1.1	UH 0R8 UTILITY COLUMN – ELECTRICAL DEMOLITION PLAN – LIGHTING
ED2.1	UH 0R8 UTILITY COLUMN – ELECTRICAL DEMOLITION PLAN – POWER
E1.1	UH 0R8 UTILITY COLUMN – ELECTRICAL NEW WORK PLAN – LIGHTING
E2.1	UH 0R8 UTILITY COLUMN – ELECTRICAL NEW WORK PLAN – POWER
E3.1	ELECTRICAL PANEL SCHEDULES

SHUTDOWNS REQUIRED

ELECTRICAL PANELS SERVING AREA OF WORK WHICH REQUIRE SHUTDOWN:

1. ORP-J 2. ORP-J1 3. LP-G1
4. CLP-G1 5. RP-GC-1

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EO.8	ELECTRICAL ABOVE CEILING PHOTOGRAPHS
ED1.1	UH 088 UTILITY COLUMN - ELECTRICAL DEMOLITION PLAN - LIGHTING
ED2.1	UH 088 UTILITY COLUMN - ELECTRICAL DEMOLITION PLAN - POWER
E1.1	UH 088 UTILITY COLUMN - ELECTRICAL NEW WORK PLAN - LIGHTING
E2.1	UH 088 UTILITY COLUMN - ELECTRICAL NEW WORK PLAN - POWER
E3.1	ELECTRICAL PANEL SCHEDULES



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UM Design Manager:	B. Merritt
Designed:	S. Wheeler
Drawn:	C. Bayer
Coordination Checked:	S. Wheeler
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Project
UH OR8 UTILITY COLUMN

Sheet Title
ELECTRICAL LEGEND &
SHEET INDEX

Project Number _____ Sheet Number _____

E0.1

PBN 947####
RTN 9520467

ELECTRICAL GENERAL NOTES :

- A. ELECTRICAL GENERAL NOTES APPLY TO ALL ELECTRICAL SHEETS.
- B. WIRING DEVICE COVERPLATES FOR NORMAL POWER SWITCHES, DIMMERS, RECEPTACLES AND MANUAL MOTOR SWITCHES ARE TO BE BRUSHED STAINLESS STEEL. LABEL WIRING DEVICE COVERPLATES (SWITCHES, RECEPTACLES, DIMMERS,OCCUPANCY SENSORS) WITH PANEL AND BRANCH CIRCUIT NUMBERS USING WATERPROOF CLEAR PLASTIC LETTERED TAPE AND BLACK MACHINE PRINTED LETTERING. LOCATE LABEL CENTERED ON TOP OF COVERPLATE. FOR WEATHERPROOF APPLICATIONS LOCATE LABEL INSIDE WEATHERPROOF COVER. LABEL MOTORIZED DOOR OPERATORS AND HARDWIRED ELECTRICAL UTILIZATION EQUIPMENT IN THE SAME MANNER AS WIRING DEVICE COVERPLATES. TYPICAL FOR ALL NEW, RELOCATED AND EXISTING TO REMAIN WIRING DEVICE COVERPLATES AND EQUIPMENT WITHIN THE AREA OF WORK. LABEL OUTLET BOX COVERPLATES SERVING FLEXIBLE WHIPS FOR SYSTEMS FURNITURE, EQUIPMENT, AND FOODSERVICE LOADS WITH PANEL AND CIRCUIT NUMBERS SIMILAR TO WIRING DEVICES. LABEL LIGHTING CONTROLS AND RECEPTACLES (FACTORY AND FIELD-INSTALLED) IN SYSTEMS FURNITURE, EQUIPMENT AND POWER POLES WITH PANEL AND CIRCUIT NUMBERS SIMILAR TO WIRING DEVICES. LABEL OUTLET BOXES FOR AV WITH APPLICABLE SYSTEM IF COVERPLATES ARE BLANK OR GROMMETED, EG "A/V INPUT" OR "TV SIGNAL", ETC. IF VENDOR FOR LOW VOLTAGE SYSTEMS INSTALLS A COVERPLATE, VENDOR IS TO LABEL THE PLATE ACCORDINGLY.
- C. PROVIDE IDENTIFICATION AND COLOR CODING OF ELECTRICAL EQUIPMENT AND WORK PER UMH DESIGN GUIDELINES SECTION 260500. PROVIDE PLASTIC LAMINATE NAMEPLATES FOR ALL DISTRIBUTION EQUIPMENT PER UMH STANDARDS. TYPICAL FOR ALL NEW AND EXISTING TO REMAIN DISTRIBUTION EQUIPMENT WITHIN THE AREA OF WORK.
- D. ALL NECESSARY ELECTRICAL EQUIPMENT REQUIRED FOR THE WORK PROPOSED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- E. REMOVE AND REINSTALL CEILINGS AND CEILING MOUNTED BUILDING SYSTEMS AS REQUIRED TO PERFORM WORK.
- F. MOUNTING HEIGHTS TO CENTER UNLESS OTHERWISE NOTED:
- REFER TO ARCHITECTURAL ELEVATIONS OF ALL AREAS PRIOR TO INSTALLATION OF ELECTRICAL WORK. MOUNT AS INDICATED ON ARCHITECTURAL ELEVATIONS. IF ANY DISCREPANCY EXISTS BETWEEN ELECTRICAL AND ARCHITECTURAL ELEVATIONS, THE ELEVATIONS TAKE PRECEDENCE.
 - RECEPTACLES & VOICE/DATA OUTLETS: 18" AFF.
 - WALL MOUNTED FIRE ALARM VISIBLE ONLY AND AUDIBLE/VISIBLE COMBINATION DEVICES: MOUNT SUCH THAT ENTIRE LENS IS NOT LESS THAN 80" AFF AND NOT GREATER THAN 96" AFF. MOUNT ALL SIMILAR DEVICES AT THE SAME HEIGHT.
 - WALL MOUNTED FIRE ALARM AUDIBLE ONLY DEVICES: MOUNT SUCH THAT THE TOP OF THE DEVICE IS A MINIMUM OF 90"AFF AND A MINIMUM OF 6" BELOW THE FINISHED CEILING. MOUNT ALL SIMILAR DEVICES AT THE SAME HEIGHT.
 - COORDINATE THE LOCATION OF ALL FIRE ALARM DEVICES IN THE AREA OF WORK OF ANY WORK, AND NOTIFY A/E OF ANY MOUNTING LOCATION DISCREPANCIES PRIOR TO THE INSTALLATION OF ANY FIRE ALARM WORK.
 - SWITCHES AND FIRE ALARM PULL STATIONS: 48" AFF.
 - DISCONNECT SWITCHES AND CIRCUIT BREAKERS: MOUNT SUCH THAT THE CENTER OF THE GRIP OF THE OPERATING HANDLE OF THE SWITCH OR CIRCUIT BREAKER, WHEN IN ITS HIGHEST POSITION, IS NOT MORE THAN 6 FEET 7 INCHES ABOVE FINISHED FLOOR.
- G. FOR ANY RECEPTACLE WITHIN 6'-0" OF A WATER SOURCE, REPLACE EXISTING TO REMAIN NON-GFR DUPLEX RECEPTACLES WITH GFR (GROUND FAULT CIRCUIT INTERRUPTER) TYPE. THESE RECEPTACLES MAY NOT BE INDICATED ON PLANS.
- H. UNLESS OTHERWISE NOTED, TYPICAL BRANCH CIRCUIT WIRING IS 3/4"C, 2#12 & 1#12G FROM A 20A/1P BRANCH BREAKER FOR CIRCUITS UP TO 100 FT. IN LENGTH. PROVIDE #10 WIRE FOR CIRCUITS GREATER THAN 100 FT. IN LENGTH. PROVIDE DEDICATED NEUTRAL CONDUCTORS FOR ALL BRANCH CIRCUITS. PROVIDE RIGID STEEL CONDUIT FOR ALL WORK IN SLAB AND FOR ANY CONDUITS IN CHASES.
- I. WHERE WIRING DEVICES AND EQUIPMENT DO NOT INCLUDE A BRANCH CIRCUIT DESIGNATION ON PLAN, INCLUDE COST IN BID TO PROVIDE A DEDICATED BRANCH CIRCUIT (3/4"C, 2#12 & 1#12G) FROM THE NEAREST PANELBOARD TO THE WIRING DEVICE/EQUIPMENT. WHERE LIGHTING FIXTURES DO NOT INCLUDE A BRANCH CIRCUIT DESIGNATION ON PLAN, INCLUDE COST IN BID TO CIRCUIT FIXTURE TO THE NEAREST LIGHTING CIRCUIT WITH A DESIGNATION. FOR WIRING DEVICES, EQUIPMENT AND LIGHTING FIXTURES, THE CIRCUIT COST IS TO BE COORDINATED FOR POWER TYPE BASED ON DRAWING SYMBOL. PROVIDE EMERGENCY CIRCUIT OR NORMAL CIRCUIT TO MATCH SYMBOL ON PLAN. PRIOR TO INSTALLATION OF CIRCUITING IN THE AREA, CONFIRM THE PROPER CIRCUIT DESIGNATION WITH A/E VIA AN RFI.
- J. CIRCUIT NUMBERS ON PLANS ARE BASED ON FIELD OBSERVATION AND ON THE OWNERS EXISTING DRAWINGS. CIRCUIT TRACE TO VERIFY ALL EXISTING BRANCH CIRCUITS IN AREA OF WORK. IDENTIFY CIRCUIT VOLTAGE, CONDUIT AND SIZE, SOURCE PANEL, BRANCH CIRCUIT OVERCURRENT DEVICE SIZE AND CIRCUIT NUMBER. INDICATE ACTUAL CIRCUIT TRACED BRANCH CIRCUIT NUMBERS ON AS-BUILT DOCUMENTS FOR EACH CIRCUIT AFFECTED BY WORK (DEMOLITION, NEW AND RELOCATED).
- K. WHERE EXISTING SPARES OR SPACES IN PANELBOARDS ARE INDICATED FOR USE IN THE PROJECT, REMOVE THE PANEL COVERS PRIOR TO INSTALLING ANY CONDUIT AND WIRING RELATED TO THE PANEL AND CONFIRM THAT SPARES ARE AVAILABLE (NO WIRING TO UNLABELLED BREAKERS), AND CONFIRM THAT POSITIONS INDICATED AS SPACES CONTAIN BUSSING SUITABLE FOR THE ADDITION OF BREAKERS. SEND PHOTOGRAPHS TO A/E OF ANY CONDITIONS FOUND WHICH ARE NOT CONSISTENT WITH USABLE SPARES AND SPACES.
- L. COORDINATE PHASING OF WORK WITH CAPITAL CONSTRUCTION /CONSTRUCTION COORDINATOR INCLUDING BUT NOT LIMITED TO THE USE OF TEMPORARY PARTITIONS IN CORRIDORS TO MAINTAIN PEDESTRIAN CIRCULATION AND MULTIPLE PHASES OF CONSTRUCTION. REFER TO ARCHITECTURAL DOCUMENTS FOR ADDITIONAL PHASING REQUIREMENTS. PROVIDE ALL WORK AND TEMPORARY SERVICES AS REQUIRED TO ACCOMMODATE PHASING, INCLUDING BUT NOT LIMITED TO TEMPORARY NORMAL AND EMERGENCY EGRESS AND EXIT LIGHTING. TEMPORARY LIGHTING DESIGN / LAYOUT IS MEANS AND METHODS BY ELECTRICAL CONTRACTOR. PROVIDE PREMIUM TIME WORK IF DIRECTED AS REQUIRED TO ACCOMMODATE PROJECT SCHEDULING.
- M. WHERE WALLS, STRUCTURE AND OTHER BUILDING SYSTEMS ARE REMOVED AND ABOVE FINISHED CEILINGS, INDEPENDENTLY RE-SUPPORT ANY EXISTING TO REMAIN RACEWAYS. PROVIDE MISCELLANEOUS STEEL AS REQUIRED TO SUPPORT RACEWAY. REFER TO ARCHITECTURAL DOCUMENTS FOR WALLS TO BE REMOVED.
- N. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO BEGINNING WORK OR SUPPLYING MATERIALS OR COMPONENTS.
- O. PROVIDE FLUSH INSTALLATION OF OUTLET BOXES AND CONCEAL CONDUIT FOR ALL SYSTEMS IN FINISHED AREAS. WORK MAY BE EXPOSED IN MECHANICAL AND ELECTRICAL SPACES. CUT AND PATCH EXISTING SURFACES AS REQUIRED AND REFINISH TO MATCH FINAL ARCHITECTURAL FINISH OF SPACE, OR PRE-CONSTRUCTION CONDITIONS IF NO OTHER ARCHITECTURAL FINISH WORK IS PERFORMED IN THE AREA. REFER TO ARCHITECTURAL DRAWINGS TO DETERMINE LOCATIONS OF INCIDENTAL ADDITIONAL FINISH WORK ASSOCIATED WITH RESTORATION OF EXISTING FINISHES WHERE ALTERED BY ELECTRICAL WORK. FINISH ANY DAMAGED/ALTERED SURFACES PER ARCHITECT'S DIRECTION.
- P. CONTRACTOR IS TO DETERMINE ROUTING OF ALL CIRCUITS ABOVE FINISHED CEILING AS MEANS AND METHODS. FIELD SURVEY TO DETERMINE ROUTING. PROVIDE CONCEALED ROUTING FOR ALL WORK. REMOVE AND REINSTALL CEILING AS REQUIRED TO PERFORM WORK.
- Q. PROVIDE A LOCAL DISCONNECTING MEANS FOR ALL EQUIPMENT AND LOADS WHICH ARE NOT CORD-AND-PLUG CONNECTED.
- R. ALL WIRING IS TO BE PERFORMED BY LICENSED ELECTRICIANS.
- S. EXISTING DEVICES/EQUIPMENT TO REMAIN ARE SHOWN WITH LIGHT LINE WEIGHT, NEW DEVICES/EQUIPMENT ARE SHOWN WITH DARK LINE WEIGHT AND DEVICES/EQUIPMENT SHOWN HATCHED ARE TO BE REMOVED.
- T. PROVIDE NEUTRAL CONDUCTORS FROM THE SAME BRANCH CIRCUIT TO NEW LIGHTING CONTROLS IF NOT ALREADY PRESENT AT THE CONTROL LOCATION.
- U. MAINTAIN INTEGRITY OF ALL EXISTING FIRE RATED PARTITIONS. REFER TO ARCHITECTURAL DOCUMENTS AND EXISTING FIELD MARKINGS FOR RATINGS.
- V. INSTALL WORK AND EQUIPMENT AS INDICATED ON DRAWINGS, AND PER NEC AND UNIVERSITY OF MICHIGAN HOSPITALS AND HEALTH CENTERS SPECIFICATIONS, STANDARDS AND DESIGN GUIDELINES.
- W. MAKE FINAL CONNECTION TO ALL EQUIPMENT INDICATED PER MANUFACTURER'S INSTALLATION INSTRUCTION. COORDINATE LOCATION OF SERVICE TO ALL EQUIPMENT WITH APPROVED SUBMITTALS AND WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO INSTALLATION.
- X. ANY EQUAL LIGHT FIXTURES SUBMITTED MUST BE ON THE CURRENT UMH PREFERRED MANUFACTURERS LIST AND MUST BE APPROVED BY THE A/E AND THE OWNER. IF ANY SUBMITTED "EQUAL" FIXTURES ARE REJECTED, CONTRACTOR IS TO PROVIDE THE SPECIFIED PRODUCT AT NO ADDITIONAL COST.

