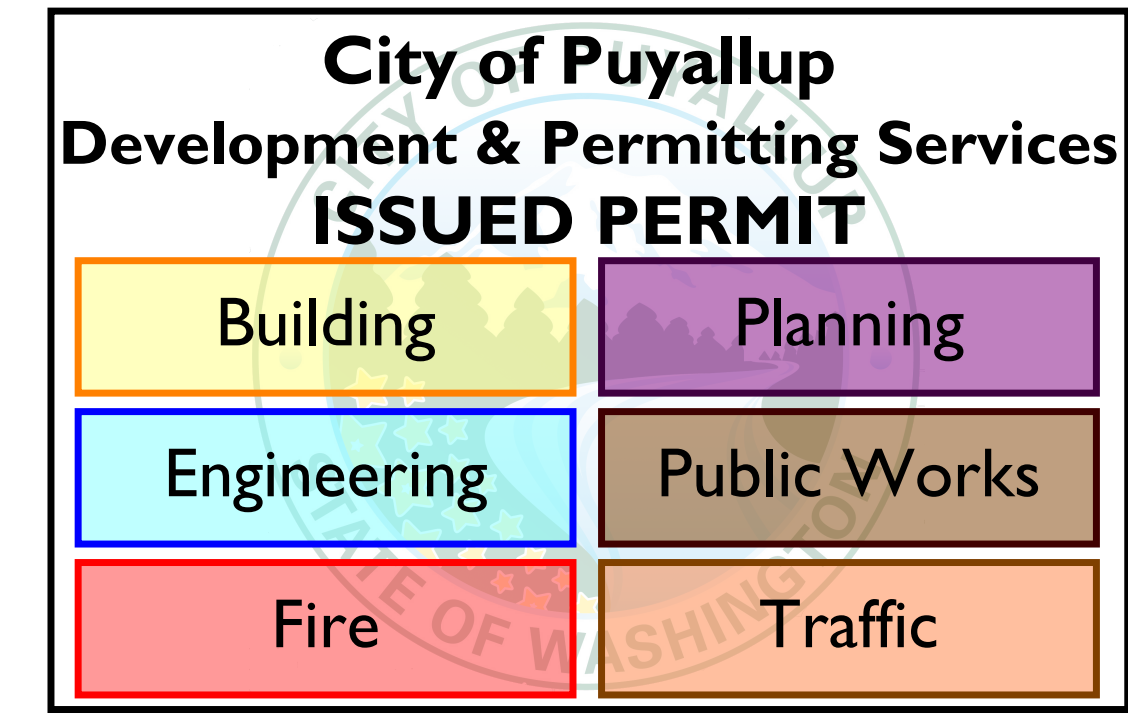


# SPECT/CT REPLACEMENT

## Multicare Good Samaritan Hospital

### 401 15th Ave. SE, Puyallup WA 98372

Approval of submitted plans is not an approval of omissions or oversight by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable building codes and regulations of the local government.



**Authorized to Begin Construction**

Construction Review Services has authorized this project to begin construction.

- See accompanying project comment form for review status and corrections.
- This is not a building permit, check with your local building department.

02/04/2022 8:55:43 AM

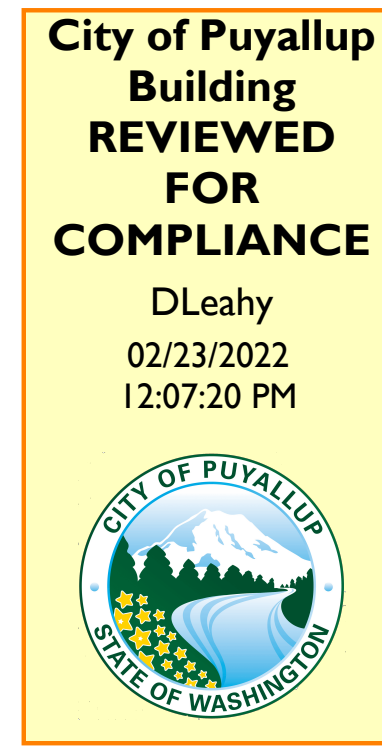
CLARK KOS ARCHITECTS, L.L.C.  
11090 REGISTERED ARCHITECT  
SCOTT S. CLARK  
P.O. BOX 10000  
PORTLAND, OR 97206  
Phone: 503/224-4848  
621 SW Alder St., Suite 700  
Portland, OR 97205

CODE SUMMARY	
PROJECT NAME:	MGSH - SPEC CT EQUIPMENT UPGRADE
ADDRESS:	401 15TH AVENUE SE PUYALLUP, WA 98372
OWNER:	MULTICARE HEALTH SYSTEM
CODES:	2018 IBC WITH STATE OF WASHINGTON AMENDMENTS, NFPA 101 - CHAPTER 18
OCCUPANCY:	I-2
NUMBER OF STORIES:	EIGHT
CONSTRUCTION TYPE:	1-A
FIRE PROTECTION:	FULLY SPRINKLERED
FIRE ALARM SYSTEM:	YES
ALLOWABLE SQUARE FOOTAGE: (TABLE 506.2)	
ALLOWABLE SQUARE FOOTAGE FOR GROUP I-2 (1-A):	UNLIMITED
TOTAL AREA ALLOWED:	UNLIMITED
ACTUAL SQUARE FOOTAGE:	
FIRE SEPARATION DISTANCE:	≥30'-0"
MAXIMUM AREA OF EXTERIOR WALL OPENINGS (705.6):	≥30'-0" UNPROTECTED, SPRINKLERED UNLIMITED
OCCUPANT LOAD:	1120 SF, SLEEPING AREAS 120 SF, CLASSROOM
MAX. COMMON PATH OF TRAVEL (1008.2.1):	75 FT
MAX. TRAVEL DISTANCE (1017.2.1):	200 FT

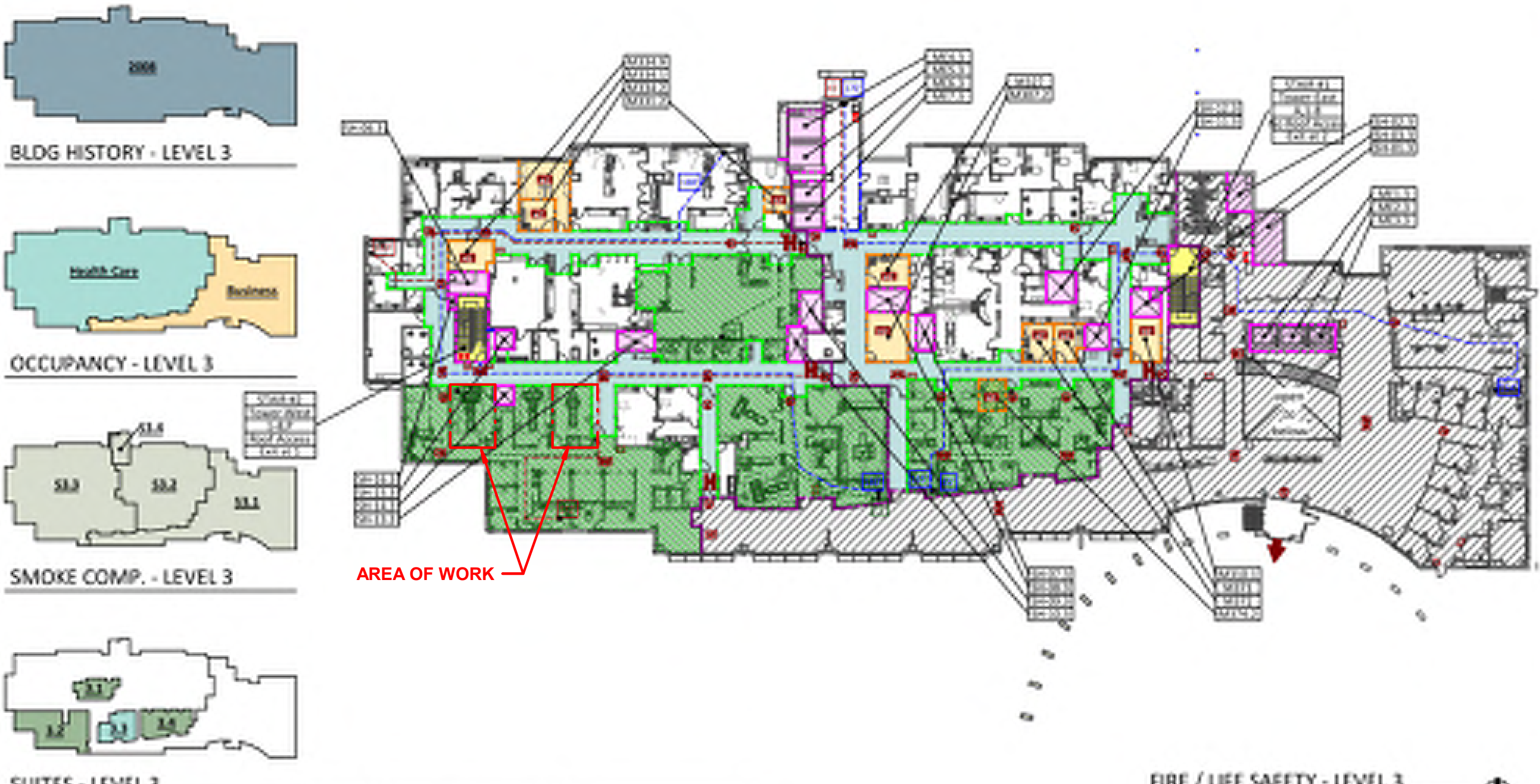
THE APPROVED CONSTRUCTION PLANS AND ALL DOCUMENTS MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

FULL SIZED LEDGIBLE COLOR PLANS ARE REQUIRED TO BE PROVIDED BY THE PERMITTEE ON SITE FOR ALL INSPECTIONS

BUILDING/PLUMBING/MECHANICAL PERMIT 2018 CODES



FIRE RESISTIVE RATINGS: (TABLE NO. 601, 602 OF THE I.B.C.)	
BUILDING ELEMENT (P-10 SEPARATION)	TYPE 1-A
STRUCTURAL FRAME	3 HOUR
BEARING WALLS	
EXTERIOR	3 HOUR
INTERIOR	3 HOUR
NON BEARING WALLS AND PARTITIONS	
EXTERIOR	1 HOUR, IF <30' FIRE SEPARATION DISTANCE
INTERIOR	0 HOUR, IF ≥30' FIRE SEPARATION DISTANCE
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	
INCLUDING SUPPORTING BEAMS AND JOISTS	2 HOUR
NON BEARING WALLS AND PARTITIONS INCLUDING SUPPORTING BEAMS AND JOISTS	1.5 HOUR



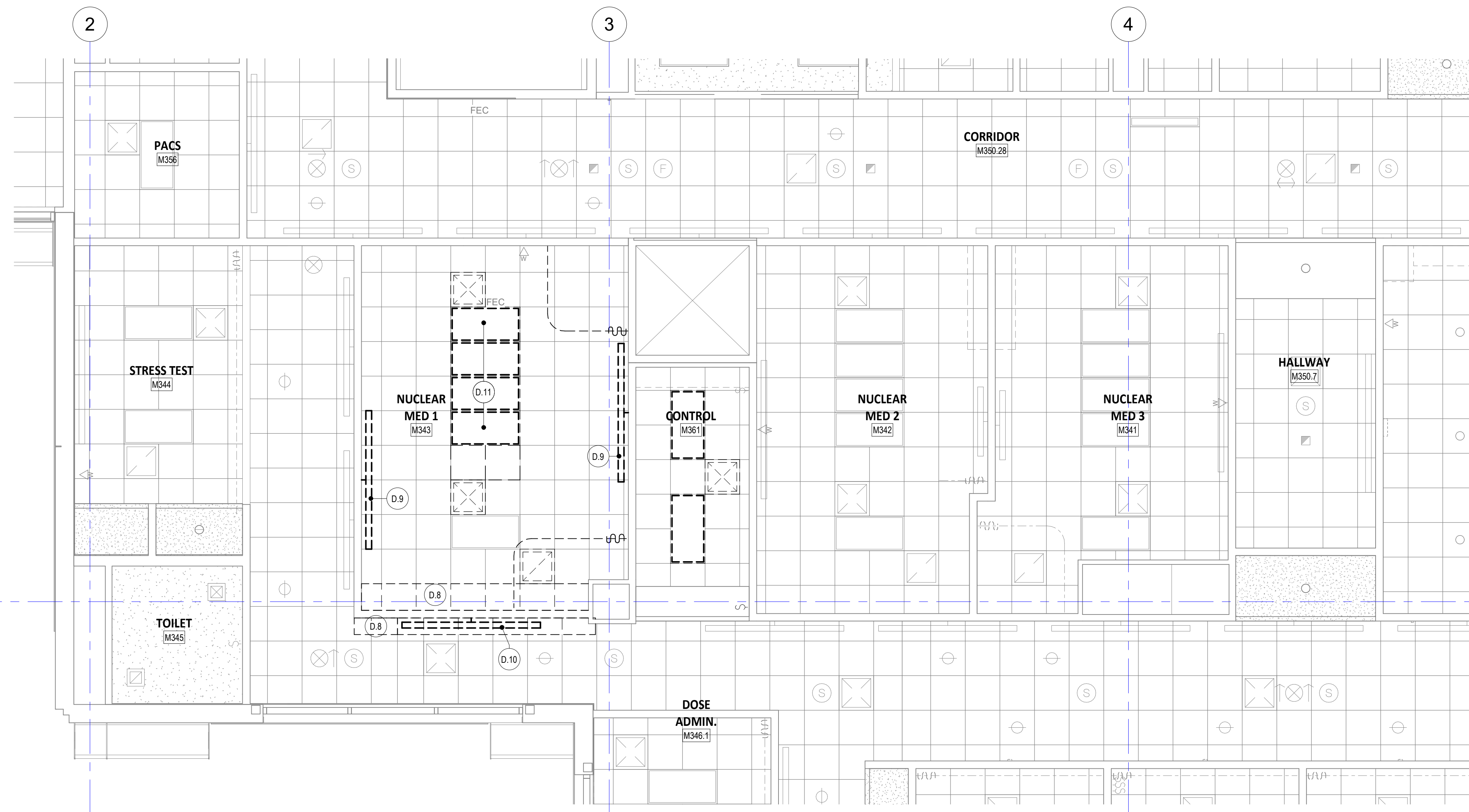
STATEMENT OF CONDITIONS  
PATIENT CARE TOWER - LEVEL 3  
Good Samaritan Hospital  
401 15th Ave SE, Puyallup, WA  
GSH SOC-13  
IN REVIEW  
01-31-2020

SYMBOLS AND FILL PATTERNS	
1/4-12 \ SLOPE	SURFACE SLOPE
ASAX	WALL ASSEMBLY
	STUD SIZE
	WALL TAG
	MODIFIER
1	KEYNOTE
	DOOR NUMBER - REF DOOR SCH
	DOOR TAG
A-1	FINISH TAG
	WINDOW TYPE - REF WINDOW SCH
W1	WINDOW TAG
ACT-1 (9'-0")	CEILING MATERIAL
	CEILING TAG
	CEILING HEIGHT ABOVE FINISHED FLOOR - ALL CEILING 9'-0" UNLESS OTHERWISE NOTED.
Name	ELEVATION TAG
Room Name	ROOM TAG
150 SF	ROOM NUMBER
	DRAWING REVISION
	DRAWING NUMBER
	CALLOUT
	SHEET NUMBER
1 A7.01	BUILDING SECTION
1 A1.01	WALL SECTION
1 A3.00 2 3	DRAWING NUMBER
	EXTERIOR ELEVATION
	SHEET NUMBER
1 A3.00 2 3	DRAWING NUMBER
	INTERIOR ELEVATION
	SHEET NUMBER
114"	DIMENSION TO FACE OF FRAMING, FACE OF CONCRETE, GRID LINE, OR AS NOTED.
114"	CLEAR DIMENSION TO FINISH FACE OR AS NOTED.
	NORTH ARROW
	PROJECT NORTH (SEE CIVIL FOR TRUE NORTH)
(E) 98.75'	EXISTING SPOT ELEV
	NEW SPOT ELEV
	ASPHALT
	CONCRETE
	EARTH
	GLASS
	GRAVEL
	GYPSUM BOARD
	INSULATION - ACOUSTICAL
	INSULATION - BATT
	INSULATION - RIGID
	INSULATION - SEMI RIGID
	MASONRY - BRICK
	MASONRY - CONCRETE BLOCK
	METAL - ALUMINUM
	METAL - STEEL
	SAND
	*WOOD - BLOCKING
	*WOOD - CONTINUOUS
	WOOD - FINISH
	WOOD - PARTICLE BOARD
	WOOD - PLYWOOD
	GA GAUGE
	GALV GALVANIZED
	GB GRAB BAR
	GL GLASS
	GWB GYPSUM WALL BOARD
	GYP GYPSUM BOARD
	GYP BD GYPSUM BOARD
	F.O. FACE OF
	FA FIRE ALARM
	FAF FLUID APPLIED FLOORING
	FD FLOOR DRAIN, FIRE DAMPER
	FE FIRE EXTINGUISHER
	FEC FIRE EXTINGUISHER CABINET
	FF FINISH FLOOR
	FFGL FIBERGLASS
	FHC FIRE HOSE CABINET
	FIN FINISHED
	FLOOR FLOURESCENT FLOORING
	FLR FOUNDATION
	FR FIREPROOFING
	FRP FIBER-REINFORCED PLASTIC
	FT FIRE TREATED
	FTG FOOTING
	GA GAUGE
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**City of Puyallup**  
**Development & Permitting Services**  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