- Y. RESUPPORT ANY UNSUPPORTED WIRING AND RACEWAYS ABOVE CEILING IN WORK AREA.
- Z. PROVIDE UL LISTED SYSTEM FOR FIRE STOPPING PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. PROVIDE SYSTEM WITH EQUAL OR GREATER RATING THAN ASSEMBLY. REFER TO ARCHITECTURAL DOCUMENTS FOR RATINGS AND LOCATIONS OF ASSEMBLIES. FIRE STOPPING MUST BE INSTALLED BY CERTIFIED PERSONNEL.
- AA. EXISTING CONDUIT SIZES NOTED ARE APPROXIMATE ONLY. CONFIRM ACTUAL DIMENSIONS AND MATCH FOR ANY EXTENSION OF CIRCUITS UNLESS OTHERWISE NOTED.
- AB. PROVIDE ACCESS PANELS PER UMH STANDARDS WHERE REQUIRED FOR ELECTRICAL WORK. PANELS ARE NOT SHOWN. COORDINATE LOCATION WITH ARCHITECT PRIOR TO INSTALLATION OF PANEL AND RELATED ELECTRICAL WORK.
- AC. AT ALL WORKSTATIONS, COORDINATE LOCATION OF POWER AND TELECOMMUNICATIONS OUTLETS WITH APPROVED WORKSTATION/FURNITURE/MILLWORK SUBMITTALS PRIOR TO INSTALLATION OF BOXES AND RACEWAYS. LOCATE OUTLETS IN ACCESSIBLE KNEESPACE OF WORKSTATIONS UNLESS OTHERWISE NOTED. ALSO AVOID INTERFERENCES WITH FILING CABINETS AND WORKSTATION ACCESSORIES SUCH AS COMPUTER LOCATIONS AS APPLICABLE.
- AD. WHERE "TYPICAL" IS NOTED, THE CONDITION APPLIES FOR ALL ROOMS ALL SHEETS IN THE WORK.
- AE. THE DOCUMENTATION FOR THIS PROJECT IS BASED ON CONSTRUCTION BY UMH CONSTRUCTION SERVICES. FOR BIDDING, AND/OR WORK PERFORMED THROUGH AEC (UNIVERSITY OF MICHIGAN ARCHITECTURE, ENGINEERING AND CONSTRUCTION), THE CONTRACTOR IS TO FOLLOW ALL DESIGN AND CONSTRUCTION REQUIREMENTS OF THE UMH FACILITIES PLANNING AND DEVELOPMENT DESIGN GUIDELINES. ALL MATERIAL SELECTION, PRODUCTS, WORK IS TO BE SELECTED AND PERFORMED PER UMH STANDARDS WHETHER EXPLICITLY DOCUMENTED OR NOT.
- AF. COORDINATE AND ATTEND COORDINATION MEETINGS BETWEEN CONTRACTOR TRADES PRIOR TO AND DURING CONSTRUCTION. REVIEW AND PLAN EQUIPMENT LOCATIONS AND ROUTING OF MECHANICAL AND ELECTRICAL WORK TO AVOID INTERFERENCES AND MAINTAIN WORKING CLEARANCES. OBTAIN UMH INSPECTOR APPROVAL OF PLANNED INSTALLATION LOCATIONS PRIOR TO INSTALLATION. VERIFY THAT CONDENSER LINES, DUCTWORK AND OTHER MECHANICAL ITEMS DO NOT INTERFERE WITH ELECTRICAL WORKING CLEARANCES.
- AG. COMPLY WITH THE UMH INFECTION CONTROL POLICIES AND PROCEDURES FOR ALL WORK. LIMIT CEILING TILE REMOVAL PER INFECTION CONTROL REQUIREMENTS AND/OR PROVIDE TENTS AS REQUIRED TO PERFORM WORK.
- AH. PROVIDE ALL WORK RELATING TO ISOLATED POWER SYSTEMS ACCORDING TO SHEETS E0.04 AND E0.05.
- AI. INCLUDE WORK INDICATED ON KEY PLANS. WORK NOTED ON KEY PLANS IS NOT DUPLICATED ON DEMOLITION AND NEW WORK PLANS.
- AJ. CLOCKS IN AREA OF WORK ARE BATTERY OPERATED AND ARE NOT POWERED BY ISOLATION PANELS. CLOCKS ARE EXISTING TO REMAIN.
- AK. ISOLATION PANEL CERTIFIER'S PRE-CONSTRUCTION INSPECTION HAS IDENTIFIED EXISTING CONDITIONS IN THE OR-8 ROOM WHICH ARE NOT COMPLIANT WITH CURRENT ISOLATED POWER INSTALLATION STANDARDS ON SHEETS E0.5 AND E0.6. INCLUDE COST FOR FIELD INVESTIGATION OF EXISTING CONDITIONS. PERFORM CORRECTIONS AS NOTED/REFERENCED ON SHEET E0.6
- AL. IF A PARTICULAR CONDUIT INTENDED TO BE REUSED HAS FILL ISSUES BASED ON BEING ONE CONDUCTOR TOO FULL, THE REFERENCE LOOP GROUND CONDUCTOR ONLY MAY BE RELOCATED OUTSIDE OF THE CONDUIT AND STRAPPED TO THE OUTSIDE OF THE CONDUIT. NOTIFY ELECTRICAL INSPECTOR OF THIS CONDITION AND OBTAIN INSPECTOR APPROVAL.
- AM. WHERE FLEXIBLE METALLIC CONDUIT IS USED IN CONNECTIONS TO BOOM BASES AND THE REDUNDANT GROUNDS OF THE #10 AWG ARE CODE-REQUIRED TO BE LOCATED ALONG WITH THE POWER CONDUCTORS, PROVIDE NEW ADEQUATELY SIZED FLEXIBLE METALLIC CONDUIT TO ACCOMMODATE THE CONDUCTORS WITH SHORTEST FLEXIBLE CONDUIT LENGTH POSSIBLE.
- AN. EXISTING WALLS ARE TILE IN THE OR. PROTECT EXISTING TILE SURFACES. PROVIDE BLANK STAINLESS STEEL COVERPLATES WHERE DEVICES ARE REMOVED AND NOT REUSED.

ELECTRICAL DEMOLITION GENERAL NOTES :

- A. DEMOLITION GENERAL NOTES APPLY TO ALL ELECTRICAL DEMOLITION PLANS INCLUDED WITHIN THIS DOCUMENT SET.
- B. COORDINATE ALL DEMOLITION WORK WITH MECHANICAL AND ARCHITECTURAL DEMOLITION PLANS, INFECTION CONTROL REPRESENTATIVE, OWNER'S FACILITY MANAGER, AND ALL TRADE CONTRACTORS PERFORMING DEMOLITION.
- C. THESE DEMOLITION NOTES AND PLAN DO NOT FULLY REPRESENT ALL DEMOLITION WORK REQUIRED TO INSTALL NEW WORK IN ACCORDANCE WITH CONTRACT DOCUMENTS, BUT ARE INTENDED TO SERVE AS GENERAL DEMOLITION GUIDELINES. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF INCIDENTAL DEMOLITION WORK NOT INDICATED ON THIS PLAN.
- D. WHERE ITEMS ARE REMOVED, AND-OR WHERE NEW FLUSH MOUNTED DEVICES REQUIRE CUTTING/OPENING OF EXISTING SURFACES, PATCH SURFACES TO MATCH ADJACENT SURFACES OR TO RECEIVE NEW FINISHES WHERE SCHEDULED. PATCHING OF NEW OR EXISTING FINISHES SHALL EXTEND TO NEAREST CORNER OR NATURAL TERMINATION FOR A CONSISTENT, SMOOTH, INVISIBLE TRANSITION FINISHES AT THE END OF CONSTRUCTION.
- E. THE EXISTING FLOOR SLAB IS BEING REMOVED, CUT OR CORED AS PART OF DEMOLITION OR NEW WORK, PROVIDE SCANNING/TRACING OF FLOOR TO IDENTIFY AND PROTECT ANY EXISTING TO REMAIN ELECTRICAL CONDUITS AND WIRING AND OTHER UTILITIES AND STRUCTURAL ELEMENTS IN/UNDER SLAB PRIOR TO DEMOLITION OF THE SLAB. HAND DIG AROUND EXISTING TO REMAIN UTILITIES. PROTECT AND MAINTAIN FEEDERS AND CIRCUITS SERVING LOADS OUTSIDE THE AREA OF WORK. TYPICAL FOR OTHER UTILITIES. DO NOT PENETRATE VAPOR BARRIER BELOW CONCRETE SLABS.
- F. COORDINATE ANY SERVICE SHUTDOWNS WITH OWNER. COORDINATE ANY SHUTDOWNS OF EXISTING SERVICES OR EQUIPMENT WITH OWNER. PERFORM SHUTDOWNS AT A SCHEDULED TIME AS TO MINIMIZE DISRUPTION OF BUILDING OPERATIONS. USE UMH FACILITIES STANDARD PROCEDURE FOR SHUTDOWNS, WHICH INCLUDES A MINIMUM OF TEN BUSINESS DAYS NOTICE FOR INVESTIGATION.
- G. WHERE DEMOLITION IS SPECIFIED OR INDICATED, REMOVE WORK AS NOTED BELOW AND PATCH SURFACE TO MATCH EXISTING OR NEW FINISH AS APPLICABLE. FIRE STOP ALL PENETRATIONS LEFT IN FLOORS AND FIRE/SMOKE-RATED WALLS. POWER, LIGHTING CONTROLS, BLANK OUTLET BOXES: REMOVE WIRING DEVICE. REMOVE WIRING BACK TO SOURCE OR TO THE NEAREST EXISTING TO REMAIN JUNCTION BOX IF CIRCUIT SERVES EXISTING TO REMAIN ACTIVE LOADS. REMOVE OUTLET BOX - DO NOT PROVIDE BLANK COVERPLATES. ABANDON CONDUIT CONCEALED IN WALLS. CUT OFF CONDUIT WHERE IT EMERGES FROM WALL ABOVE CEILING AND PLUG OR CAP END. REMOVE CONDUIT BACK TO SOURCE WHERE OTHERWISE ACCESSIBLE, INCLUDING ABOVE FINISHED CEILINGS. PLUG OPENINGS IN PANELS AND BOXES FROM REMOVED CONDUIT. REMOVE FLEXIBLE CONDUIT IN WALLS COMPLETELY. TELECOMMUNICATIONS/DATA: IT CONTRACTOR TO DISCONNECT AT SOURCE IN COMMUNICATIONS ROOM AND AT EACH OUTLET. ELECTRICAL CONTRACTOR TO REMOVE CABLE, OUTLET BOX AND CONDUIT AS NOTED FOR POWER AND LIGHTING CONTROLS.
- H. REFER TO DRAWINGS FOR EXISTING BUILDING COMPONENTS TO BE REMOVED, SALVAGED, AND REUSED IN NEW WORK. THE CONTRACTOR IS RESPONSIBLE FOR ALL ITEMS TO BE SALVAGED AND RELOCATED, THROUGHOUT THE CONSTRUCTION PERIOD, INCLUDING SAFE STORAGE OF SAME. UPON DEMOLITION, THE OWNER SHALL RETAIN THOSE ITEMS DEEMED SALVAGEABLE. ITEMS NOT RETAINED SHALL BECOME THE PROPERTY OF THE CONTRACTOR, WHO SHALL LEGALLY DISPOSE OF SAME.
- I. REMOVE STEEL SERVING EXISTING REMOVED SURGICAL COLUMNS AND BOOM. TYPICAL FOR RELATED ELECTRICAL SERVICES UNLESS OTHERWISE NOTED. PROVIDE SUITABLE CLEAR SPACE TO INSTALL AND MAINTAIN AIRFRAME SYSTEMS/UTILITIES.
- J. WHERE WORK IN/ON WALL IS REQUIRED, PROTECT AND MAINTAIN EXISTING TILE TO THE EXTENT POSSIBLE. REUSE ANY EXISTING REMOVED TILE TO PATCH AS REQUIRED.

ISOLATED POWER SYSTEMS (IPS) – POST-CONSTRUCTION CERTIFICATION/TESTING:

PROVIDE A CERTIFICATION TEST REPORT TO THE OWNER FOR EACH IPS THAT IS MODIFIED OR INSTALLED WITHIN ANY GIVEN SCOPE OF WORK. CERTIFY THAT THE ISOLATED POWER SYSTEM (IPS) HAS MET ALL QUALIFICATIONS AND INCLUDE THE FOLLOWING:

1. ALL FIXED EQUIPMENT TESTED AND NOT ONE CIRCUIT SHALL EXCEED 5.0MA.
2. PORTABLE EQUIPMENT SHALL NOT HAVE THE LEAKAGE CURRENT EXCEED 100µA WITH THE GROUND WIRE CLOSED AND SHALL NOT EXCEED 500µA WITH GROUND WIRE DISCONNECTED.
3. ALL CIRCUITS SHALL HAVE THE CURRENT READINGS WITH EQUIPMENT ON AND OFF. PROVIDE IDENTIFICATION OF EACH CIRCUIT AS IT IS SHOWN ON PANEL SCHEDULE.
4. CONFIRM THAT EACH NEW OR MODIFIED LINE ISOLATION MONITOR (LM) WILL ACTUALLY CREATE AUDIBLE AND VISUAL ALARMS AS DESCRIBED BY THE MANUFACTURER. TEST EACH CIRCUIT THROUGH A RESISTOR WHOSE VALUE IS 200 * V (OHMS), WHERE V EQUALS MEASURED LINE VOLTAGE. RECORD THE LIM ALARM MILLIAMPERE VALUE INDICATED. CONFIRM THAT THE LIM ALARMS CAN BE ACKNOWLEDGED/MUTED.
5. TEST EACH HOSPITAL GRADE RECEPTACLE COVERED BY THE IPS PER NFPA 99 WITH A PULL TEST THAT EXCEEDS 4 OUNCES (115 GRAM).
6. TEST AND REPORT ANY REVERSE POLARITY RECEPTACLE WIRING.
7. TEST ALL CONDUCTIVE SURFACES FOR THE VOLTAGE POTENTIAL 20 MILLIVOLT LIMIT AND REPORT ANY NON-BONDED METAL STORAGE CABINETS.
8. CONFIRM THAT ALL ISOLATED POWER PANELS IN EACH ROOM ARE BONDED TOGETHER WITH A MINIMUM #6 AWG GREEN THHN CABLE AND NOT TO BE BONDED TO OTHER PANELS OUTSIDE OF THE ROOM.
9. IDENTIFY ANY INCORRECT PANEL SCHEDULE CIRCUIT LABELS.
10. IDENTIFY ANY EXISTING NON-CODE COMPLIANT WIRING (ANSI TYPE AND/OR COLOR).
11. TEST ALL BRANCH CIRCUIT WIRING FOR LEAKAGE CURRENTS TO GROUND (WIRING SHALL BE ISOLATED FROM PANEL BOARDS, WIRING DEVICES AND HARD WIRED EQUIPMENT). RECOMMEND REPLACING THE WIRING ON ANY CIRCUIT EXCEEDING IPS MANUFACTURER'S RECOMMENDATIONS.
12. TEST OVERALL SYSTEM WIRING WITH RECEPTACLES INSTALLED.
13. TEST THAT THE RESISTANCE BETWEEN THE GROUND POINT OF EACH RECEPTACLE AND THE REFERENCE POINT IS LESS THAN 0.2 OHMS.
14. TEST THAT THE SYSTEM IMPEDANCE OF THE ISOLATED SYSTEM MUST EXCEED 200,000 OHMS, INCLUDING RECEPTACLES BUT NOT LIGHT FIXTURES OR COMPONENTS OF FIXTURES.
15. EXISTING ISOLATED POWER SYSTEMS SHALL BE RE-CERTIFIED BY A QUALIFIED AGENCY.
16. ALL CONDUCTORS DISTRIBUTED FROM THE IPS SHALL HAVE DIELECTRIC CONSTANT OF 3.5 OR LESS, TYPE XHHW-2.
17. SIMULATE AN ALARM CONDITION TO CONFIRM AUDIO AND VISUAL ALARMS.
18. IDENTIFY ANY CONDITIONS THAT WERE PRESENT AT TIME OF TEXTING AND WERE CORRECTED ON SITE AT TIME OF TESTING.