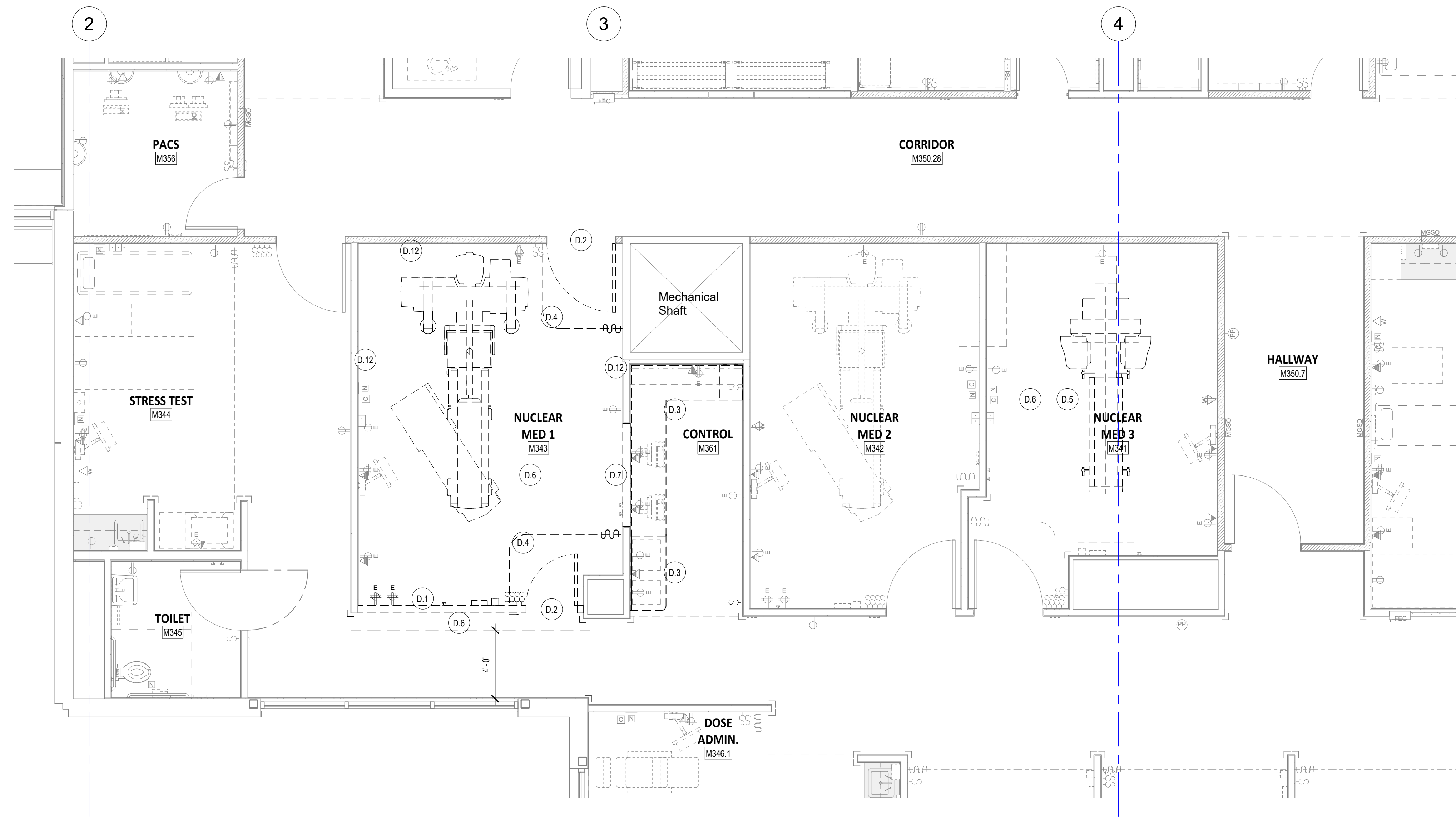


**2** LEVEL 3 - DEMO RCP - NUC MED  
 1/4" = 1'-0"

- GENERAL NOTES**
- CONTRACTOR SHALL VERIFY LIMITS OF DEMOLITION WORK
  - THIS DRAWING IDENTIFIES ONLY MAJOR WORK FOR DEMOLITION AND REMOVAL. ALL AREAS OF DEMOLITION SHALL BE CLEARED OF ALL ITEMS MAJOR AND MINOR TO RECEIVE INSTALLATION OF NEW CONSTRUCTION AND FINISHES
  - SEE REFLECTED CEILING PLANS FOR WORK THAT MAY IMPACT DEMOLITION
  - SEE STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION
  - CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES AND CONDITIONS PRIOR TO COMMENCING WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. REPORT ANY DISCREPANCIES BETWEEN DIMENSIONS FOUND IN FIELD AND DIMENSIONS ON DRAWINGS TO ARCHITECT
  - LOCATE ALL WIRES, PIPES, UTILITIES, STRUCTURAL MEMBERS, ETC. PRIOR TO ANY DEMOLITION. CUTTING OF ANY ITEM WHICH IS NOT PART OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, INCLUDING ANY TESTING OR SPECIAL OBSERVATION TO CORRECT THE PROBLEM
  - PATCH AND PAINT WALLS, FLOORS, AND SUBFLOOR TO MATCH EXISTING WHERE WORK HAS DISTURBED EXISTING CONDITIONS
  - ALL EXISTING FINISHES ARE TO BE PROTECTED FROM DAMAGE. DAMAGED AREAS SHALL BE REPAIRED AT NO COST TO THE OWNER

- LEGEND**
- EXISTING PARTITION TO BE REMOVED
  - EXISTING PARTITION

- KEYNOTES**
- D.1 REMOVE WALL AND FIXTURES
  - D.2 REMOVE DOOR, FRAME, AND HARDWARE
  - D.3 REMOVE CASEWORK AND COUNTERTOPS
  - D.4 REMOVE CURTAIN AND TRACK
  - D.5 REMOVE NUC MED MACHINE, PREP FOR RELOCATED MACHINE
  - D.6 REMOVE EXISTING FLOOR FINISH, PREP SURFACE FOR NEW FLOORING
  - D.7 CUT AND REMOVE SECTION OF WALL FOR NEW WINDOW
  - D.8 REMOVE PORTION OF ACT FOR NEW WALL LOCATION
  - D.9 REMOVE LINEAR SURFACE MOUNTED LIGHT FIXTURE
  - D.10 REMOVE LINEAR SURFACE MOUNTED LIGHT FIXTURE, REINSTALL FIXTURE ON NEW WALL
  - D.11 REMOVE AND REINSTALL (4) PHOTO SKY PANELS 2 SOUTH
  - D.12 REMOVE INTERIOR LAYER OF GYP TO INSTALL LEAD SHIELDING



**1** LEVEL 3 - DEMO PLAN - NUC MED  
 1/4" = 1'-0"

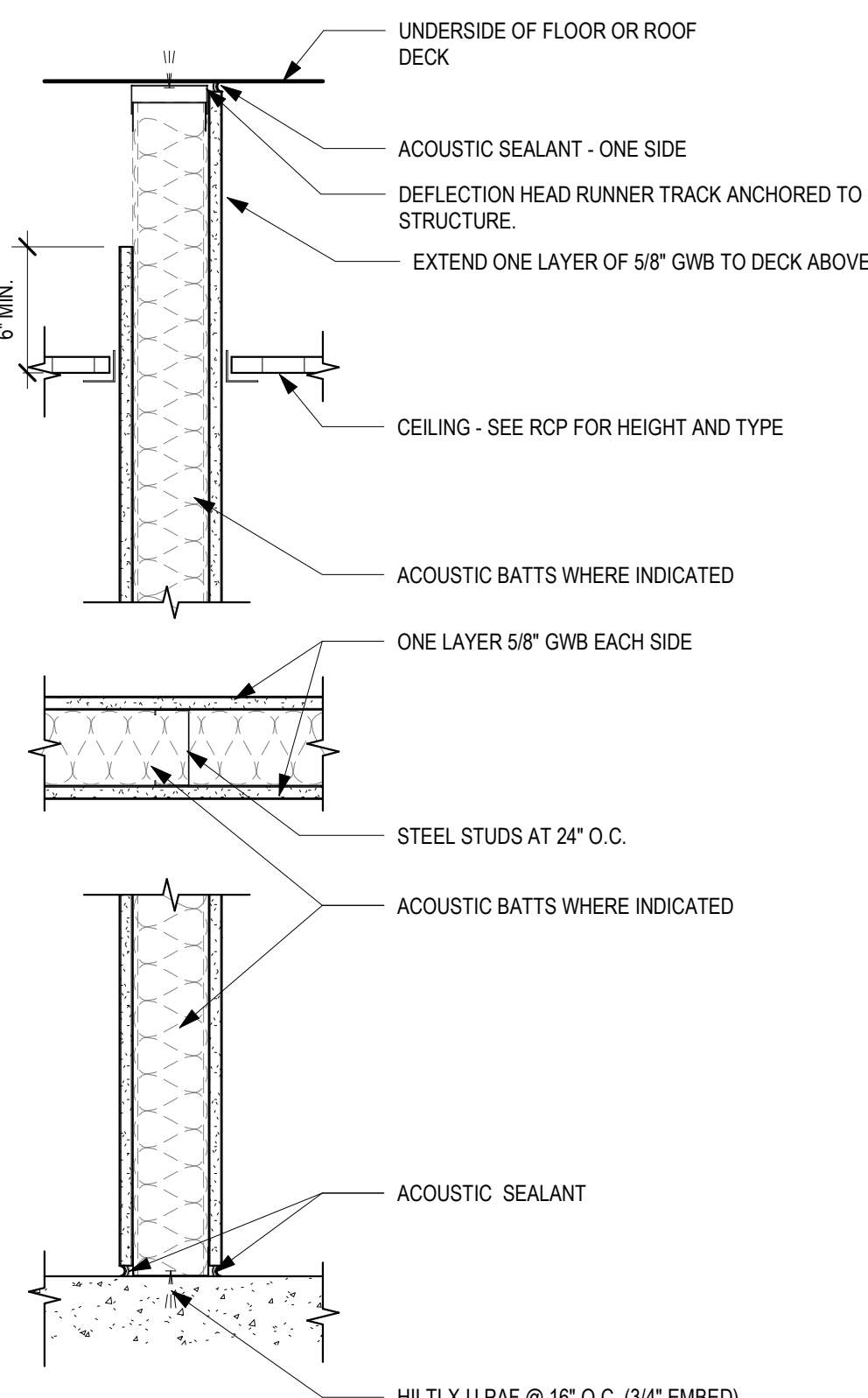


ISSUE DATE: 07.09.21  
 REVISIONS:

DEMOLITION PLAN AND RCP

**D2.01**  
 PROJECT NO.: 20046

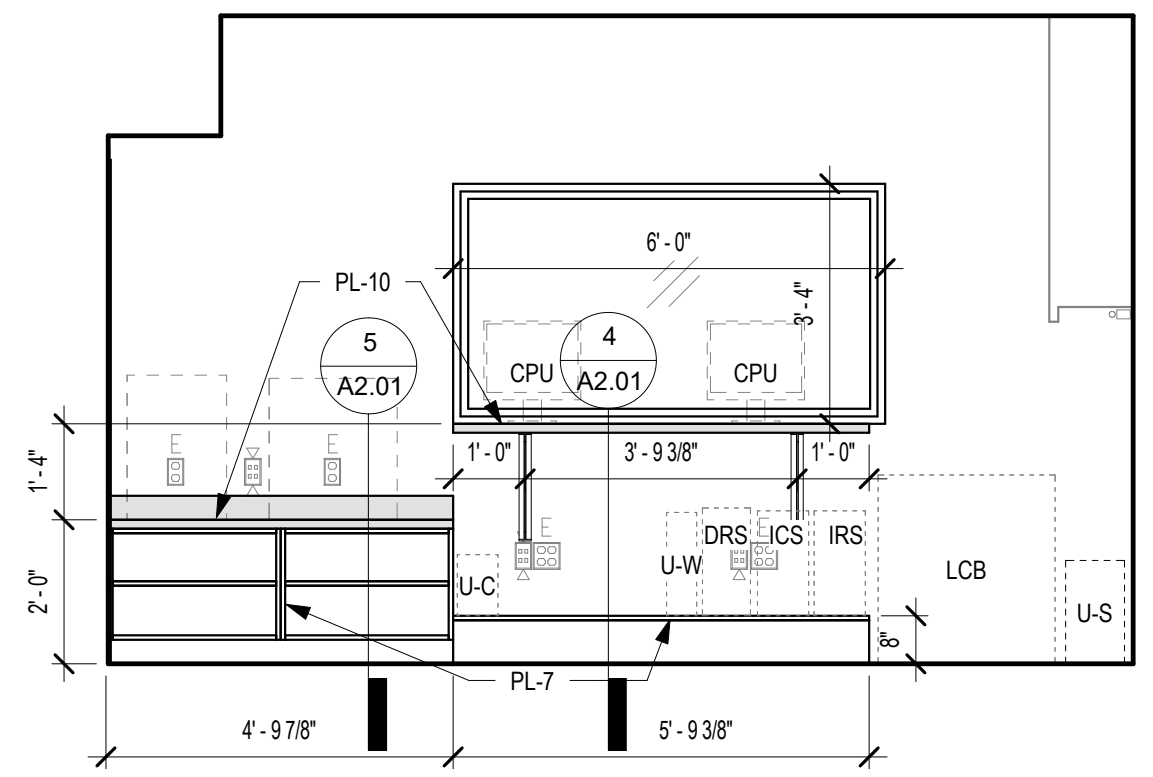




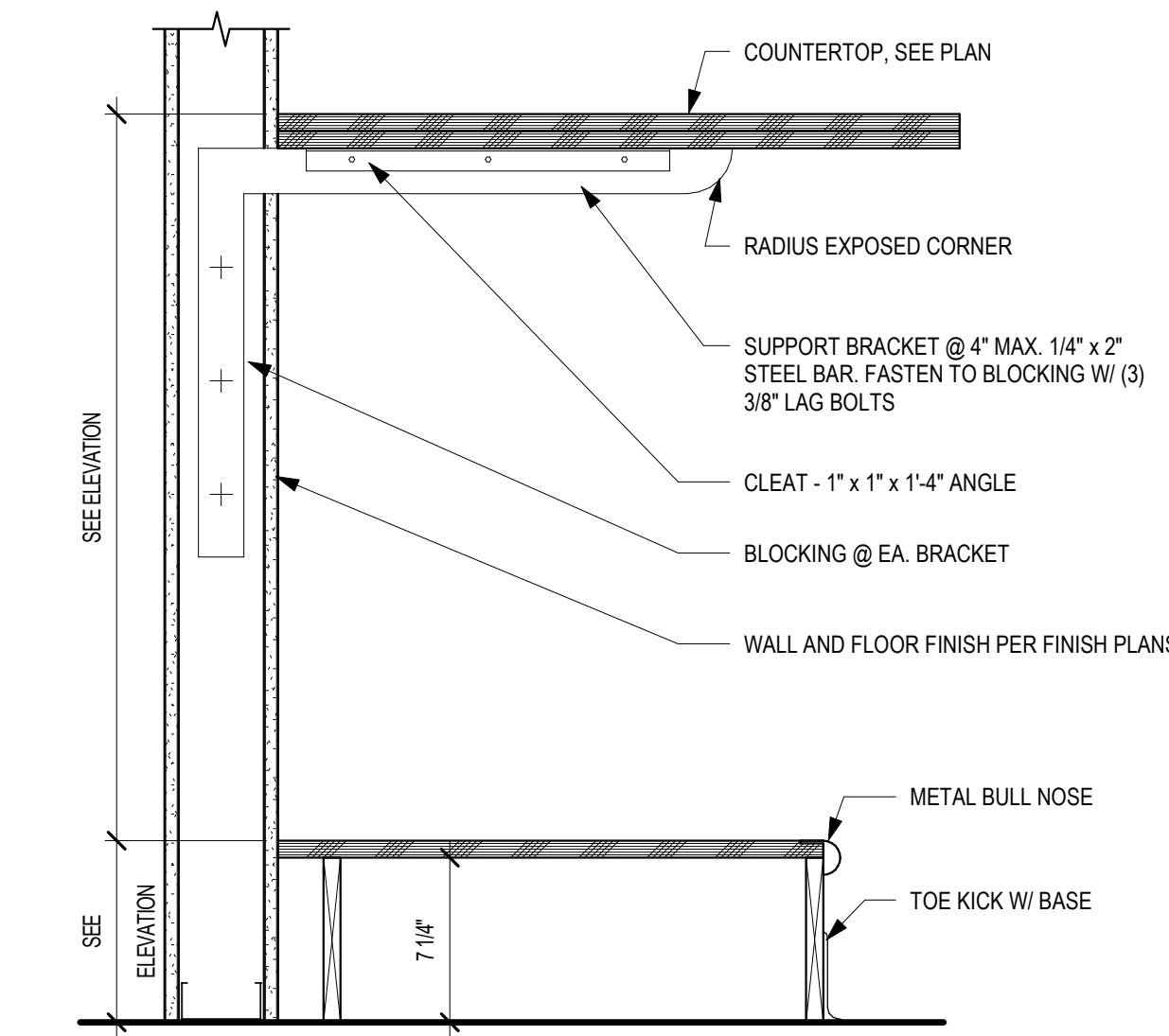
GA FILE NO WP 1072 (GENERIC)  
 STC 45-49 WITH ACUSTIC BATTs

STUD SIZE  
 P33 = 3/8"  
 P36 = 6"

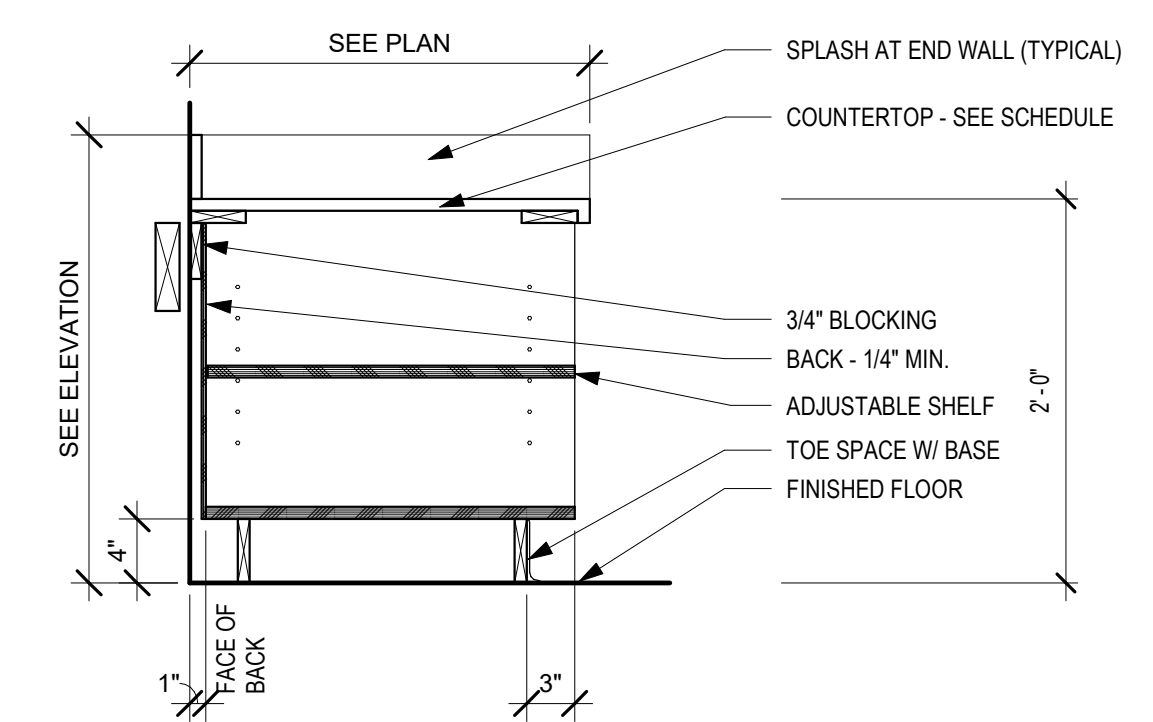
**P3 NON-RATED PARTITION TYPE 3**



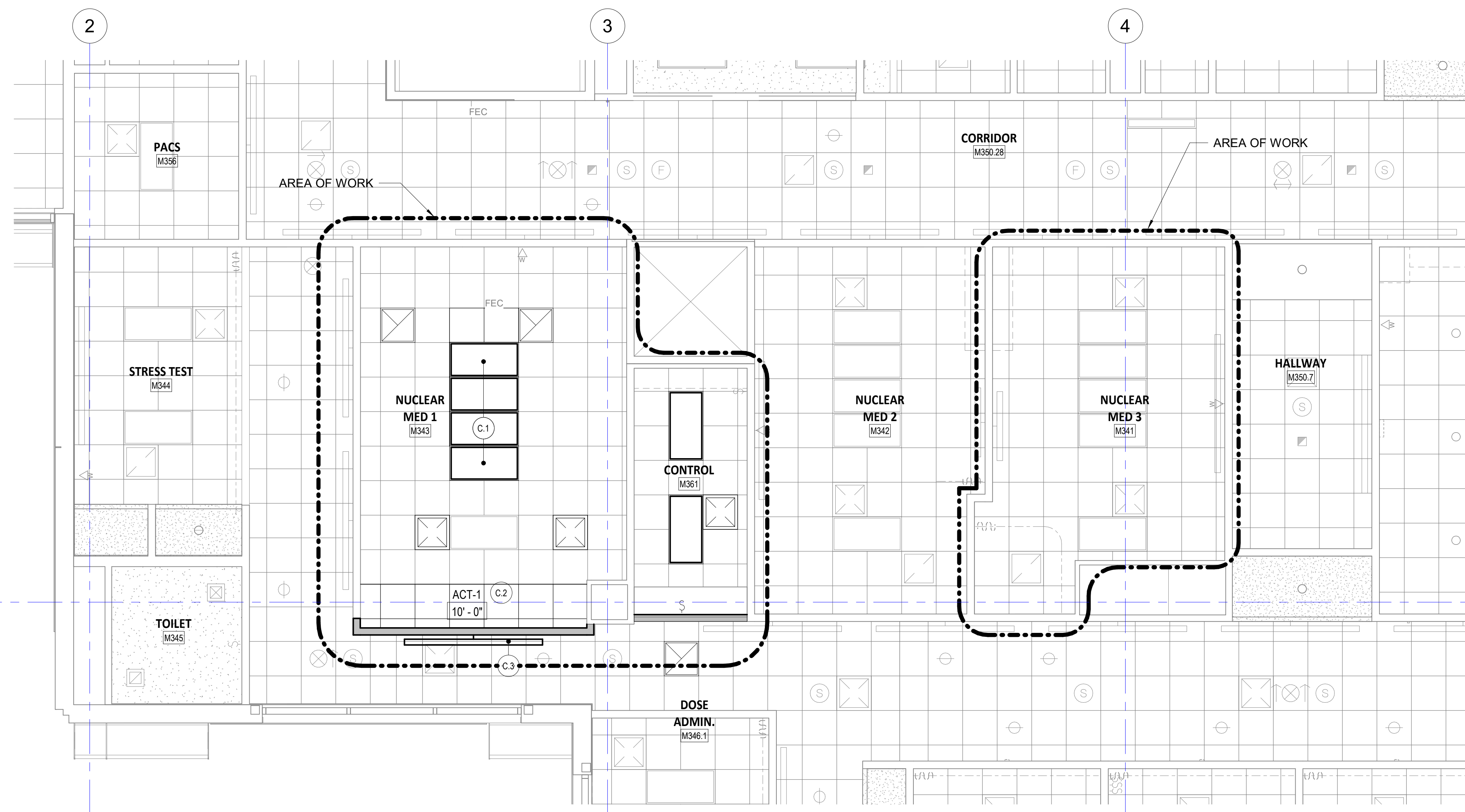
**3 CONTROL-W**  
 3/8" = 1'-0"