THE RESULTS OF ALL TESTS PERFORMED BY THE QUALIFIED AGENCY SHALL BE DOCUMENTED IN A REPORT THAT CONTAINS ALL OF THE ABOVE AND ALSO CONTAINS THE FOLLOWING:

1. MICHIGAN MEDICINE PROJECT TITLE INCLUDING RTN NUMBER AND AEC PROJECT NUMBER OR WORK ORDER NUMBER.
2. DATE OF TEST AND DATE OF REPORT SUBMISSION.
3. INDICATE IF THE REPORT IS A RESUBMISSION BASED ON RETESTING AFTER ORIGINALLY IDENTIFIED ISSUES WERE LATER REMEDIATED. INCLUDE THE ORIGINAL TEST REPORT SUBMISSION DATE IF THAT IS THE CASE.
4. QUALIFIED AGENCY CERTIFIER'S NAME AND CONTACT INFORMATION.
5. EACH QUALIFIER MENTIONED ABOVE SHALL BE CLEARLY IDENTIFIED AS A PASS/FAIL STATUS.
6. A DESCRIPTION OF ANY OTHER CODE VIOLATIONS OBSERVED IN THE ROOM BY THE CERTIFIER. FOR EXAMPLE; NON GFCI OR ISOLATED POWER RECEPTACLES PROVIDING POWER TO BOOMS OR OTHER PORTABLE EQUIPMENT CAPABLE OF EXTENDING INTO THE PATIENT VICINITY



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UM Design Manager:	B. Merritt
Designed:	S. Wheeler
Drawn:	C. Bayer
Coordination Checked:	S. Wheeler
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Approved:	S. Wheeler
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Keyword:	Notes

Project
UH OR8 UTILITY COLUMN

Sheet Title
ELECTRICAL GENERAL
NOTES

Project Number Sheet Number
E0.2

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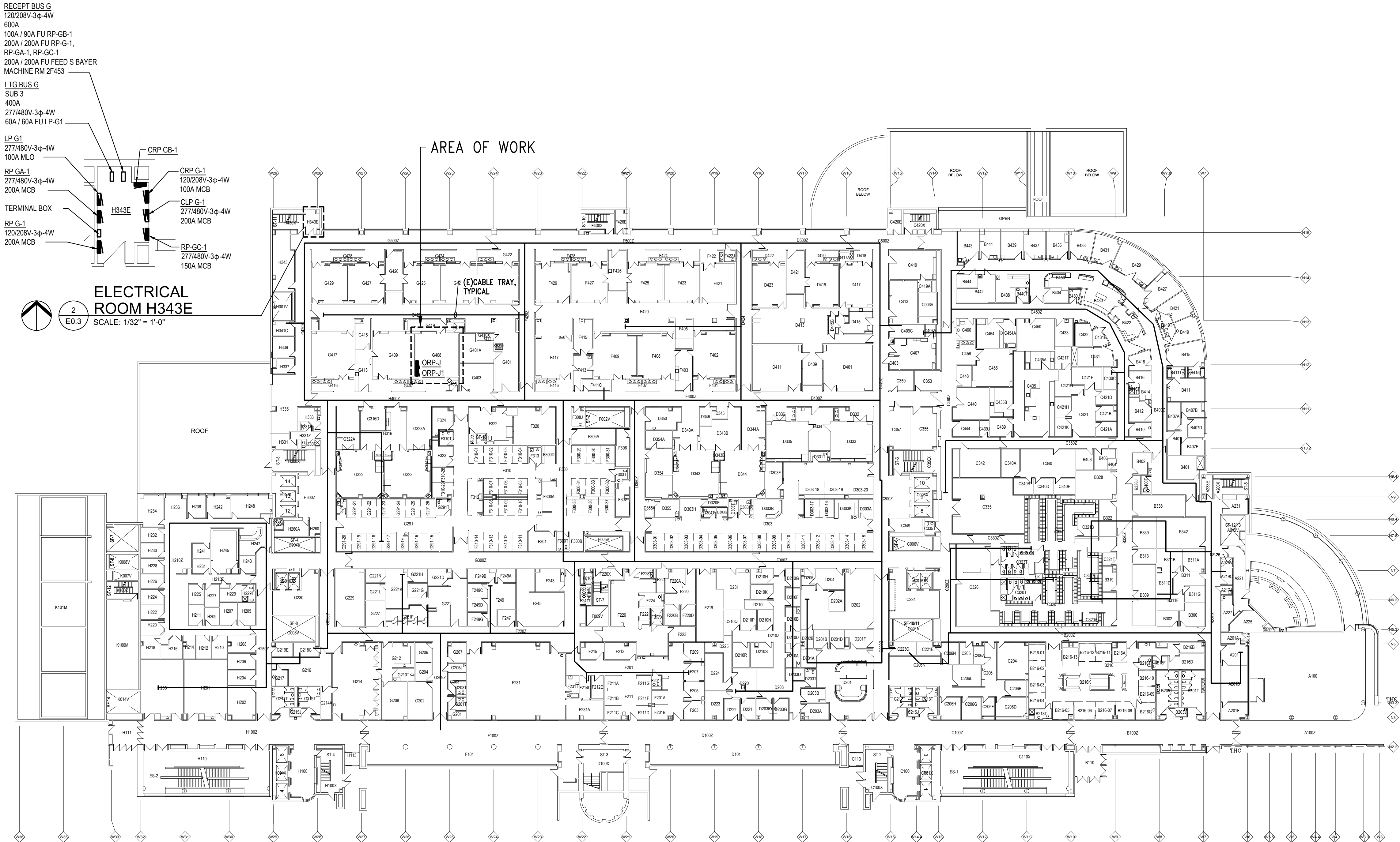
Project
UH OR8 UTILITY COLUMN

Sheet Title
**ELECTRICAL KEY PLAN -
LEVEL 01**

Project Number Sheet Number

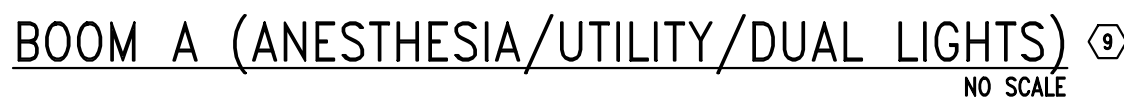
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PBN 947####
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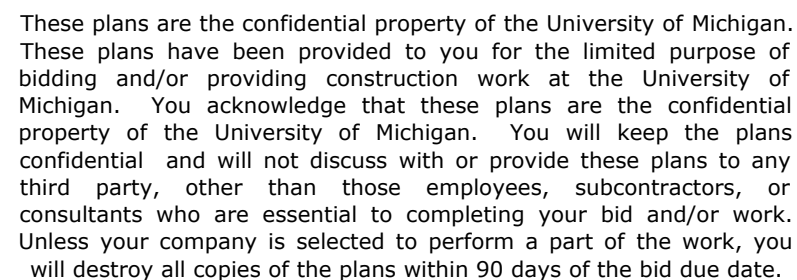


ELECTRICAL KEY PLAN - LEVEL 01
SCALE: 1/32" = 1'-0"

4 11 12 13



- (1) INSTALL SKYTRON-FURNISHED ELECTRICAL JUNCTION BOX AT BOOM MOUNTING PLATE PER INSTALLATION INSTRUCTIONS. BOX ACCOMMODATES UP TO SIX CIRCUITS. MAKE FINAL CONNECTION TO CABLE RECEPTACLES.
- (2) NOT USED.
- (3) PROVIDE OUTLET BOXES AND WORK SAME AS A TYPICAL COMMUNICATIONS OUTLET INSIDE NEMA ENCLOSURE. PROVIDE ACTIVATIONS OF OUTLETS AS INDICATED AT EACH BOOM. PROVIDE BLANK-OFFS FOR UNUSED JACK POSITIONS.
- (4) ALL WIRING FROM ISOLATED POWER PANELS IS TO BE TYPE XHNW-2, #12AWG, 90 DEGREE C, COPPER CONDUCTOR IN 3/4" EMT, UNLESS OTHERWISE NOTED. PROVIDE THE FOLLOWING ENCLOSURE (BOOM) WIRING AS FOLLOWS: #12 AWG, 600V, TYPE XHNW-2, 90 DEGREE C, COPPER CONDUCTOR UNLESS OTHERWISE NOTED. PROVIDE HEALTHCARE LISTED FLEXIBLE METAL DUCT AS SELECTED BY BOOM SUPPLIER. EXTEND FLEXIBLE DUCT BELOW FINISHED CEILING PER SKYTORN SHOP DRAWINGS.
- (5) PROVIDE TELECOMMUNICATION JUNCTION BOX AT SKYTORN BOOMS AS DETAILLED ON SHEET HJTS/ATM. PROVIDE ONE TELECOMMUNICATIONS CABLEING TO EACH TELECOMMUNICATIONS OUTLETS MOUNTED IN ENCLOSURE, HJTS/ATM TO FURNISH AND PULL TELECOMMUNICATIONS PATCH CORDS FROM TELECOMMUNICATIONS JUNCTION BOX TO EACH ROOM TO COORDINATE WITH THE OTHER ROOMS. COORDINATE ALL WORK IN BOOM WITH SKYTORN. HJTS/ATM TO COORDINATE PATCH CORD LENGTH WITH APPROVED BOOM SHOP DRAWINGS (INCLUDED 50' FOOT LENGTH FOR PATCH CORDS FOR BUDGETARY PURPOSES ONLY).
- (6) LABEL JUNCTION BOX COVERPLATE WITH PANEL & CIRCUIT NUMBER FOR PANELS CONTAINED WITHIN LABEL. EACH RECEPTACLE COVERPLATE ON BOOM WITH CIRCUIT NUMBER. SKYTORN WILL FURNISH BRANCH CIRCUIT TO ENCLOSURE AND TERMINATE THE COVERPLATE IN ADDITION TO ACTUAL PANELBOARD/BRANCH CIRCUIT NUMBER.
- (7) DISPLAY INTERFACE POWER SUPPLY JUNCTION BOX FOR SKYTORN BOOM MONITOR. PROVIDE NEMA 4 ENCLOSURE WITHIN 3 FEET OF THE EQUIPMENT MOUNT. PROVIDE 18" X 18" X 12" DEEP ENCLOSURE WITH REMOVABLE COVER FOR BIDDING PURPOSES. COORDINATE FINAL DIMENSIONS WITH SKYTORN AND MONITOR EQUIPMENT SUPPLIER PER INSTALLATION INSTRUCTIONS. COORDINATE JUNCTION BOX TO ENCLOSURE AND TERMINATE IN SINGLE-POLE MANUAL MOTOR SWITCH AS DISCONNECTING MEANS TO POWER SUPPLY. COORDINATE WITH POWER SUPPLY SUPPLIER TO FURNISH A HARD-WIRED POWER SUPPLY TO INTERNAL MAIN CORD AND PLUS COORDINATE ALL WORK TO BE MADE ABOVE FINISHED CEILING PER REC. INCLUDE COST IN BID TO PROVIDE GROMMETTED OPENING IN ENCLOSURE OR ADDITIONAL RACEWAY TO BOOM FOR DISPLAY INTERFACE CABLE VOLTAGE CABLEING TO BOOM. PERFORM ALL COORDINATION PRIOR TO INSTALLATION OF ANY RELATED WORK FOR THIS SYSTEM.
- (8) NEMA 1 ALUMINUM ENCLOSURE WITH TWO-POLE, 30A, SINGLE THROW SWITCH, PAD-LOCKABLE OFF AS DISCONNECTING MEANS. HUNBELL HT13720 OR APPROVED EQUAL, LOCATE IN ACCESSIBLE LOCATION ABOVE FINISHED CEILING ADJACENT TO SKYTORN FURNISHED JUNCTION BOX. PROVIDE MEDIUM CARBON STEEL STUD FOR MOUNTING. LABEL WITH CIRCUIT NUMBER AND WITH "ACTIVE ASSIST DOZ - BOTH UTILITY BOOMS". MAKE FINAL CONNECTION TO SKYTORN EQUIPMENT/MONITOR POWER SUPPLY.
- (9) SKYTORN CIRCUIT NUMBERS REFERENCE THE SKYTORN SHOP DRAWINGS. SEE PLANS & DETAILS FOR ACTUAL BRANCH CIRCUIT NUMBERS.
- (10) INSTALL SKYTORN FURNISHED ELECTRICAL ENCLOSURE/JUNCTION BOX FOR MOTORIZED HEIGHT ADJUSTABLE ARM.
- (11) PROVIDE PRONG BONDING OF THE BOOM EQUIPMENT WIRING TERMINATIONS AT THE BASE.
- (12) PROVIDE ELECTRICAL ISOLATION OF ANY A/V 4-IN-1 PANELS ON THE BOOMS.
- (13) COORDINATE LOCATION OF JUNCTION BOOMS ABOVE FINISHED CEILING WITH AIR FRAME CEILING SYSTEMS. LOCATE TO MAKE FINAL CONNECTIONS TO ELECTRICAL WHIPS, ELECTRICAL ENCLOSURES, TELECOMMUNICATIONS PATCH CABLES, AND BOOM SERVICES WHILE MAINTAINING ACCESSIBILITY TO JUNCTION BOXES.



UM Design Manager:	B. Merri
Designed:	S. Wheeler
Drawn:	C. Baye
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Checked:	S. Wheeler
Approved:	S. Wheeler
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E0.4



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BIDS - ELECTRICAL	04/05/22
95% OWNER REVIEW	03/11/22

CD's Issued To:
BFS: TBD HFES: TBD
BFS Shop Drawing Submission Req'd:
FA: Yes SUPP: Yes

Project Delivery Method: CS

UM Design Manager:	B. Merritt
Designed:	S. Wheeler
Drawn:	C. Bayer
Coordination Checked:	S. Wheeler
Checked:	S. Wheeler
Approved:	S. Wheeler
Location	UH - Level 1
Keyword:	Details

Project
UH OR8 UTILITY COLUMN

Sheet Title
ELECTRICAL DETAILS - 2

Project Number Sheet Number

PBN 947###
RTN 9520467

ISOLATED POWER SYSTEM KEY NOTES:

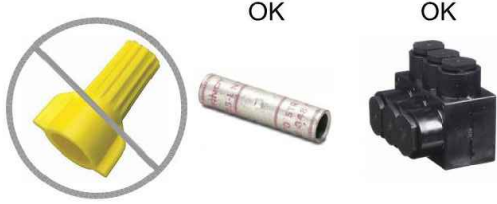
- 1 ISOLATED POWER CONDUCTOR REQUIREMENTS:
DIELECTRIC CONSTANT OF 3.5 OR LESS, (XHHW-2) 90 DEGREE C COPPER. WIRE SIZE #12 AWG TYPICAL FOR ONE-TWO CIRCUITS IN 3/4" C, PROVIDE #10 AWG TYPICAL FOR THREE-FOUR CIRCUITS IN 1" C.
ORANGE WITH A DISTINCTIVE COLORED STRIPE OTHER THAN WHITE, GREEN OR GRAY. TERMINATES ON RECEPTACLE "NEUTRAL" TERMINAL.
BROWN WITH A DISTINCTIVE COLORED STRIPE OTHER THAN WHITE, GREEN OR GRAY. TERMINATES ON RECEPTACLE "HOT" TERMINAL.
GREEN W/ YELLOW STRIPE ISOLATED POWER BONDING GROUND, DEDICATED, SEPARATE WIRE FOR EACH CIRCUIT FROM "GROUND" TERMINAL TO PANEL.

- 2 OVERCURRENT AND PROTECTION SWITCHES:
BRANCH CIRCUIT BREAKERS TO BE 2-POLE, SINCE BOTH CONDUCTORS ARE CURRENT-CARRYING.
HARDWIRED FIXED EQUIPMENT SHALL BE CONNECTED TO 2-POLE SWITCHES (FILM VIEWERS, UNDER-CABINET LIGHTING, BOOM MOTORS).

- 3 REFERENCE GROUND LOOP:
#10 AWG (MINIMUM) GREEN COMMON GROUND WIRE FOR BONDING BACK BOXES, FLEXIBLE METALLIC CONDUITS, BOOM CHASSIS AND EXPOSED FIXED CONDUCTIVE SURFACES TO THE PANEL GROUND BUS BY TERMINATING AT BOTH ENDS. MAY USE WIRE NUTS.

- 4 CONDUIT FILL REQUIREMENTS:
USE NONFLEXIBLE METAL CONDUIT IF AT ALL POSSIBLE. INSTALL REDUNDANT GROUND IF FLEXIBLE METAL CONDUIT IS NECESSARY.
3/4" MINIMUM SIZE, WITH NOT MORE THAN 2 ISOLATED POWER CIRCUITS (6 CONDUCTORS) PER 3/4" CONDUIT.
1" MAXIMUM SIZE, WITH NOT MORE THAN 4 ISOLATED POWER CIRCUITS (12 CONDUCTORS) PER 1" CONDUIT.
NEVER USE WIRE PULLING COMPOUNDS!

- 5 WIRING SPLICES:
MINIMIZE ISOLATED POWER CONDUCTOR (ORANGE, BROWN, AND GREEN/YELLOW STRIP) SPLICES AS MUCH AS POSSIBLE. IF SPLICES ARE NECESSARY, THEN USE COMPRESSION SPLICES. DO NOT USE WIRE NUTS.



- 6 WIRING DEVICES:
USE HOSPITAL GRADE RECEPTACLES ONLY, PER NEC 517.
DO NOT USE ISOLATED GROUND RECEPTACLES, PER NEC 517.
DO NOT USE GFCI, SURGE PROTECTION POWER TAPS, OR ANY OTHER DEVICE THAT HAS A RELATIONSHIP WITH AN EQUIPMENT GROUND TO OPERATE.
LINE INTERACTIVE UPS HAVE AN INHERENTLY HIGH LEAKAGE CURRENT. USE ONLY DOUBLE CONVERSION UPS IN THE ISOLATED POWER SYSTEM, IF REQUIRED BY THE MEDICAL EQUIPMENT.

- 7 LIMIT TOTAL LENGTH OF BRANCH CIRCUIT CONDUCTORS FED BY ONE ISOLATED POWER TRANSFORMER TO 480 FEET:
MINIMUM IMPEDANCE TO GROUND ≥ 200 KΩ AT COMMISSIONING PER NFPA 99 6.3.2.6.
THEREFORE MAXIMUM ALLOWABLE SYSTEM HAZARD CURRENT = 120 V ÷ 200 KΩ = 600 MA.
TYPICAL PANEL LEAKAGE = 50 MA (INTERIOR DEVICES) + 25 MA (10 KVA TRANSFORMER) = 75 MA.
REMAINING ALLOWABLE LEAKAGE FOR CIRCUIT CONDUCTORS = 600 MA - 75 MA = 525 MA.
LEAKAGE CURRENT OF XLPE CABLE IS 1 MA/FT IN METALLIC CONDUIT PER IEEE 602-2007. USE CONSERVATIVE VALUE OF 1.1 MA/FT.
TOTAL RECOMMENDED CIRCUIT CONDUCTORS LENGTH = 525 MA ÷ 1.1 MA/FT = 477.27 FEET.

- 8 RECOMMENDED LIMITING CIRCUITS TO NO MORE THAN THREE DUPLEX RECEPTACLES (6 OUTLETS) EACH:
THE LINE ISOLATION MONITOR IS TESTING FOR A WORST CASE SCENARIO, THEREFORE ADDING ADDITIONAL EQUIPMENT TO A CIRCUIT CAN CAUSE ADDITIONAL LEAKAGE TO THE MONITORED CIRCUIT.
NOTE THAT EXISTING CIRCUITS ON SOUTH WALL AND IN CABINET INCLUDE FOR DUPLEX RECEPTACLES. THESE CIRCUITS MAY REMAIN WITH FOUR.

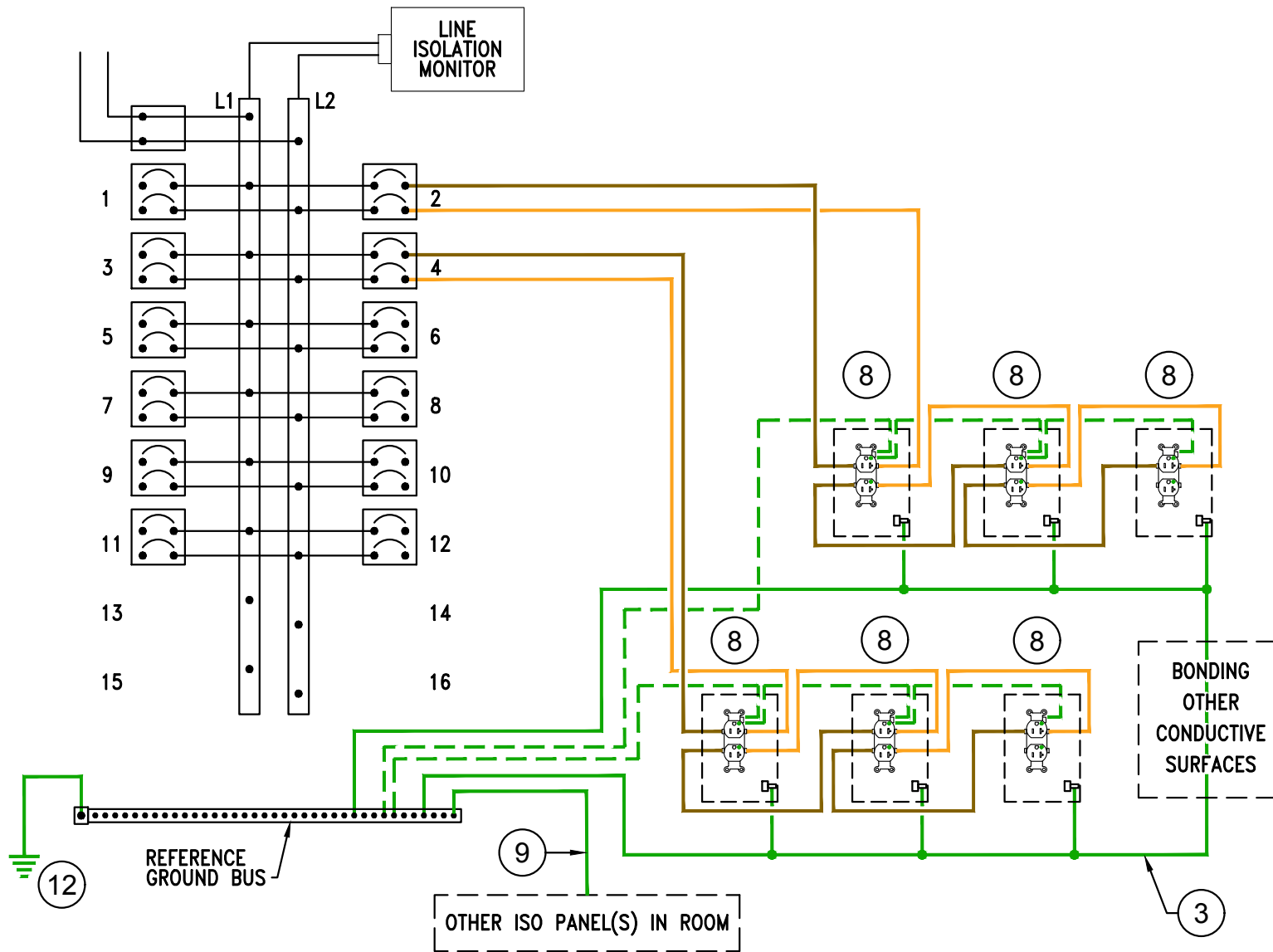
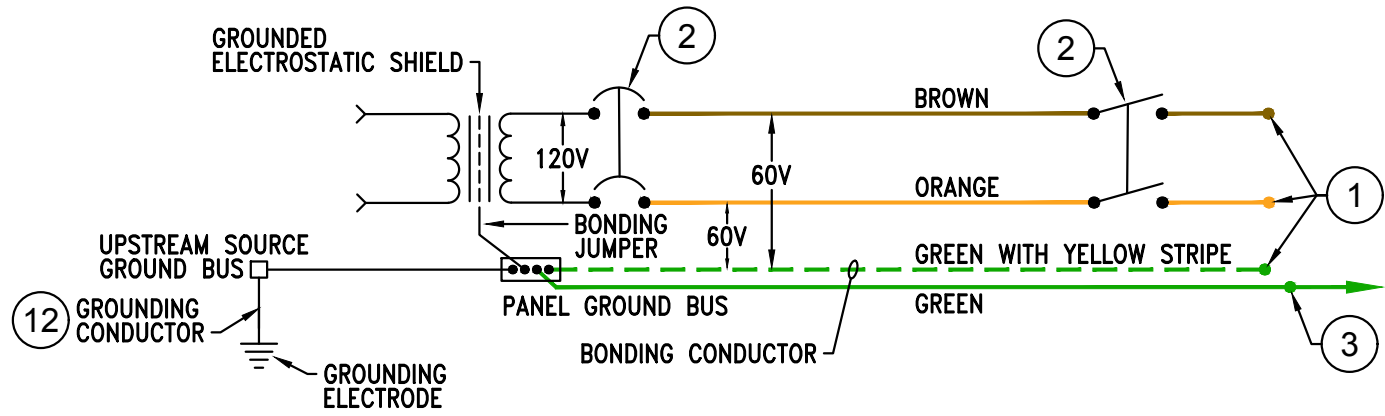
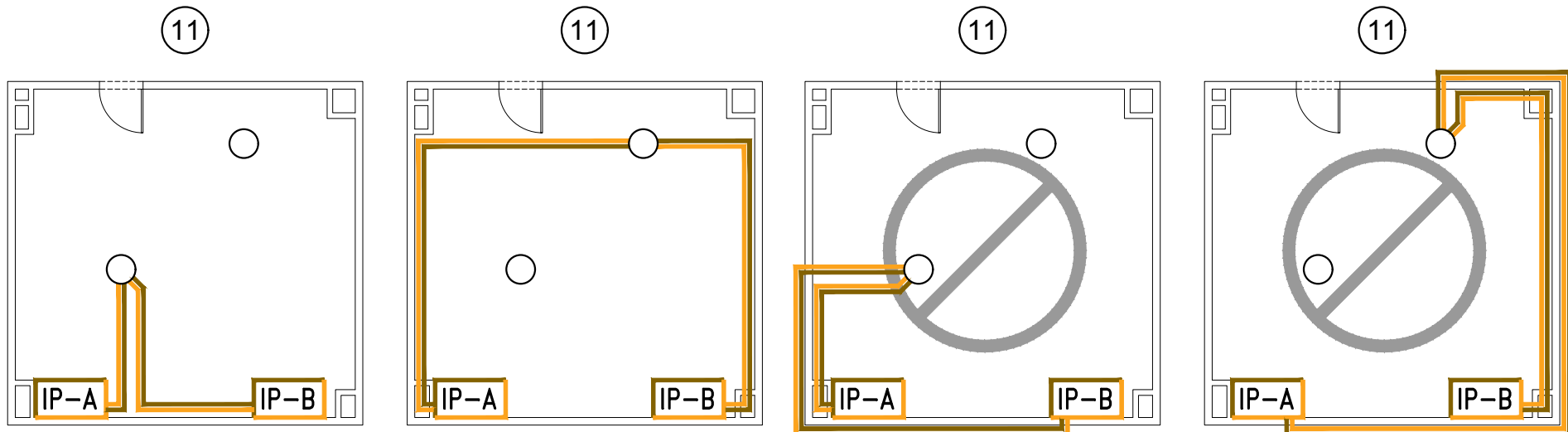
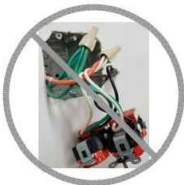
- 9 BOND THE ISOLATION PANEL GROUND BUSS TERMINALS WITHIN EACH ROOM WITH A #6 AWG GREEN GROUND WIRE:
THIS WIRE IS TO CONNECT TO NO OTHER DEVICES IN THE ROOM.
THIS ISOLATION PANEL GROUND BUS TERMINAL BOND WIRE IS NOT TO EXTEND INTO ANY OTHER ROOMS.

- 10 CONFIRM EQUIPMENT MANUFACTURER'S LISTED LEAKAGE CURRENT RATING PRIOR TO INSTALLATION:
WALL MOUNTED DIGITAL CLOCKS, UNDER-CABINET LIGHT FIXTURES, AND OTHER HARDWIRED (I.E. NOT PLUGGED INTO RECEPTACLES) HAVE PREVIOUSLY BEEN KNOWN TO HAVE HIGH LEAKAGE CURRENT VALUES WHEN INSTALLED, THEREBY LIMITING THE ISOLATED POWER SYSTEM LIM CAPACITY. CONFIRM WITH AHJ IF THESE FIXED-MOUNTED EQUIPMENT WITH NON-MOVEABLE ELEMENTS COMPLETELY LOCATED OUTSIDE OF THE PATIENT VICINITY ARE EVEN REQUIRED TO BE SUPPLIED WITH ISOLATED POWER.

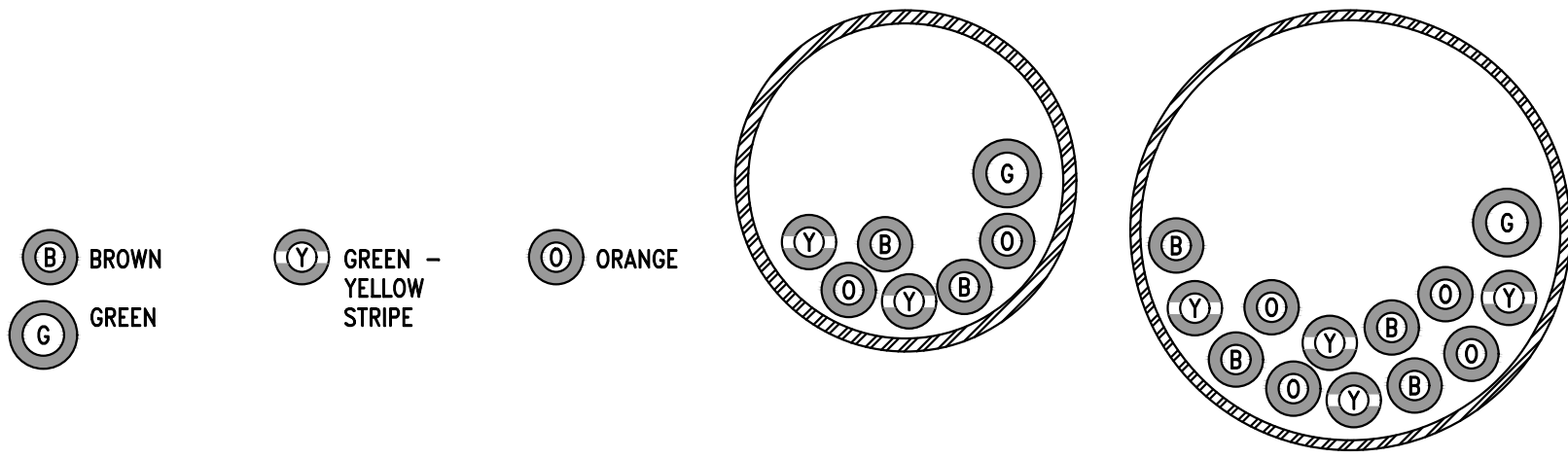
- 11 DESIGN AND INSTALL ELECTRICAL CONDUITS IN MANNER THAT MINIMIZES CIRCUIT LENGTH:
COORDINATE WITH OTHER TRADES AND SYSTEMS TO PROVIDE THE MOST DIRECT ROUTE FROM THE PANEL TO THE LOAD.