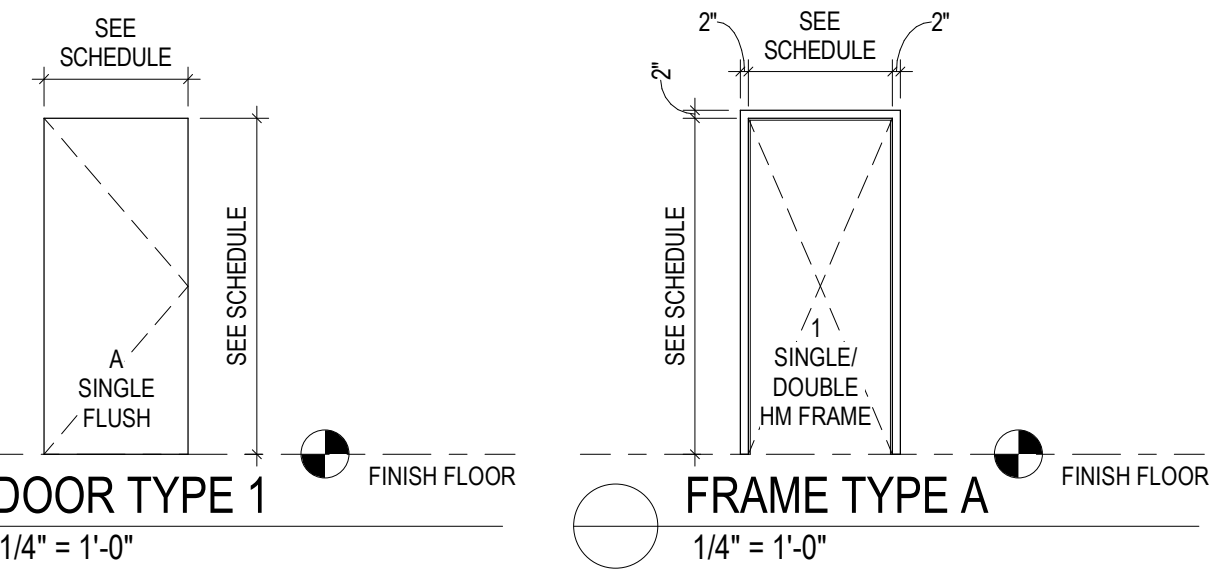
**4 BC - HIDDEN SUPPORT BRACKETS**  
 1 1/2" = 1'-0"



**5 BC - OPEN SHELVES**  
 1" = 1'-0"

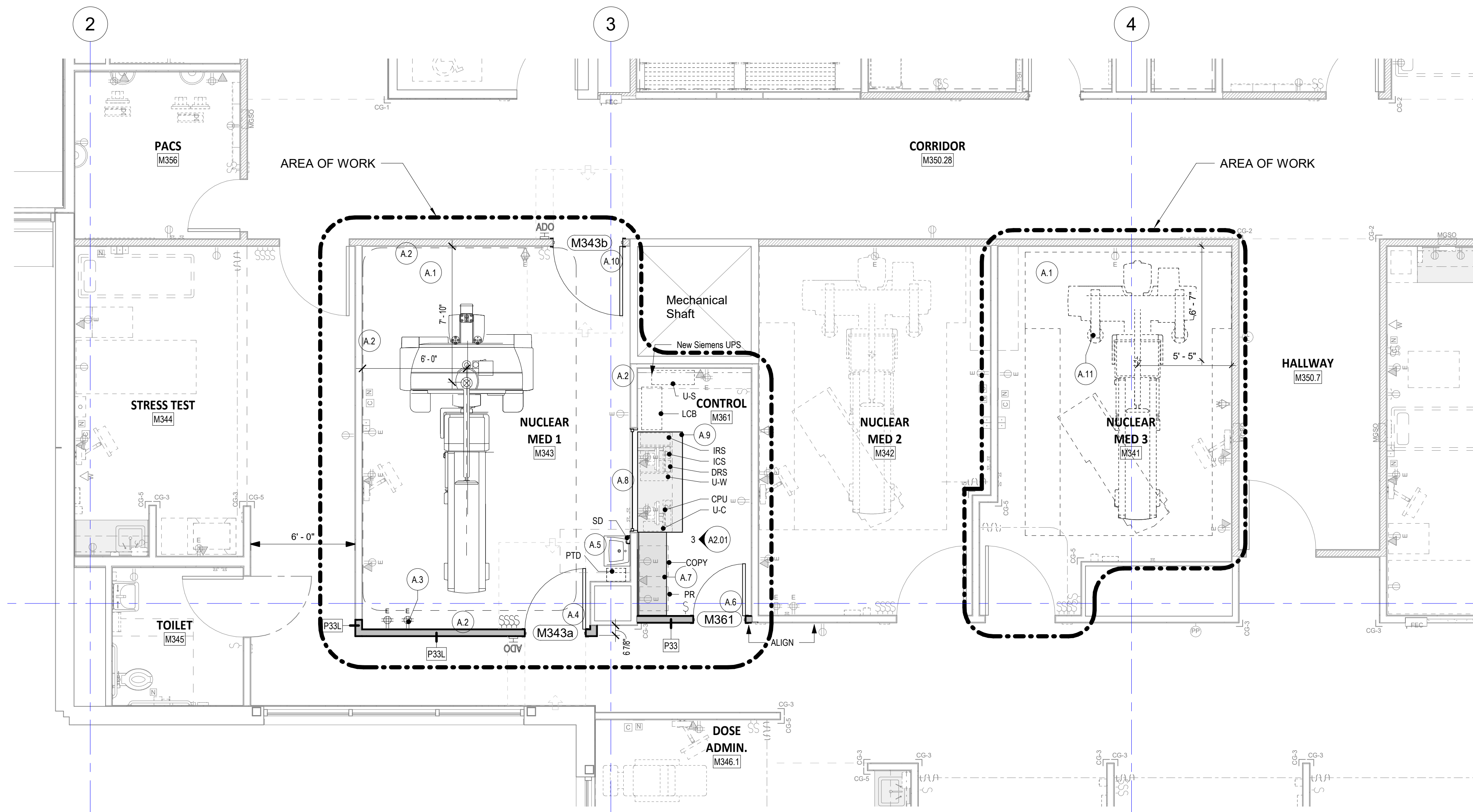


**1 REFLECTED CEILING PLAN - NUCLEAR MEDICINE - CT ROOM EQUIPMENT UPDATES**  
 1/4" = 1'-0"



**DOOR TYPE 1** 1/4" = 1'-0"  
**FRAME TYPE A** 1/4" = 1'-0"

MARK	ROOM NUMBER	ROOM NAME	DOOR			FRAME			COMMENTS
			WIDTH	HEIGHT	TYPE	MATERIAL	TYPE	MATERIAL	
M343b	M343	NUCLEAR MED 1	3'-0"	7'-0"	1	SC	A	HM	A.4 79MM LEAD SHIELDING, AUTO-OPENER
M343b	M343	NUCLEAR MED 1	4'-0"	7'-0"	1	SC	A	HM	A.10 79MM LEAD SHIELDING, AUTO-OPENER
M361	M361	CONTROL	3'-0"	7'-0"	1	SC	A	HM	A.6

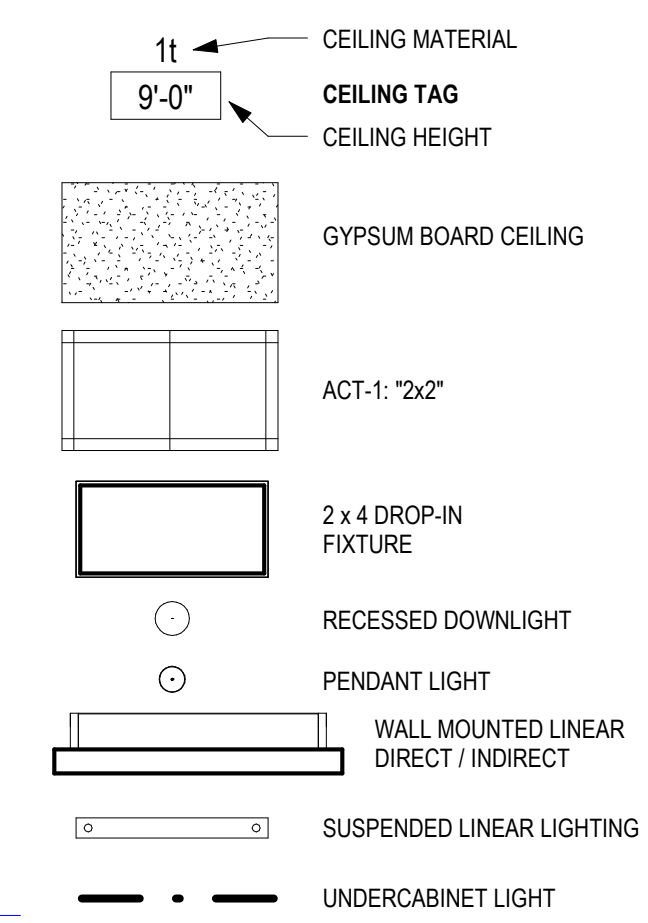


**2 LEVEL 3 - FLOOR PLAN - NUC MED**  
 1/4" = 1'-0"

**GENERAL NOTES - CEILING**

- ALL CEILING HEIGHTS ARE RELATIVE TO TOP OF SLAB OR SUBFLOOR, U.N.O.
- SEE ELECTRICAL AND MECHANICAL PLANS FOR LOCATIONS OF FIXTURES AND EQUIPMENT.
- FIELD VERIFY EXISTING CEILING LAYOUTS PRIOR TO ANY WORK.
- SUSPENSION SYSTEMS FOR NEW AND EXISTING SUSPENDED GYPSUM BOARD CEILINGS SHALL BE MODIFIED TO FRAME AROUND CEILING INSTALLED ITEMS. SEE MECHANICAL AND ELECTRICAL DRAWINGS.
- INSTALL BLOCKING AND BACKING FOR WINDOW COVERING TRACKS.
- REMOVE EXISTING CEILINGS WHERE NEW CEILINGS ARE SHOWN TO BE INSTALLED.
- FOR TOP OF WALL DETAILS AND HEIGHT OF GYP BOARD ON WALLS, SEE PLANS, PARTITION TYPES, AND DETAILS.
- RECESSED FIXTURES ARE TO MAINTAIN RATINGS WHERE LOCATED IN RATED CEILING ASSEMBLIES.