- 12 INCOMING GROUNDING CONDUCTOR:
THE EQUIPMENT GROUNDING CONDUCTOR FROM THE 277 VOLT PANEL BOARD SERVICE SHALL BE A MINIMUM OF #8 AWG.

- 13 MODULAR WIRING MODULES PROHIBITED:
DUPLEX RECEPTACLE OUTLETS WHICH ARE CONNECTED TO WIRING MODULES ARE PROHIBITED FOR USE ON ISOLATED POWER CIRCUITS. STANDARD BACK OR SIDE WIRE TERMINATIONS ARE REQUIRED.



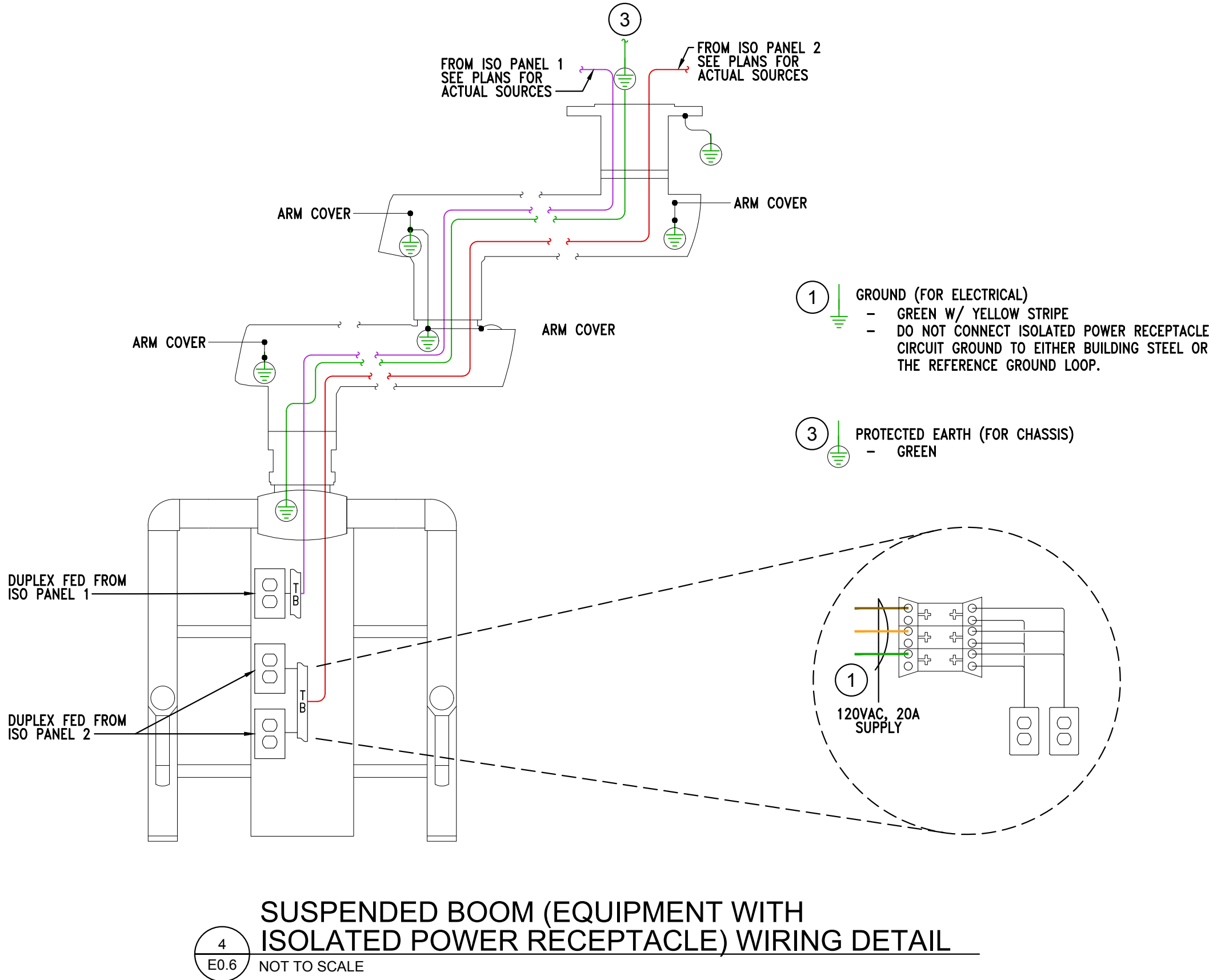
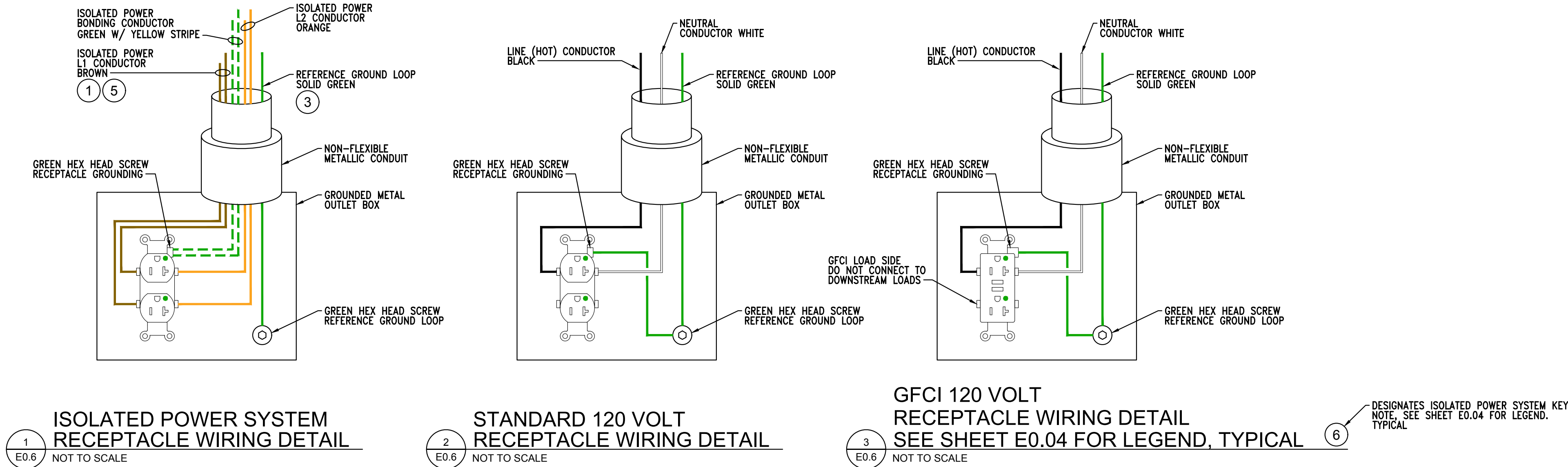
1 ISOLATED (UNGROUND)SYSTEM
E0.5 NOT TO SCALE



2 CONDUIT FILL REQUIREMENTS
E0.5 NOT TO SCALE

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INITIAL INSPECTION 09/22/2019	
RJZ SALES 9-22-19 BOB ZIELINSKI UH OR#8... NOTES	
LIM'S WERE TESTED AND METERED, FUNCTIONING WITHIN SPECS PANELS WERE CLEANED AND ALL TERMINATIONS TIGHTENED ALL ELECTRICAL BOXES CLEANED 2 RECEPTACLES WERE REPLACED 23 RECEPTACLES WERE CORRECTED FOR POLARITY ISSUES N WALL HAS A METAL CABINET LINEUP THAT IS NOT BONDED AND IS CLOSE TO VICINITY OF THE PATIENT BED. MIGHT CONSIDER BONDING THIS MONITOR IS BEING FED FROM NORMAL POWER RECEPTACLES IN THE CEILING. THESE RECEPTACLES SHOULD BE GFCI PROTECTED AS THE MONITORS ARE 120 VOLTS UNDER 7 1/2 N WALL AUDIO SHELF NOT BONDED. S WALL ENVIRONMENTAL PLATE NOT BONDED, SHOWING VOLTAGE TWIST RECEPTACLE ON SW COLUMN SHOULD BE REPLACED OR REPAIRED. BUSS CONTACTS ARE EXPOSED ARE PANELS BONDED TOGETHER?	
FINAL REPORT 05/19/2022	
RJZ SALES 5-19-22 BOB ZIELINSKI UH OR#8... NOTES... 2019	
LIM'S WERE TESTED AND METERED, FUNCTIONING WITHIN SPECS PANELS WERE CLEANED AND ALL TERMINATIONS TIGHTENED ALL ORIGINAL RECEPTACLES ARE REVERSE POLARITY; EVERY RECEPTACLE SHOULD BE OPENED AND EVALUATED. N WALL HAS A METAL CABINET LINEUP THAT IS NOT BONDED AND IS CLOSE TO VICINITY OF THE PATIENT BED. MIGHT CONSIDER BONDING THIS MONITOR IS BEING FED FROM NORMAL POWER RECEPTACLES IN THE CEILING. THESE RECEPTACLES SHOULD BE GFCI PROTECTED AS THE MONITORS ARE 120 VOLTS UNDER 7 1/2 N WALL AUDIO SHELF NOT BONDED. S WALL ENVIRONMENTAL PLATE NOT BONDED, SHOWING VOLTAGE TWIST RECEPTACLE ON SW COLUMN SHOULD BE REPLACED OR REPAIRED. ARE PANELS BONDED TOGETHER?	
CORRECTIONS TO BE COMPLETED WITH THIS PROJECT SCOPE	
SEE SHEET E2.1	
DEVICE IS DEMOLISHED - SEE SHEET ED2.1	
SEE SHEET E2.1	

BIDS - ELECTRICAL	04/05/22
95% OWNER REVIEW	03/11/22

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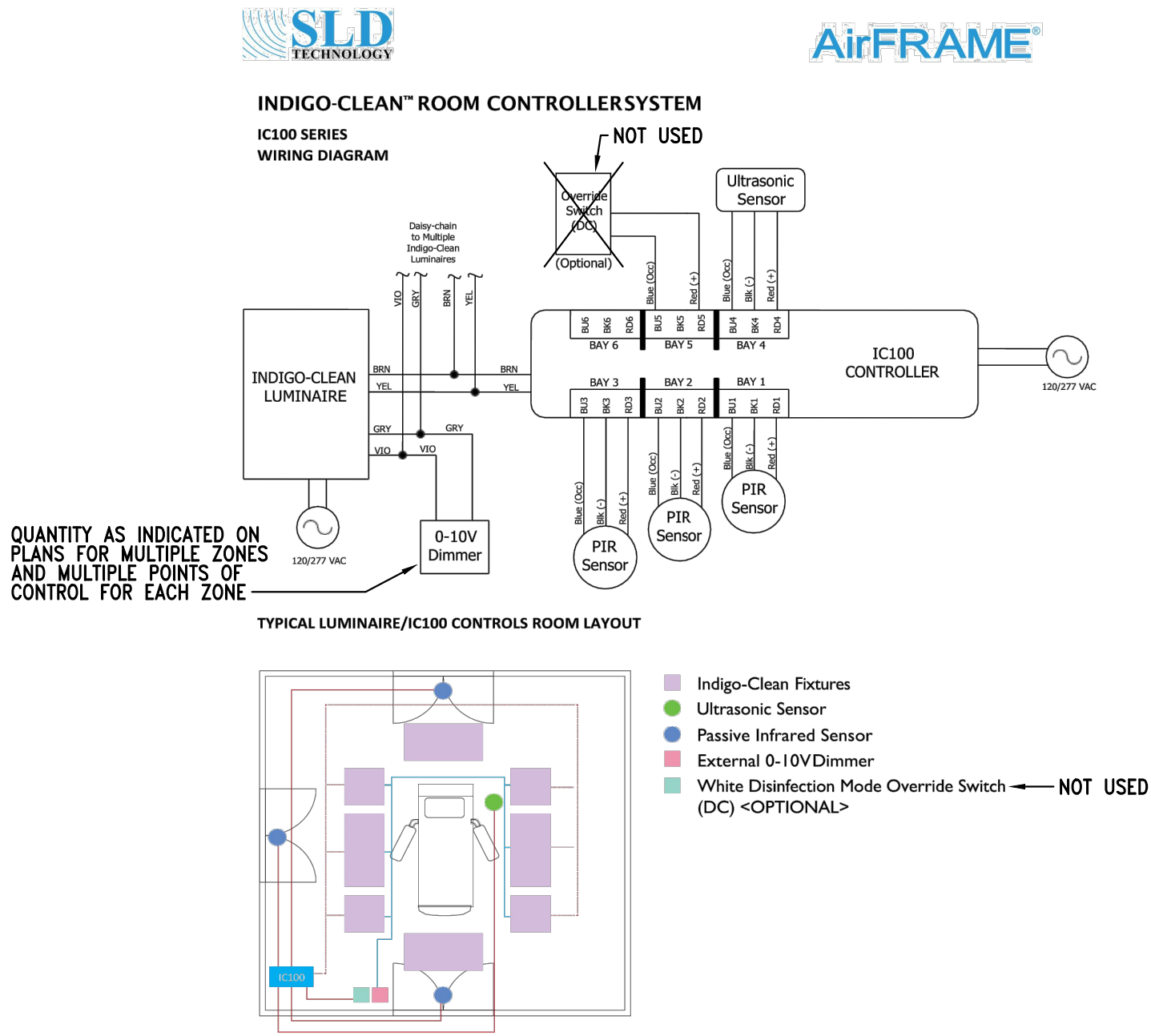
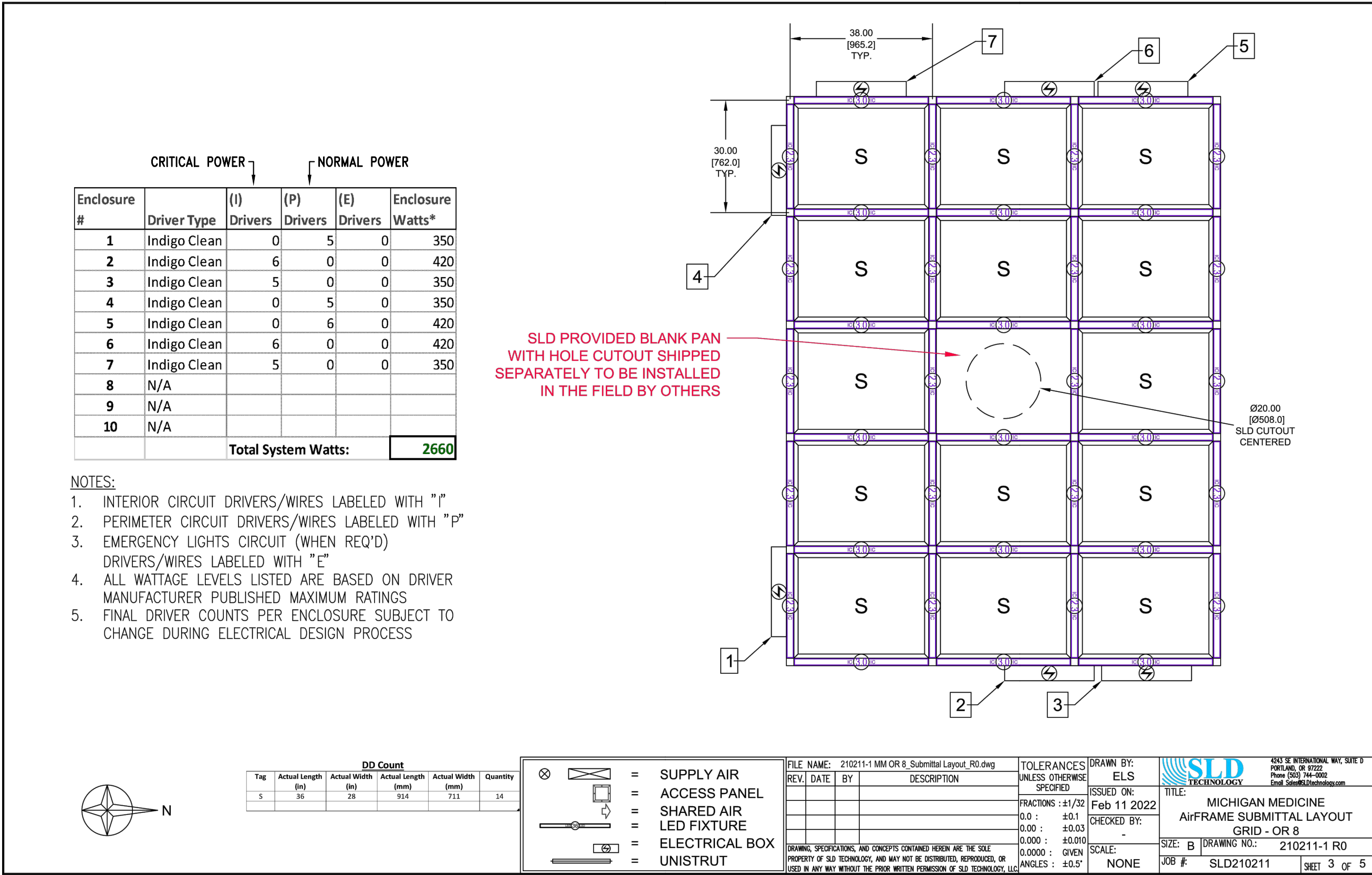
Project Delivery Method: CS	
UM Design Manager:	B. Merritt
Designed:	S. Wheeler
Drawn:	C. Bayer
Coordination Checked:	S. Wheeler
Checked:	S. Wheeler
Approved:	S. Wheeler
Location	UH - Level 1
Keyword:	Details

Project
UH OR8 UTILITY COLUMN

Sheet Title
ELECTRICAL DETAILS - 3

Project Number
Sheet Number
E0.6

PBN 947###
RTN 9520467



Printed: 11/15/19

4243 SE International Way Suite D, Portland, OR 97222

Phone: 503-744-0002

2 AIRFRAME LIGHTING CONTROLS
NOT TO SCALE



Printed: 11/15/19

4243 SE International Way Suite D, Portland, OR 97222

Phone: 503-744-0002

3 AIRFRAME CONTROLS DETAILS
NOT TO SCALE

KEY NOTES:

- PROVIDE SEPERATE CONDUIT FOR LOW VOLTAGE CONTROLS, SEPERATE FROM LINE VOLTAGE RACEWAY.
- PROVIDE LINE VOLTAGE BRANCH CIRCUIT CONNECTIONS TO AIRFRAME INDIGO CLEAN ENCLOSURES FOR FIXTURE POWER ACCORDING TO POWER SOURCE:
 - PERIMETER FIXTURES NORMAL POWER TO ENCLOSURES 1, 4, AND 5
 - INTERIOR FIXTURES CRITICAL POWER TO ENCLOSURES 2, 3, 6, AND 7
- NORMAL POWER LIGHTING LOAD: 1120W
CRITICAL POWER LIGHTING LOAD: 1540W (INDIGO CLEAN) AIRFRAME TYPE "A"
+ 332W (INDIGO CLEAN) 2x2 TYPE "B"
+ 41.6W DOWNLIGHT TYPE "C"
= 1914W
- COORDINATE INDIGO-CLEAN POWER AND CONTROL WIRING WITH INSTALLATION INSTRUCTIONS AND WITH STEVENS MOON PRIOR TO INSTALLING ANY RELATED WORK.
- RUN LOW VOLTAGE CONTROL WIRING (0-10VDC) IN SEPARATE RACEWAY FROM LINE VOLTAGE (120-277VAC). PROVIDE RACEWAYS ACCORDINGLY FOR ALL WORK. INDIGO-CLEAN FIXTURES RECEIVE SEPARATE WIRING SETS FOR 0-10V DIMMING AND OCCUPANCY SENSOR CONTROL (2 SETS), IN ADDITION TO LINE VOLTAGE FOR POWER. SEE INSTALLATION INSTRUCTIONS.



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Drawn:	C. Bayer
Coordination Checked:	S. Wheeler
Checked:	S. Wheeler
Approved:	S. Wheeler
Location	UH - Level 1
Keyword:	Details

Project
UH OR8 UTILITY COLUMN

Sheet Title
ELECTRICAL DETAILS - 4

Project Number Sheet Number

PBN 947###
RTN 9520467

E0.7



ACCESS PANEL 1



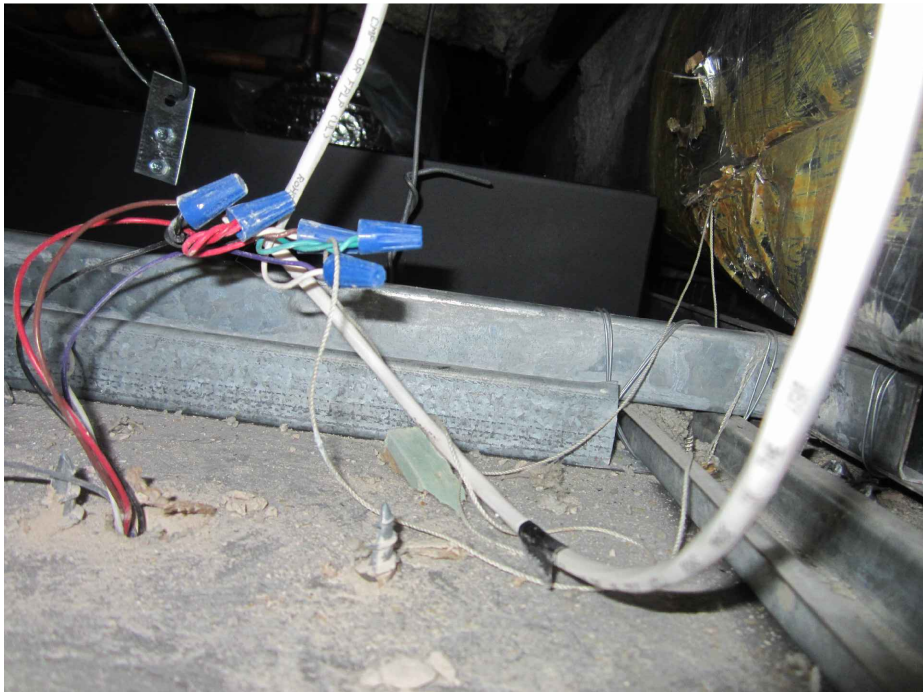
MISC 3/4" CONDUITS



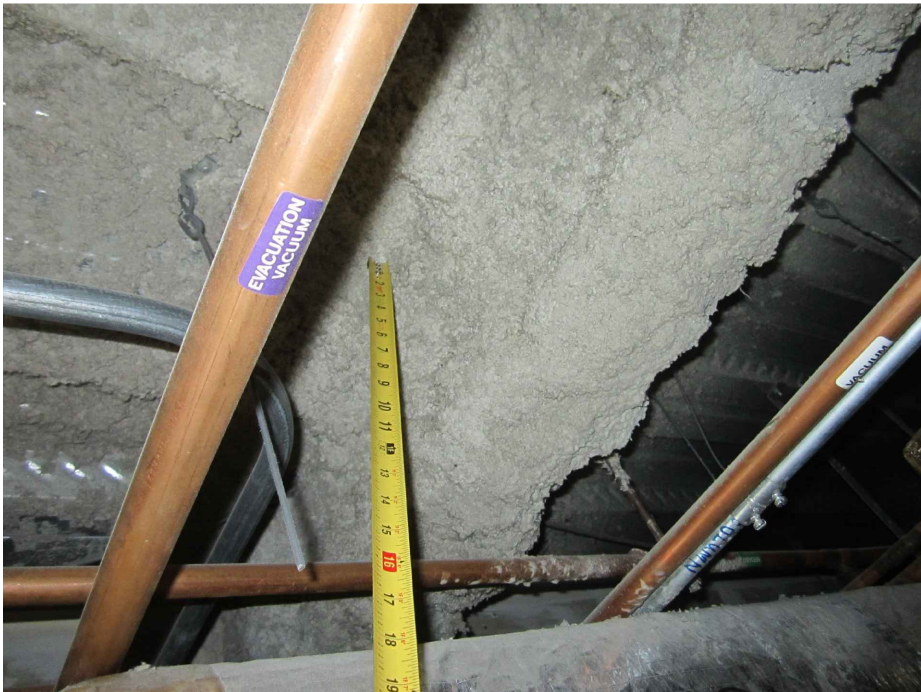
ACCESS PANEL 2



SPEAKER & CONDUITS AT CEILING (NORTH WALL)



CABLE AND OCCUPANCY SENSOR WIRING



CONDUIT AND PIPING



CONDUITS AT CEILING (EAST WALL)



ABOVE CEILING (EAST WALL)



2"C AND MULTIPLE MISC CONDUITS AT CEILING



2"C AND MULTIPLE MISC CONDUITS AT CEILING



JUNCTION BOX & MISC CONDUITS AT BOOM SUPPORT

KEY NOTES:

⚠️ INCLUDE COST IN BID FOR THE FOLLOWING: TRACE AND IDENTIFY ALL ABOVE-CEILING RACEWAY AND WIRING THAT IS NOT REMOVED AS PART OF DEMOLITION AND INTERFERES WITH NEW WORK. RAISE AND/OR REROUTE CONDUITS THAT ARE IN THE FOOTPRINT OF THE NEW AIRFRAME CEILING SYSTEM AND ITS MECHANICAL CONNECTIONS SYSTEMS TO ALLOW FOR INSTALLATION AND SUPPORT OF THE AIRFRAME. FOR PRICING PURPOSES, INCLUDE COST TO RAISE/REROUTE THE FOLLOWING RUNS: ONE 2"C (EMT), FOUR 1-1/4"C (EMT), FIVE 1"C (EMT), FIVE 3/4"C (EMT) AND TWO 1-1/4"C GRS ALONG WITH ASSOCIATED WIRING. ASSUME 30 FEET OF CONDUIT EACH RUN DESCRIBED ABOVE. PROVIDE JUNCTION BOXES AT EITHER END OF RAISED LENGTH TO REDIRECT RACEWAY AND SPLICE NEW WIRING AS REQUIRED. DEMOLISH EXISTING JUNCTION BOXES AT BOOM. PROVIDE NEW JUNCTION BOXES FOR NEW BOOM. INCLUDE COST TO FIELD INVESTIGATE ACTUAL CONDITIONS ABOVE CEILING WHEN CEILING IS REMOVED. IDENTIFY AND DOCUMENT ANY RACEWAY, WIRING AND ELECTRICAL SYSTEMS ABOVE CEILING THAT WILL OBSTRUCT THE AIRFRAME INSTALLATION. EXISTING CEILING IS BEING LOWERED APPROXIMATELY 6" AND THE NEW AIRFRAME IS 18" TALL. OBTAIN AIRFRAME FOOTPRINT FROM SHOP DRAWINGS AND ARCHITECTURAL DOCUMENTS. COORDINATE OBSTRUCTIONS AND REROUTE OBSTRUCTIONS ACCORDINGLY. RESUPPORT EXISTING RACEWAY ABOVE CEILING AS REQUIRED.