**LEGEND**



**KEYNOTES**

- NEW (SV-1) FLOORING, (P-1) PAINT, AND (WP-1) WALL PROTECTION THROUGHOUT
- NEW 79MM LEAD SHIELDING ON THIS WALL
- EXISTING POWER AND DATA TO BE RELOCATED TO NEW LOCATION
- NEW LEAD LINED 42" DOOR WITH NEW FRAME AND HARDWARE
- NEW WALL MOUNTED HANDWASH SINK AND PLUMBING CONNECTION
- NEW PARTITION AND DOOR WITH HM FRAME
- NEW PL-C COUNTER, 24" AFF
- 79MM LEAD EQUIVALENT SHIELDED WINDOW WITH HM FRAME
- NEW COUNTER WITH SHELF BENEATH FOR EQUIPMENT PLACEMENT
- NEW LEAD LINED 48" x 84" DOOR WITH HM FRAME IN EXISTING OPENING
- RELOCATED MACHINE FROM NUC MED #1
- RELOCATED PHOTO SKY PANELS
- EXTEND ACT CEILING INTO NEW PORTION OF THE ROOM
- REINSTALL EXISTING LIGHT ON NEW WALL

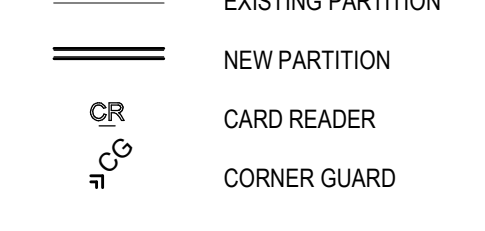
**EQUIPMENT LEGEND**

- COPY COPY MACHINE
- CPU COMPUTER
- DRS DEDICATED RECONSTRUCTION SYSTEM
- ICS IMAGE CONSTRUCTION SYSTEM
- IRS IMAGE RECONSTRUCTION SYSTEM
- LCB LINE CONNECTION BOX
- PR PRINTER
- PTD PAPER TOWEL DISPENSER
- SD SOAP DISPENSER
- U-C UPS CAMERA
- U-S UPS, SYMBIA CAMERA
- U-W UPS, WORKPLACE

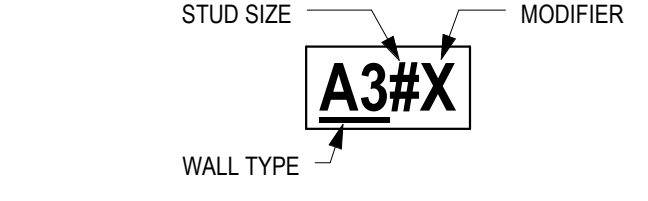
**GENERAL NOTES - FLOORPLAN**

- SEE PARTITION TYPES SHEET FOR LEGEND AND CONSTRUCTION ASSEMBLIES.
- ALL DIMENSIONS TO FACE OF STUD UNLESS OTHERWISE NOTED.
- SEE MECHANICAL AND ELECTRICAL FOR ADDITIONAL INFORMATION.
- ALL WALLS TO BE P13 U.N.O.
- INTEGRAL BASE TO BE INSTALLED IN ALL HOUSEKEEPING CLOSETS, SOILED HOLD ROOMS, AND TOILET ROOMS (UNLESS NOTED OTHERWISE).

**LEGEND**



**WALL TAG**



**MODIFIERS**

- A = PROVIDE CONTINUOUS ACUSTIC BATTs
- B = PROVIDE ABUSE RESISTANT GWB
- C = PROVIDE 5/8" RESILIENT FURRING CHANNELS OVER FRAMING ON ONE SIDE
- L = PROVIDE LEAD LINED GYPSUM BOARD - EXTEND 7'-0" AFF MIN. SEE PHYSICIST REPORT
- T = PROVIDE CEMENTITIOUS BACKER BOARD AT TILE FINISHES
- S = SHEAR WALL FRAME PER STRUCTURAL

**ASSEMBLIES**

**GA WP 1072 (Generic)**  
 One layer 5/8" type X gypsum wallboard or gypsum venter applied parallel or at right angles to each side of 3/8" steel studs 24" O.C. with 1" type S drywall screws 9" O.C. at vertical joints and 12" O.C. at floor and ceiling runners and intermediate studs.  
 Joints staggered 24" on each side and on opposite sides. Sound tested with 3 1/2" glass fiber friction fit in stud space.

**GA WP 1052 (Generic)**  
 One layer 5/8" type X gypsum wallboard or gypsum venter base applied parallel or at right angles to each side of 3/8" steel studs 24" O.C. with 1" type S drywall screws 9" O.C. at vertical joints and 12" O.C. at wall perimeter and intermediate studs. Face layer 5/8" type X gypsum wallboard or gypsum venter base applied parallel or at right angles to ONE SIDE with 1 5/8" Type S drywall screws at 12" O.C.  
 Joints staggered 24" each layer and side. Sound tested with 3 1/2" glass fiber friction fit in stud space.

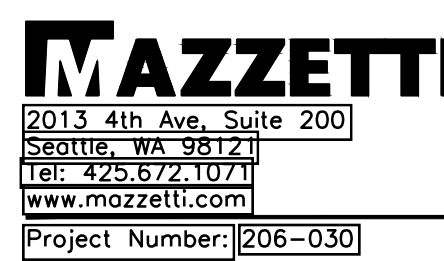
**GA WP 1022 (Generic)**  
 Base layer 5/8" type X gypsum wallboard or gypsum venter base applied parallel or at right angles to each side of 3/8" steel studs 24" O.C. with 1" type S drywall screws. Face layer 5/8" type X gypsum wallboard or gypsum venter base applied parallel or at right angles to each side with 1 5/8" type S drywall screws at 12" O.C.  
 Joints staggered 24" each layer and side. Sound tested with 3 1/2" glass fiber friction fit in stud space.

**GA WP 7051 / UL DESIGN M428 (Proprietary)**  
 One layer 1" x 24" proprietary type X gypsum panels inserted between 2 1/2" floor and ceiling J runners with T section of 2 1/2" steel or C-14 or C-T studs between panels.  
 OPPOSITE SIDE: Base layer 1/2" proprietary type X gypsum wallboard applied at right angles to studs with 1" type S drywall screws 24" O.C. Face layer 1/2" type S proprietary type X gypsum wallboard applied parallel to studs with 1 5/8" type S drywall screws at 12" O.C.  
 Sound tested with 1 7/8" glass fiber friction fit in stud space.



ISSUE DATE: 07.09.21  
 REVISIONS:





**SPECT/CT REPLACEMENT**  
 Multicare Good Samaritan Hospital  
 401 15th Ave. SE, Puyallup WA 98372



ISSUE DATE: 07.02.21

REVISIONS:

CONSTRUCTION DOCUMENTS

MECHANICAL COVER SHEET

**M001**

PROJECT NO.: 20046

**B-21-0829**

GENERAL LEGEND		AIR SYSTEMS LEGEND		CONTROL SYSTEM LEGEND		PIPE SYSTEMS LEGEND		GENERAL NOTES		ABBREVIATIONS	
	MATCH LINE		BRANCH TAKEOFF, WITH BRANCH VOLUME DAMPER (EXCEPT WHERE SPECIFICALLY NOTED THEY ARE NOT REQUIRED)		BAS CONTRACTOR PROVIDED OCC POINT AND HARDWARE		ARROW INDICATES DIRECTION OF FLOW	1. THE ENTIRE MECHANICAL SYSTEMS, INSTALLATION AND TESTING MUST BE IN COMPLIANCE TO THE LIFE SAFETY REQUIREMENTS OF CALIFORNIA BUILDING CODE 1995 EDITION CHAPTER 5.	46. PROVIDE MINIMUM 4'-0" ACOUSTICALLY LINED DUCTWORK AT DISCHARGE OF EACH TERMINAL BOX, OR REHEAT COILS AS INDICATED ON FLOOR PLANS.	ABV	ABOVE
	SECTION DESIGNATION		SHOWN IN ORDER (LEFT TO RIGHT): FIRE DAMPER (FD), SMOKE DAMPER (SD) & COMBINATION FIRE SMOKE DAMPER (FSD)		CONTROL DEVICE PROVIDED BY ELECTRICAL CONTRACTOR BUT INTERFACED TO DDC SYSTEM BY BAS CONTRACTOR		SLOPE PIPE UP OR DOWN (DN) AS NOTED	2. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.	47. FOR EXACT CONCRETE PAD/CURB SIZES COORDINATE WITH APPROVED EQUIPMENT AND WITH STRUCTURAL DOCUMENTS.	ACU	AIR CONDITIONING UNIT
	DETAIL DESIGNATION		VERTICAL COMBINATION FIRE AND SMOKE (FSD) OR SMOKE (SD) DAMPER WITH ACTUATOR (SUPPLY DUCT SHOWN)		BAS CONTRACTOR INTERFACE TO EQUIPMENT MANUFACTURER'S HARDWARE, HARD-WIRED UNLESS NOTED OTHERWISE		TOP PIPE CONNECTION	3. IN THE EVENT OF A DISCREPANCY BETWEEN CONTRACT DRAWINGS AND SPECIFICATIONS, THE MOST STRINGENT SHALL GOVERN.	48. SEE ARCHITECTURAL DOCUMENTS FOR PAINTING OF ALL EXPOSED DUCTWORK, PIPING, AIR OUTLET AND FIXTURE TRIM. ALL DUCTWORK AND PIPING ON MECHANICAL EQUIPMENT LEVEL (ROOF) IS TO BE PAINTED IN COMPLIANCE WITH DIVISION 15 AND DIVISION 9.	ACC	AIR COOLED CHILLER
	EQUIPMENT DESIGNATION		VERTICAL FIRE (FD) DAMPER (SUPPLY DUCT SHOWN)		LOCAL CONTROL POINT (NO BAS INTERFACE)		ELBOW TURNED DOWN	4. ALL WORK TO BE IN ACCORDANCE WITH REQUIREMENTS OF GOVERNING STATE AND LOCAL FIRE AND BUILDING CODES, & NFPA CODE 101/99.	49. INSTALL SHUT-OFF VALVES AT EACH BRANCH PIPE LINE.	AD	ACCESS DOOR
	EQUIPMENT DESIGNATION REQUIRING ELECTRICAL CONNECTION (FLR-EQUIPMENT-NO)		DUCT MOUNTED COIL		HEATING COIL		BOTTOM PIPE CONNECTION	5. INSTALL ALL PIPING AND DUCTWORK TO AVOID ARCHITECTURAL FRAMING, STRUCTURAL MEMBERS, AND OTHER OBSTRUCTIONS. COORDINATE PIPING AND DUCTWORK LOCATION WITH ALL APPLICABLE CONTRACT DRAWINGS PRIOR TO PLACING SLEEVES IN FLOORS OR WALLS.	50. ALL DUCT SMOKE DETECTORS TO BE PROVIDED AND WIRED BY DIVISION 16, INSTALLED BY DIVISION 15. DETECTOR SAMPLING TUBES TO HAVE AN ACCESS DOOR MAKING SAMPLING TUBES READILY ACCESSIBLE.	AFD	AIR FLOW MEASURING STATION
	EQUIPMENT DESIGNATION NOT REQUIRING ELECTRICAL CONNECTION (FLR-EQUIPMENT-NO)		CEILING SUPPLY DIFFUSER		COOLING COIL		PUMP (FOR DIAGRAMMATIC)	6. INSTALL ALL PIPING AND DUCTWORK TO BEST SUIT FIELD CONDITIONS AND COORDINATE WITH THE INSTALLATION WORK OF OTHER TRADES. THE DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED TO DETERMINE EXACT LOCATIONS OF PIPING OR DUCTWORK.	51. UNLESS SPECIFICALLY SPECIFIED OR SHOWN OTHERWISE ALL CONSTRUCTION IS TO CONFORM TO SMCMA HVAC CONSTRUCTION STANDARDS AS A MINIMUM REQUIREMENT.	AFV	AIR FLOW MEASURING STATION
	AIR OUTLET/WELT DEVICE DESIGNATION		CEILING RETURN REGISTER OR GRILLE		AIR MEASURING UNIT (PROVIDE DUCT ACCESS DOOR UPSTREAM AND DOWNSTREAM)		GATE VALVE	7. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT DIFFUSER LOCATIONS AND FINISHED CEILING.	52. FIRE DAMPERS AND FIRE SMOKE DAMPERS ARE TO BE INSTALLED IN RATED PORTION OF THE ASSEMBLIES IN WHICH THEY OCCUR.	AHV	AIR HANDLING UNIT
	POINT OF CONNECTION, NEW WORK TO EXISTING WORK		CEILING EXHAUST REGISTER OR GRILLE		2-WAY MODULATING CONTROL VALVE, XX = SPECIAL DESIGNATION (EG: PI=PRESSURE INDEPENDENT)		CHECK VALVE	8. COORDINATE DUCTWORK, PIPING WITH STRUCTURAL DRAWINGS, LIGHTING AND SPRINKLER SYSTEM. PROVIDE TRANSITIONS AS REQUIRED.	53. REFER TO ARCHITECTURAL SPECIFICATION FOR APPROVED FIRESTOPPING SYSTEM.	AL	ACoustICAL LINING
	POINT OF DISCONNECTION		ROUND DIFFUSER		3-WAY MODULATING CONTROL VALVE, XX = SPECIAL DESIGNATION (EG: BF=BUTTERFLY VALVE)		STOP CHECK VALVE	9. COORDINATE LOCATIONS OF ACCESS DOORS WITH F.D.'S, V.D.'S, SD, ETC. THE OPENING SHALL BE LARGE ENOUGH TO PERMIT MAINTENANCE AND RESETTING OF THE DEVICE.	54. ALL CONTROL PANELS SHALL BE MOUNTED NO LESS THAN 4 FEET ABOVE FURNISHED FLOOR.	ALT	ALTitUDE
	NEW WORK		LINEAR DIFFUSER (FLOW ARROW SHOWN ONLY IF AIRFLOW IS ONE DIRECTIONAL)		5-WAY MODULATING CONTROL VALVE, XX = SPECIAL DESIGNATION (EG: BF=BUTTERFLY VALVE)		BALL VALVE	10. CONTRACTOR TO COORDINATE WITH ARCHITECT'S CEILING ACCESS PANELS FOR ALL FIRE, SMOKE AND VOLUME DAMPERS IN INACCESSIBLE CEILING AS REQUIRED.	55. ALL PIPING NOT TO BE CAPPED FOR FUTURE EXTENSION SHALL BE PROVIDED WITH VALVE NEAR CAP TO PERMIT FUTURE CONNECTION OF THE SYSTEM.	ALD	ALtItUDe
	EXISTING WORK TO REMAIN		SUPPLY REGISTER OR GRILLE		2-WAY MODULATING CHARACTERIZED PORT BALL VALVE		LUBRICATED PLUG VALVE	11. PROVIDE ALL CONCRETE PADS, SPECIAL SUPPORTS AND ANCHORING FOR ALL MECHANICAL EQUIPMENT REQUIRING SUCH.	56. ALL SUPPORT ABOVE ROOF SHALL BE WEATHER PROTECTED BY MEAN PAINTING.	AMC	AMtItUDe
	EXISTING WORK TO BE REMOVED		RETURN OR EXHAUST REGISTER OR GRILLE		SOLENOID VALVE		CALIBRATED FLOW BALANCE VALVE	12. ALL DUCT DIMENSIONS ARE AIRSTREAM DIMENSIONS.	57. ALL PLENUM BOXES, DUCTWORK ETC TO BE LOCATED INSIDE WALL CAVITIES OR INACCESSIBLE SPACES SHALL BE TESTED FOR AIRTIGHT CONSTRUCTION BEFORE INSTALLATION (TYPICAL).	ANV	ANtItUDe
<b>AIR SYSTEMS LEGEND</b>			SLOPING RISE OR DROP IN RECTANGULAR DUCTWORK		MOTORIZED DAMPER (PARALLEL BLADE)		FLOW LIMITING VALVE	13. ALL MECHANICAL RELATED PENETRATIONS THROUGH ROOF SHALL HAVE CURBS (SUPPLIED BY M.C.) AND SHALL BE INSTALLED BY ROOFING CONTRACTOR TO ENSURE A PROPER WATERPROOF SEAL.	58. ALL FIRE SMOKE DAMPERS TO BE EQUIPPED WITH INTEGRAL SMOKE DETECTOR, UNLESS OTHERWISE NOTED. INSTALL PER MANUFACTURER'S INSTALLATION PROCEDURES.	APPROX	APPROXIMATE
	SLOPING RISE OR DROP IN ROUND DUCTWORK		RETURN OR EXHAUST REGISTER OR GRILLE		MOTORIZED DAMPER (OPPOSED BLADE)		RELIEF VALVE	14. MECHANICAL CONTRACTOR TO PROVIDE SHIM TO LEVEL ALL EQUIPMENT ON THE FLOOR.	59. ALL FIRE SMOKE DAMPERS TO BE EQUIPPED WITH INTEGRAL SMOKE DETECTOR, UNLESS OTHERWISE NOTED. INSTALL PER MANUFACTURER'S INSTALLATION PROCEDURES.	ARCH	ARCHITECTURAL
	RECTANGULAR DUCT, SIZE BASED ON CLEAR INSIDE DIMENSIONS, FIRST FIGURE INDICATES PLAN SIZE		SUPPLY REGISTER OR GRILLE		TEMPERATURE SENSOR		MANUAL AIR VENT	15. REFER TO ARCHITECTURAL DRAWINGS FOR INTAKE AND RELIEF LOUVERS.	SEISMIC RESTRAINTS:	AS	AIR SEPARATOR
	ROUND DUCT, DIAMETER SIZE BASED ON CLEAR INSIDE DIMENSIONS		RETURN OR EXHAUST REGISTER OR GRILLE		TEMPERATURE SENSOR - AVERAGING		AUTOMATIC AIR VENT	16. SEAL ALL FIRE RATED PENETRATIONS WITH FIRE RETARDANT MATERIAL AS SPECIFIED.	1. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE- OR POST TENSIONED), LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.	AV	AIR VENT
	FLAT OVAL DUCT, SIZE BASED ON CLEAR INSIDE DIMENSIONS, FIRST FIGURE INDICATES PLAN SIZE		SCREENED RETURN OR EXHAUST AIR OPENING		PRESSURE SENSOR		VACUUM BREAKER	17. THERMOSTAT AND HUMIDISTAT APPEARANCE AND LOCATION SHALL BE COORDINATED WITH ARCHITECTS/OWNER.	2. VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES FOUND. VERIFY DIMENSIONS OF ALL OWNER-FURNISHED OPERATING EQUIPMENT TO ENSURE PROPER COORDINATION WITH CONSTRUCTION.	AW	AIR WELT
	ACOUSTIC LINING IN DUCT (SIZE NOTED INDICATES INSIDE CLEAR DIMENSIONS)				PRESSURE GAUGE		FLOW SWITCH	18. PROVIDE REMOTE OPERATORS FOR ALL VOLUME DAMPERS LOCATED ABOVE INACCESSIBLE CEILING.	3. SCHEDULE ALL WORK ACCESS AND STORAGE WITH THE FACILITY ADMINISTRATOR.	AWP	AIR WELT
	FLEXIBLE CONNECTION IN DUCT				PRESSURE GAUGE, STEAM SYSTEMS		FLOW METER (INSTANTANEOUS FLOW)	19. PROVIDE OPERATING HANDLES FOR ALL VALVE AND COCKS WITHOUT INTEGRAL OPERATORS.	4. CONTRACTOR SHALL PROVIDE DUST COVERS AS REQUIRED TO CONTAIN DUST AND DEBRIS WITHIN CONSTRUCTION AREA AND KEEP DIRT AND DUST TO A MINIMUM.	CA	COMPRESSED AIR
	FLEXIBLE DUCT				PRESSURE GAUGE, HYDRONIC SYSTEMS		TOTALIZING FLOW METER	20. IN MECHANICAL OR EQUIPMENT ROOMS, INSTALL ALL VALVES ACCESSIBLE FROM FLOOR LEVEL WHERE POSSIBLE. PROVIDE GUIDED CHAIN OPERATIONS, UNLESS OTHERWISE NOTED. ON ALL VALVES IN MECHANICAL AND EQUIPMENT ROOMS INSTALLED OVER 7' ABOVE FLOOR.	5. ALL REMOVED ITEMS DEEMED TO HAVE VALUE BY THE OWNER SHALL BE DELIVERED TO A PLACE OF STORAGE AT THE SITE AS DIRECTED. ALL OTHER ITEMS MUST BE DISPOSED OF OFF SITE IN A LEGAL MANNER.	CAV	CONSTANT VOLUME
	MANUAL VOLUME DAMPER IN DUCT				TEMPERATURE SENSOR		TEMPERATURE-PRESSURE TEST FITTING	21. PROVIDE VALVES AND OTHER PIPING SPECIALTIES SAME SIZE AS LINE SIZE SHOWN UNLESS OTHERWISE NOTED.	6. WHERE EXISTING CONSTRUCTION IS CUT, DAMAGED, OR REMODELED, PATCH WITH MATERIALS TO MATCH IN KIND, QUALITY AND PERFORMANCE.	CC	COOLING COIL
	MANUAL VOLUME DAMPER IN DUCT WITH REMOTE REGULATOR				TEMPERATURE SENSOR - AVERAGING		PIPE ANCHOR	22. INSTALL SWING CHECK VALVES IN THE HORIZONTAL POSITION.	7. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR SAFETY OF ALL PERSONS ON OR ABOUT THE CONSTRUCTION SITE IN ACCORDANCE WITH APPLICABLE LAWS AND CODES. GUARD ALL HAZARDS IN ACCORDANCE WITH THE SAFETY PROVISIONS OF THE LATEST MANUAL OF ACCIDENT PREVENTION PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA.	CD	CEILING DIFFUSER
	BACK DRAFT DAMPER				PRESSURE SENSOR		PIPE EXPANSION JOINT	23. WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE SO THERE WILL BE COUNTER FLOW BETWEEN WATER AND AIR.	8. CLEAN ALL EXPOSED SURFACES AND NEW EQUIPMENT AFTER COMPLETION.	CE	CEILING EXHAUST
	SLIDE GATE DAMPER				HUMIDIFIER		WYE TYPE STRAINER	24. PROVIDE 3/8" BLOW-OFF VALVE AND 1/2" IPS TO HOSE THREAD ADAPTER ON ALL STRAINERS.	9. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.	CF	CAP FOR FUTURE
	MOTORIZED DAMPER IN DUCT				ROOM SENSOR OR THERMOSTAT (WITH ZONE OR EQUIPMENT DESIGNATION WHERE APPLICABLE)		WYE TYPE STRAINER	25. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, ALL HOT WATER SUPPLY/RETURN TAKE-OFFS TO REHEAT COIL IN VAV BOXES SHALL BE 3/4" DIAMETER.		CFM	CUBIC FEET PER MINUTE
	SUPPLY DUCT TURNING UP, (IN ORDER SHOWN, RECTANGULAR, FLAT OVAL & ROUND)				ROOM SENSOR OR THERMOSTAT WITH LEADER TO RELATED EQUIPMENT		REDUCED PRESSURE BACKFLOW PREVENTER	26. ALL DUCT HEATING COILS SHALL HAVE DUCT ACCESS PANEL.		CFM	CUBIC FEET PER MINUTE
	SUPPLY DUCT TURNING DOWN, (IN ORDER SHOWN, RECTANGULAR, FLAT OVAL & ROUND)						SIGHT GLASS	27. ALL BRANCH DUCTS TO AIR OUTLET SHALL BE EQUIPPED WITH DUCT VOLUME DAMPER.		CFM	CUBIC FEET PER MINUTE
	RETURN DUCT TURNING UP, (IN ORDER SHOWN, RECTANGULAR & ROUND)						BLIND FLANGE	28. PROVIDE UNIONS OR FLANGES ON EACH SIDE OF CONTROL VALVES AND PUMPS. EVERY PIPING ASSEMBLY SHALL BE MADE SO AS TO MAKE EVERY EQUIPMENT EASILY REMOVABLE. WELDED OR SOLDER-JOINT VALVES ARE EXCEPTED FROM THIS REQUIREMENT.		CFM	CUBIC FEET PER MINUTE
	RETURN DUCT TURNING DOWN, (IN ORDER SHOWN, RECTANGULAR & ROUND)						HEATING WATER SUPPLY	29. CEILING DIFFUSER SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.		CFM	CUBIC FEET PER MINUTE
	EXHAUST DUCT TURNING DOWN, (IN ORDER SHOWN, RECTANGULAR & ROUND)						HEATING WATER RETURN	30. PROVIDE LOCAL INDICATOR LIGHTS FOR ALL SMOKE/FIRE DAMPERS. LIGHT IS ACTIVATED WHEN DAMPER IS IN CLOSED POSITION.		CFM	CUBIC FEET PER MINUTE
	EXHAUST DUCT TURNING UP, (IN ORDER SHOWN, RECTANGULAR & ROUND)							31. ALL DRAIN CONNECTIONS FROM MECHANICAL EQUIPMENT SHALL BE PIPED TO SPILL DIRECTLY INTO NEAREST FLOOR DRAIN.		CFM	CUBIC FEET PER MINUTE
	DUCT ACCESS DOOR							32. PROVIDE ALL GREASE DUCTS WITH ADEQUATE CLEANOUT OPENING IN ACCORDANCE WITH UMC.		CFM	CUBIC FEET PER MINUTE
	MITERED ELBOW WITH TURNING VANES							33. ALL LOW POINTS OF ALL GREASE DUCTS SHALL HAVE ADEQUATE CAPACITY GREASE TANK (COLLECTORS) OR DRAIN.		CFM	CUBIC FEET PER MINUTE
	RADIUS ELBOW, R/D=1.5 UNLESS NOTED OTHERWISE							34. PROVIDE 1" AIR GAP AT ALL DRAIN CONNECTIONS.		CFM	CUBIC FEET PER MINUTE
	DUCT SPLIT WITH SPLIT SIZE							35. ALL PIPING AND DUCTWORK PASSING THROUGH SEPARATION JOINTS USED AS BUILDING SEISMIC SEPARATIONS SHALL HAVE FLEXIBLE CONNECTIONS TO COMPENSATE FOR SEISMIC MOVEMENT AS REQUIRED. PROVIDE HANGERS ON EACH SIDE OF FLEXIBLE CONNECTION.		CFM	CUBIC FEET PER MINUTE