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Keyword:	Photographs

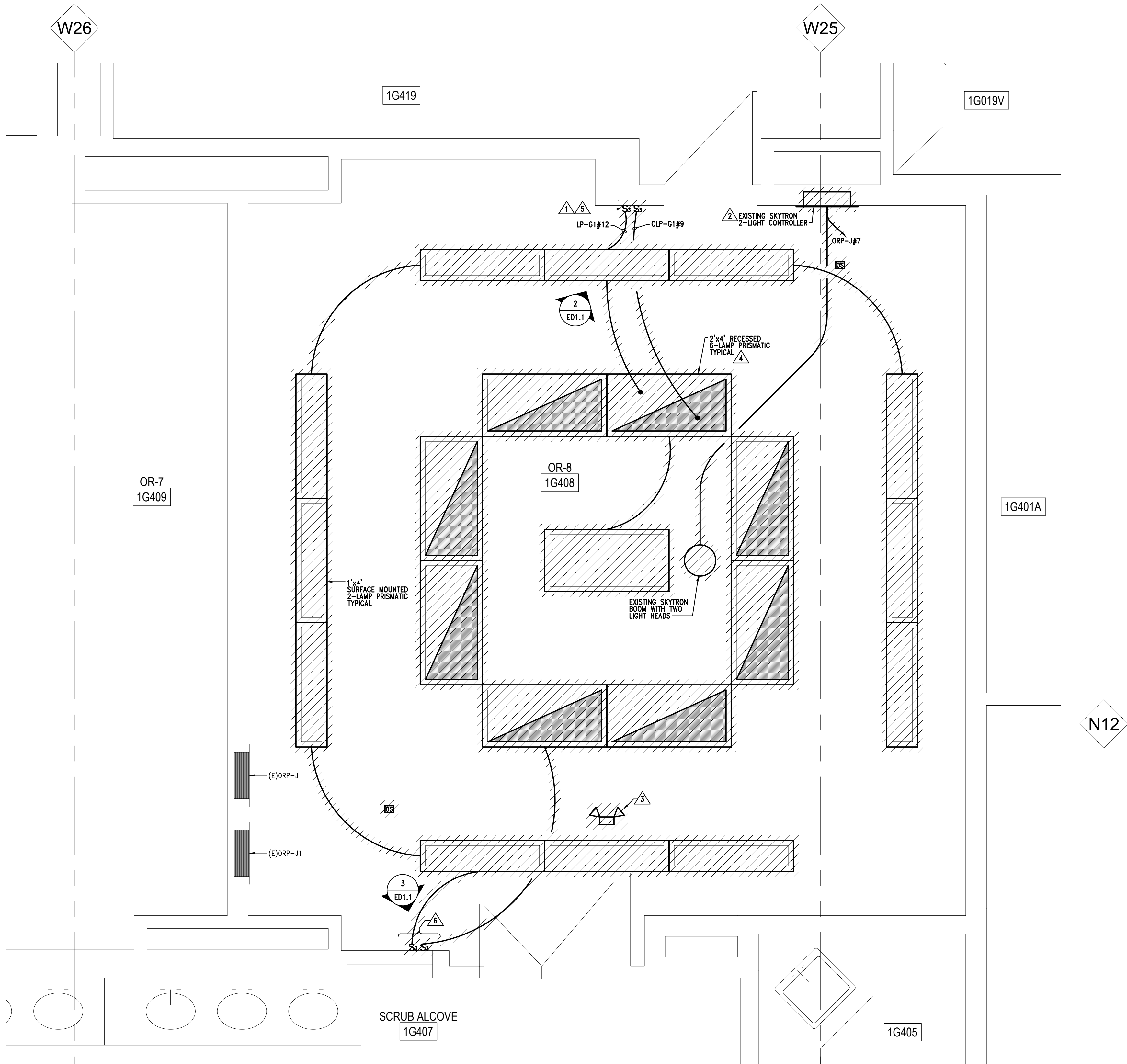
Project
UH OR8 UTILITY COLUMN

Sheet Title
**ELECTRICAL ABOVE
CEILING PHOTOGRAPHS**

Project Number Sheet Number

PBN 947###
RTN 9520467

E0.8



- LIGHTING KEY NOTES:**
- 1. FOUR GANG COVERPLATE WITH TWO TOGGLE SWITCHES (2 BLANK, 2 USED). PROVIDE NEW 4-GANG CUSTOM STAINLESS STEEL COVERPLATE TO ACCOMMODATE NEW CONTROLS.
 - 2. DEMOLISH THE EXISTING SEMI-RECESSED ROOM LIGHTING CONTROLLER. PROTECT AND MAINTAIN SKYTRON BACK BOX FOR MOUNTING NEW CONTROLLER. PROTECT AND MAINTAIN BRANCH CIRCUIT SERVING BACK BOX FOR NEW CONTROLLER.
 - 3. EMERGENCY BATTERY FIXTURE IS NOT LABELED WITH CIRCUIT NUMBER. CIRCUIT TRACE TO IDENTIFY CIRCUIT. COORDINATE WITH NEW WORK FOR REUSE OR REMOVAL OF EXISTING CONNECTION.
 - 4. PERIMETER 2'x4' FIXTURES ARE SERVED BY BOTH NORMAL AND CRITICAL BRANCH CIRCUITS WHICH ARE SWITCHED SEPARATELY.
 - 5. INCLUDE COST FOR NEW 4-GANG BACKBOX AND CONDUIT. EXISTING 4-GANG BACKBOX AND CONDUIT UP WALL MAY BE REUSED AT CONTRACTOR'S DISCRETION IF SUITABLE FOR NEW WORK.
 - 6. EXISTING 2-GANG BACKBOX BELOW WINDOW. REMOVE AND REPLACE WITH 4-GANG BACKBOX. REUSE EXISTING CONDUIT UP WALL FOR NEW BACKBOX IF POSSIBLE. INCLUDE COST FOR NEW CONDUIT. PROTECT AND MAINTAIN EXISTING SURROUNDING TILE.



2 NORTH WALL CONTROLS
ED1.1 NO SCALE



3 SOUTH WALL CONTROLS
ED1.1 NO SCALE



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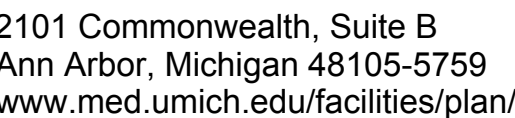
Project Delivery Method: CS
UM Design Manager: B. Merritt
Designed: S. Wheeler
Drawn: C. Bayer
Coordination Checked: S. Wheeler
Checked: S. Wheeler
Approved: S. Wheeler
Location UH - Level 1
Keyword: Lighting, Demolition

Project
UH OR8 UTILITY COLUMN

Sheet Title
UH OR8 UTILITY COLUMN -
ELECTRICAL DEMOLITION
PLAN - LIGHTING

Project Number Sheet Number
ED1.1

PBN 947###
RTN 9520467



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1. COVERPLATE IS NOT LABELED. CIRCUIT TRACE TO IDENTIFY CIRCUIT. LABEL COVERPLATE AND INDICATED ON AS-BUILT DOCUMENTS.
2. BLANK COVERPLATE APPROXIMATELY 15"x7".
3. TV AND WAP ARE CABLED TO THIS CEILING OUTLET.
4. WALL MOUNTED RECEPTACLES, TELECOMMUNICATIONS OUTLETS, AND WALL PHONE ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
5. DEMOLISH SURGICAL COLUMNS. REFER TO EXISTING SURGICAL COLUMN ELECTRICAL UTILITIES, THIS SHEET, FOR RELATED ELECTRICAL DEMOLITION.
6. ORP-1 HAZARD CURRENT AT TIME OF SURVEY: 1.3MA
ORP-J1 HAZARD CURRENT AT TIME OF SURVEY: 1.4MA
7. SEE PHOTOS AND ADDITIONAL REQUIREMENTS AT ACCESS PANELS AND OPENING PANELS ON SHEET E.O.8. SEE MECHANICAL SHEETS FOR ADDITIONAL PHOTOS.
8. EXISTING SURFACE RACEWAY NEAR CEILING (SIMILAR TO WIREMOLD G4000) INTENDED TO REMAIN. OPEN SURFACE RACEWAY AND IDENTIFY CONTENTS. NOTIFY UM PROJECT MANAGER AND A/E IF RACEWAY CONTAINS ANYTHING OTHER THAN TELECOMMUNICATIONS WIRING. UM HITS WILL BE REPLACING TELECOMMUNICATIONS WIRING DURING PROJECT CONSTRUCTION. COORDINATE WIRING AND ACCESS TO RACEWAY WITH UM HITS.
9. NOT USED.
10. DEMOLISH BRACH CIRCUIT WIRING FROM SURGICAL COLUMNS BACK TO ISO PANEL. DEMOLISH RELATED CONDUIT AND BOXES BACK TO ABOVE CEILING. COORDINATE NEW BRACH CIRCUIT WIRING TO BE WORKED TO SERVE NEW BIPER PANEL NEW WORK PLANS. DOCUMENT CONDUIT COUNT AND SIZE FOR EACH PANEL. COORDINATE NEW WORK WIRING WITH CONDUIT FILL REQUIREMENTS SHEET E.O.5. INCLUDE COST TO OPEN WALL AT BOTH PANELS TO ADD NEW CONDUIT UP. NOTIFY A/E IF THIS SCOPE IS REQUIRED.
11. REMOVE CEILING MOUNTED DEVICES TO ALLOW FOR CEILING LOWERING BY AND NEW CEILING INSTALLATION. REINSTALL IN NEW CEILING.
12. REMOVE WIRING DEVICE. REPLACE WITH GFR TYPE.

ELECTRICAL UTILITIES:

DEMOLISHED DEVICES AND CIRCUITS:
 REMOVE SURGICAL COLUMN AND ELECTRICAL DEVICES. CIRCUIT WIRING BACK TO PANEL. REMOVE CONDUIT BACK TO PANEL OR NEW CONNECTION POINT. EXISTING CONDUIT MAY BE REUSED AT CONTRACTOR'S DISCRETION IF SUITABLE FOR NEW WORK.

- NEW CIRCUITS AND RECEPTACLE COUNTS TO NEW BOOM A:
 PROVIDE NEW BRANCH CIRCUITS TO BOOM AS INDICATED.
- | | | | |
|--------|----|-------------------------|----------------------|
| ORP-J | #4 | TWO DUPLEX RECEPTACLES | |
| ORP-J | #5 | FOUR DUPLEX RECEPTACLES | |
| ORP-J | #7 | TWO DUPLEX RECEPTACLES | |
| ORP-J1 | #2 | TWO DUPLEX RECEPTACLES | |
| ORP-J1 | #4 | TWO DUPLEX RECEPTACLES | + TWO ACTIVE ASSISTS |
| ORP-J1 | #5 | TWO DUPLEX RECEPTACLES | |
| ORP-J1 | #7 | TWO DUPLEX RECEPTACLES | |

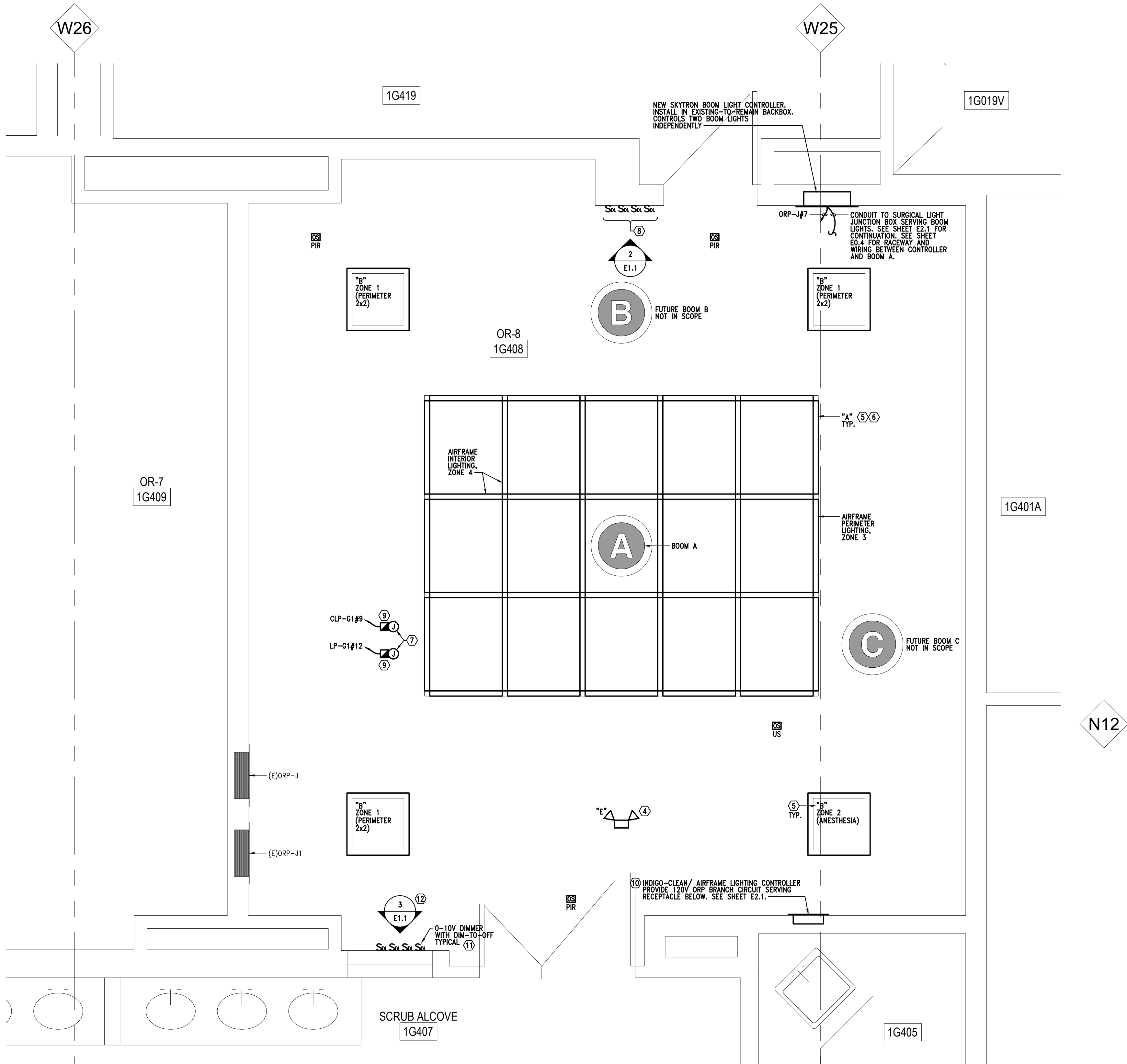
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Sheet Title
UH OR8 UTILITY COLUMN -
ELECTRICAL DEMOLITION
PLAN - POWER

PBN 947####
RTN 9520467

ED2.1



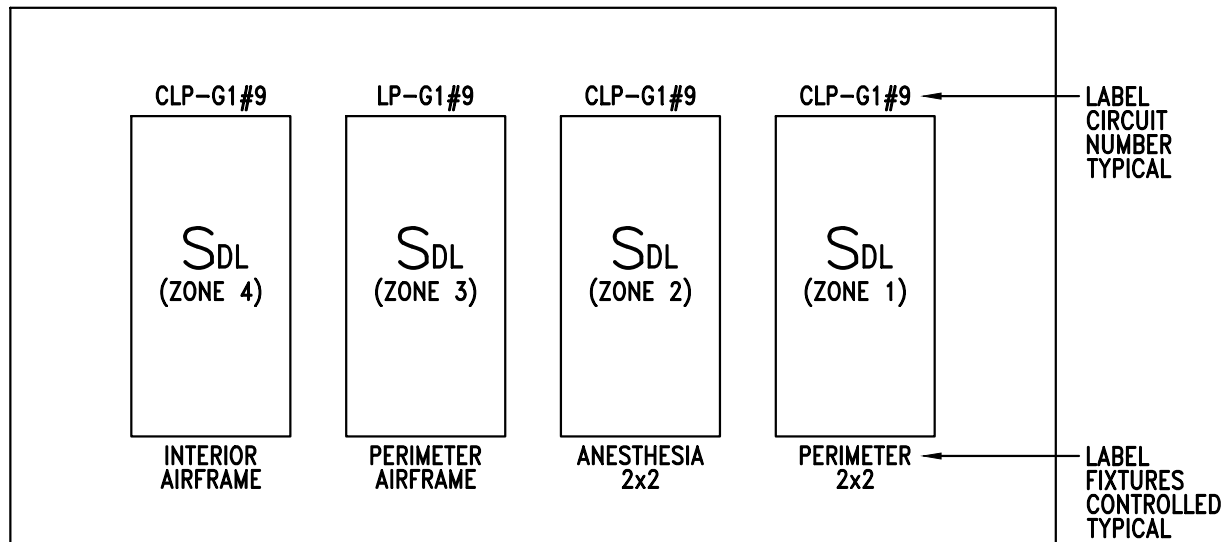
1 UH OR8 UTILITY COLUMN - ELECTRICAL NEW WORK PLAN - LIGHTING 1X3
E1.1 SCALE: 1/2" = 1'-0"

LIGHTING KEY NOTES:

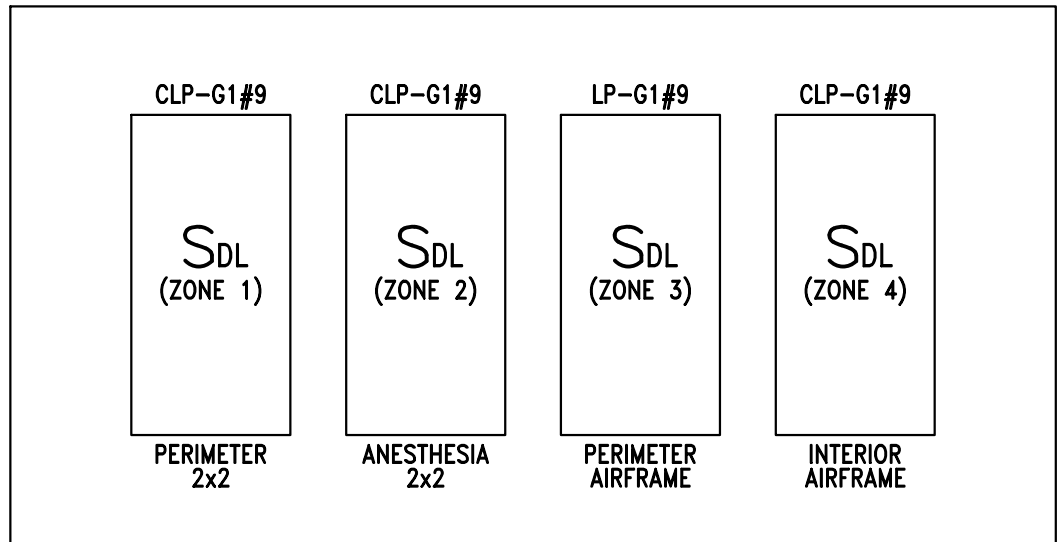
- 1 REFER TO SHEET E0.7 FOR CIRCUITING AND CONTROLS FOR INDIGO-CLEAN/AIRFRAME RELATED LIGHTING SYSTEMS.
- 2 INDIGO-CLEAN LIGHTING FIXTURES, CONTROLLER, AND OCCUPANCY SENSOR ARE FURNISHED BY STEVENS MOON AND INSTALLED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO ALSO PROVIDE ALL RACEWAYS, WIRING AND PROGRAMMING.
- 3 INDIGO-CLEAN FIXTURES ARE FURNISHED WITH 4300K LEDS, 90CRI.
- 4 CIRCUIT UNIT EQUIPMENT TO UNSWITCHED LEG OF CLP-G1#9. LABEL WITH CIRCUIT NUMBER VISIBLE FROM BELOW.
- 5 CIRCUIT TYPE "A" INTERIOR FIXTURES AND TYPE "B" FIXTURES TO CLP-G1#9 (CRITICAL POWER).
- 6 CIRCUIT TYPE "A" PERIMETER FIXTURES TO LP-G1#9 (NORMAL POWER).
- 7 REUSE EXISTING BRANCH CIRCUIT HOMERUNS FOR INDIGO-CLEAN LIGHTING. SHOWN SCHEMATICALLY, MAKE CONNECTIONS TO INDIVIDUAL TYPE "B" FIXTURES. MAKE CONNECTION TO MULTIPLE ENCLOSURES AROUND THE PERIMETER OF THE AIRFRAME SYSTEM AS INDICATED ON SHEET E0.7. EXTEND BRANCH CIRCUIT WIRING TO FINAL CONNECTIONS. LABEL EACH FIXTURE/ENCLOSURE WITH LINE VOLTAGE CIRCUIT SERVING IT. PAINT ENCLOSURES AND FIXTURE JUNCTION BOX CONNECTIONS WITH CRITICAL POWER ORANGE.
- 8 PROVIDE NEW 4-GANG STAINLESS STEEL 302/304 WALLPLATE TO FIT DEVICES. PROVIDE WIRING PER AIRFRAME LIGHTING CONTROLS DETAIL 2, SHEET E0.7 AND INDIGO-CLEAN INSTALLATION INSTRUCTIONS.
- 9 277V BRANCH CIRCUIT POWER TO INDIGO-CLEAN FIXTURES IS UNSWITCHED. PROVIDE LABELED DISCONNECTING MEANS FOR MAINTENANCE. LABEL WITH CIRCUIT NUMBER AND "NORMAL LIGHTING FIXTURES" OR "EMERGENCY LIGHTING FIXTURES" AS APPLICABLE.
- 10 OPEN WALL AS REQUIRED TO INSTALL LIGHTING CONTROLLER FLUSH, AND CIRCUITING. PROTECT AND REUSE EXISTING TILE.
- 11 COORDINATE WITH STEVENS MOON, AIRFRAME/INDIGO-CLEAN SUPPLIER, FOR SELECTION OF COMPATIBLE DIMMERS. PROVIDE RED BODY FOR DIMMERS ON CRITICAL POWER AND IVORY BODY FOR DIMMERS ON NORMAL POWER. PROVIDE STAINLESS STEEL COVERPLATE. PROVIDE DIMMERS AND WIRING SUITABLE FOR CONTROLLING EACH ZONE FROM TWO LOCATIONS SHOWN. NO LINE-VOLTAGE IS USED AT DIMMERS.
- 12 PROVIDE NEW 4-GANG BACKBOX. SEE DEMOLITION PLAN.

LIGHTING FIXTURE SCHEDULE:

- "A" INDIGO-CLEAN LINEAR LED FIXTURES INTEGRAL TO AIRFRAME STERILE FIELD. 90CRI, 4300K, 120-277V.
- "B" INDIGO-CLEAN LED 2'x2' FIXTURE, RECESSED. 90CRI, 4300K, 120-277V.
- "C" 6" FULLY SEALED AND ENCLOSED CLEAN ROOM/MEDICAL LED DOWNLIGHT. STEEL HOUSING, CLEAR FLUSH 0.125" SMOOTH IMPACT RESISTANT ACRYLIC SEALED/MEDICAL BOTTOM LENS. IP65 RATED, CLEAR SEMI SPECULAR REFLECTOR, WIDE DISTRIBUTION, WHITE PAINTED FLANGE. 4000 LUMEN, 41.6W LEDS, 5000K, 90CRI, UNIVERSAL VOLTAGE DRIVER WITH DIMMING TO 1%. 5 YEAR WARRANTY. MANUFACTURER: FAILSAFE #FLD6B SERIES, KENALL #M4DL6 SERIES, OR APPROVED EQUAL.
- "E" LED THERMOPLASTIC CEILING MOUNTED EMERGENCY LIGHT. WHITE FINISH. (2)3.6W LED HEADS, UNIVERSAL VOLTAGE INPUT 120-277V. NI-CAD BATTERY, 3.6 VOLTS. SELF DIAGNOSTICS. MANUFACTURER: LIGHT ALARMS 'LCA' SERIES OR APPROVED EQUAL.



2 NORTH WALL CONTROLS
ED1.1 NO SCALE



3 SOUTH WALL CONTROLS
ED1.1 NO SCALE



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BIDS - ELECTRICAL	04/05/22
95% OWNER REVIEW	03/11/22

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UM Design Manager: B. Merritt
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Checked: S. Wheeler
Approved: S. Wheeler
Location: UH - Level 1
Keyword: Lighting, New Work

Project
UH OR8 UTILITY COLUMN

Sheet Title
UH OR8 UTILITY COLUMN -
ELECTRICAL NEW WORK
PLAN - LIGHTING

Project Number Sheet Number
PBN 947###
RTN 9520467



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

SCRUB ALCOVE

1G407

1G405

- 1) PROVIDE #10AWG REFERENCE GROUND LOOP AROUND PERIMETER OF ROOM AND TO AIRFRAME AND BOOM PER NOTE 3, SHEET E0.5. BOND TO ANY EXISTING TO REMAIN REFERENCE GROUND CONDUCTORS. BOND TO ADDITIONAL NON-CURRENT CABLE ITEMS IN ROOM AS NOTED. PROVIDE CONCEALED RACEWAY FOR CONNECTION DOWN WALLS.
- 2) BOND ISOLATION PANELS WITH #6AWG PER NOTE 9, SHEET E0.5.
- 3) EXISTING RECEPTACLES ARE REVERSE POLARITY IN FINAL ISO-INSPECTION REPORT 05/19/2022. INCLUDE COST TO TEST AND CORRECT POLARITY FOR EVERY RECEPTACLE IN ROOM.
- 4) BOND METAL SURFACE TO REFERENCE GROUND LOOP PER NOT 3, SHEET E0.5. PROVIDE CONCEALED BONDING CONDUIT, NOT EXPOSED FOR ROUTING UP WALL.
- 5) PROVIDE NEW OR REINSTALLED OUTLET BOX AS REQUIRED IN CEILING. RIGIDLY SUPPORT. PROVIDE NEW GFCI WIRING DEVICE.
- 6) PROVIDE MULTIPLE JUNCTION BOXES FOR CONNECTION TO BOOM BASED ON EXISTING AND NEW CONDUIT FROM OEP PANELS & INVESTIGATION NOTED ON E02.1. ONE JUNCTION BOX PER ISOLATION PANEL IS SHOWN SCHEMATICALLY. COORDINATE LOCATIONS OF BOXES WITH AIRFRAME AND BOOM INSTALLER TO CONNECT WITH SYSTEM WHICH LOCATE BOXES IN ACCESSIBILITY. REFER TO SHEET E0.4, SURFACE ROOM DETAIL FOR CIRCUITING TO BOOMS, AND FOR TELECOMMUNICATIONS JUNCTION BOX REQUIREMENTS.
- 7) BOND METAL CABINET TO REFERENCE GROUND LOOP PER NOTE 3, SHEET E0.5.
- 8) SURFACE RACEWAY IS EXISTING TO REMAIN. COORDINATE FINAL CEILING HEIGHT TO ALLOW ADEQUATE SPACE FOR CEILING ITEMS TO BE REMOVED AND REPLACED UNDER THE RACEWAY AROUND THE ENTIRE PERIMETER OF THE ROOM. CONFIRM FINAL CEILING HEIGHT WITH UM FPD.



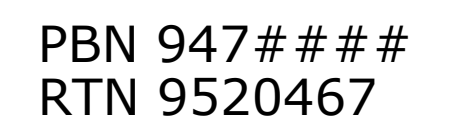
NO SCALE



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PANELBOARD: ORP-J1 ISO POWER PANEL (EX CONDITION) FED FROM: CLP-F1#12					
VOLTAGE: 277V 1-PHASE PRIMARY					
120V 1-PHASE SECONDARY					
KVA: 7.5					
MAIN: 35 A, 1-POLE MCB					
LOCATION: 1G408 OR-8					
Circ No	Breaker		Load Information		Connected Watts
	Pole	Trip	Location	Description	Phase
1	2	20	RM. 1G408	RECEPTS SOUTH WALL	360
2	2	20	RM. 1G408	RECEPTS COLUMN #2	360
3	2	20	RM. 1G408	RECEPT WEST WALL (DEDICATED)	360
4	2	20	RM. 1G408	RECEPTS COLUMN #4	360
5	2	20	RM. 1G408	RECEPTS COLUMN #3	360
6	2	20	RM. 1G408	RECEPTS EAST WALL	360
7	2	20	RM. 1G408	RECEPTS COLUMN #1	360
8	2	20	RM. 1G408	TWIST LOC COLUMN #3	360
9	2	20	RM. 1G408	RECEPTS WEST WALL	360
10	2	20	RM. 1G408	RECEPT EAST WALL (DEDICATED)	360
11	2	20	RM. 1G408	RECEPT EAST WALL (DEDICATED)	360
12	2	20	RM. 1G408	POWER FOR FAULT MONITOR	360
DEMAND KW: 4.3					
CONNECTED AMPS (at MCB on Primary): 16 Phase Watts: 4,320					
56% Loaded					

PANELBOARD: ORP-J ISO POWER PANEL (EX CONDITION) FED FROM: CLP-G1#29					
VOLTAGE: 277V 1-PHASE PRIMARY					
120V 1-PHASE SECONDARY					
KVA: 7.5					
MAIN: 35 A, 1-POLE MCB					
LOCATION: 1G408 OR-8					
Circ No	Breaker		Load Information		Connected Watts
	Pole	Trip	Location	Description	Phase
1	2	20	RM. 1G408	RECEPTS EAST WALL	360
2	2	20	RM. 1G408	RECETPS N. WALL, CASE TIMER, SOUND SYS	360
3	2	20	RM. 1G408	RECEPTS WEST WALL	360
4	2	20	RM. 1G408	RECEPTS COLUMNS #4 & #2	360
5	2	20	RM. 1G408	RECEPTS COLUMNS #1 & #3	360
6	2	20	RM. 1G408	RECEPTS EAST WALL, SOUTH WALL	360
7	2	20	RM. 1G408	SURGICAL LIGHT	360
8	2	20	RM. 1G408	RECEPTS EAST WALL	360
9	2	20	RM. 1G408	RECEPT WEST WALL (DEDICATED)	360
10	2	20	RM. 1G408	RECEPTS WEST WALL	360
DEMAND KW: 3.6					
CONNECTED AMPS (at MCB on Primary): 13 Phase Watts: 3,600					
46% Loaded					

PANELBOARD: ORP-J1 ISO POWER PANEL (NEW WORK) FED FROM: CLP-F1#12					
VOLTAGE: 277V 1-PHASE PRIMARY					
120V 1-PHASE SECONDARY					
KVA: 7.5					
MAIN: 35 A, 1-POLE MCB					
LOCATION: 1G408 OR-8					
Circ No	Breaker		Load Information		Connected Watts
	Pole	Trip	Location	Description	Phase
1	2	20	RM. 1G408	RECEPTS SOUTH WALL	360
2	2	20	RM. 1G408	SKYTRON - 3 RECEPTS (CIRCUIT 2)	540
3	2	20	RM. 1G408	RECEPT WEST WALL (DEDICATED)	360
4	2	20	RM. 1G408	SKYTRON - ACTIVE ASSISTS (CKT 4 & 8)	200
5	2	20	RM. 1G408	SKYTRON - 4 RECEPTS (CIRCUIT 3)	720
6	2	20	RM. 1G408	RECEPTS EAST WALL	360
7	2	20	RM. 1G408	SKYTRON - 3 RECEPTS (CIRCUIT 6)	540
8	2	20	RM. 1G408	SKYTRON - 4 RECEPTS (CIRCUIT 7)	720
9	2	20	RM. 1G408	RECEPTS WEST WALL	360
10	2	20	RM. 1G408	RECEPT EAST WALL (DEDICATED)	360
11	2	20	RM. 1G408	RECEPT EAST WALL (DEDICATED)	360
12	2	20	RM. 1G408	POWER FOR FAULT MONITOR	360
DEMAND KW: 5.2					
CONNECTED AMPS (at MCB on Primary): 19 Phase Watts: 5,240					
68% Loaded					
TOTAL CIRCUIT LENGTH: 451 FEET 5-FEET OF CABLE LENGTH WITHIN PANEL IS INCLUDED IN OVERALL CIRCUIT LENGTHS MAXIMUM LENGTH ALLOWED IS 525' PER IEEE 602-2007. 480' IS TARGET MAX.					

PANELBOARD: ORP-J ISO POWER PANEL (NEW WORK) FED FROM: CLP-G1#29					
VOLTAGE: 277V 1-PHASE PRIMARY					
120V 1-PHASE SECONDARY					
KVA: 7.5					
MAIN: 35 A, 1-POLE MCB					
LOCATION: 1G408 OR-8					
Circ No	Breaker		Load Information		Connected Watts
	Pole	Trip	Location	Description	Phase
1	2	20	RM. 1G408	RECEPTS EAST WALL	360
2	2	20	RM. 1G408	RECETPS N. WALL, CASE TIMER, SOUND SYS	360
3	2	20	RM. 1G408	RECEPTS WEST WALL	360
4	2	20	RM. 1G408	SKYTRON - 3 RECEPTS (CIRCUIT 1)	540
5	2	20	RM. 1G408	SKYTRON - 3 RECEPTS (CIRCUIT 5)	540
6	2	20	RM. 1G408	RECEPTS EAST WALL, SOUTH WALL	360
7	2	20	RM. 1G408	SKYTRON - BOOM LIGHT (CIRCUIT 9)	360
8	2	20	RM. 1G408	RECEPTS EAST WALL	360
9	2	20	RM. 1G408	RECEPT WEST WALL (DEDICATED)	360
10	2	20	RM. 1G408	RECEPTS WEST WALL	360
DEMAND KW: 4.0					
CONNECTED AMPS (at MCB on Primary): 14 Phase Watts: 3,960					
51% Loaded					
TOTAL CIRCUIT LENGTH: 412 FEET 5-FEET OF CABLE LENGTH WITHIN PANEL IS INCLUDED IN OVERALL CIRCUIT LENGTHS MAXIMUM LENGTH ALLOWED IS 525' PER IEEE 602-2007. 480' IS TARGET MAX.					

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ELECTRICAL PANEL
SCHEDULES

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