**City of Puyallup**  
 Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic



**City of Puyallup**  
**Development & Permitting Services**  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic



**MAZZETTI**  
 2013 4th Ave, Suite 200  
 Everett, WA 98201  
 Tel: 425.677.1071  
 www.mazzetti.com  
 Project Number: 206-030

**SPECT/CT REPLACEMENT**  
 Multicare Good Samaritan Hospital  
 401 15th Ave. SE, Puyallup WA 98372



ISSUE DATE: 07.02.21  
 REVISIONS:

CONSTRUCTION DOCUMENTS

MECHANICAL  
 ENERGY COMPLIANCE  
 FORMS

**M003**  
 PROJECT NO.: 20046

**2018 WASHINGTON STATE ENERGY CODE**

1. MECHANICAL EQUIPMENT SHALL HAVE MINIMUM PERFORMANCE AT SPECIFIED RATING CONDITIONS NOT LESS THAN THE VALUE INDICATED IN TABLE C403.3.2(1)A THROUGH C403.3.2(1)C, C403.3.2(2), C403.3.2(3), C403.3.2(4), C403.3.2(5), C403.3.2(7), C403.3.2(8), C403.3.2(9), C403.3.2(10), C403.3.2(11), C403.3.2(12), C403.3.2.2 OF THE WSEC, AND AS INDICATED ON THE CONTRACT DOCUMENTS.	32. ALL PIPING SHALL BE INSULATED AS REQUIRED BY SECTION C403.10.3 AND TABLE C403.2.9 OF THE WSEC AND AS DESCRIBED IN THE PROJECT MANUAL.																																																																							
2. CALCULATION OF HEATING AND COOLING LOADS SHALL BE DETERMINED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN ANSI/ASHRAE/ACCA STANDARD 183 OR BY AN APPROVED EQUIVALENT COMPUTATIONAL PROCEDURE PER THE REQUIREMENTS OF SECTION C403.1.2 OF THE WSEC.	<table border="1"> <thead> <tr> <th rowspan="2">TEMPERATURE °F</th> <th colspan="2">INSULATION CONDUCTIVITY</th> <th colspan="5">PIPE DIAMETER</th> </tr> <tr> <th>CONDUCTIVITY BTU·IN/(H·FT<sup>2</sup>·°F)</th> <th>MEAN RATING TEMP °F</th> <th>1/2"</th> <th>3/4"</th> <th>1"</th> <th>1 1/2"</th> <th>2"</th> </tr> </thead> <tbody> <tr> <td>ABOVE 350</td> <td>0.02-0.04</td> <td>250</td> <td>4.5</td> <td>5.0</td> <td>5.0</td> <td>5.0</td> <td>5.0</td> </tr> <tr> <td>251-350</td> <td>0.02-0.03</td> <td>200</td> <td>3.0</td> <td>4.0</td> <td>4.5</td> <td>4.5</td> <td>4.5</td> </tr> <tr> <td>201-250</td> <td>0.02-0.03</td> <td>150</td> <td>2.5</td> <td>2.5</td> <td>2.5</td> <td>3.0</td> <td>3.0</td> </tr> <tr> <td>141-200</td> <td>0.02-0.03</td> <td>125</td> <td>1.5</td> <td>1.5</td> <td>2.0</td> <td>2.0</td> <td>2.0</td> </tr> <tr> <td>105-140</td> <td>0.02-0.03</td> <td>100</td> <td>1.0</td> <td>1.0</td> <td>1.5</td> <td>1.5</td> <td>1.5</td> </tr> <tr> <td>40-60</td> <td>0.02-0.03</td> <td>75</td> <td>0.5</td> <td>0.5</td> <td>1.0</td> <td>1.0</td> <td>1.0</td> </tr> <tr> <td>BELOW 40</td> <td>0.02-0.03</td> <td>75</td> <td>0.5</td> <td>1.0</td> <td>1.0</td> <td>1.0</td> <td>1.5</td> </tr> </tbody> </table> <p>NOTE: PIPING INSULATION MEETS OR EXCEEDS WSEC.</p>	TEMPERATURE °F	INSULATION CONDUCTIVITY		PIPE DIAMETER					CONDUCTIVITY BTU·IN/(H·FT <sup>2</sup> ·°F)	MEAN RATING TEMP °F	1/2"	3/4"	1"	1 1/2"	2"	ABOVE 350	0.02-0.04	250	4.5	5.0	5.0	5.0	5.0	251-350	0.02-0.03	200	3.0	4.0	4.5	4.5	4.5	201-250	0.02-0.03	150	2.5	2.5	2.5	3.0	3.0	141-200	0.02-0.03	125	1.5	1.5	2.0	2.0	2.0	105-140	0.02-0.03	100	1.0	1.0	1.5	1.5	1.5	40-60	0.02-0.03	75	0.5	0.5	1.0	1.0	1.0	BELOW 40	0.02-0.03	75	0.5	1.0	1.0	1.0	1.5
TEMPERATURE °F	INSULATION CONDUCTIVITY		PIPE DIAMETER																																																																					
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ABOVE 350	0.02-0.04	250	4.5	5.0	5.0	5.0	5.0																																																																	
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201-250	0.02-0.03	150	2.5	2.5	2.5	3.0	3.0																																																																	
141-200	0.02-0.03	125	1.5	1.5	2.0	2.0	2.0																																																																	
105-140	0.02-0.03	100	1.0	1.0	1.5	1.5	1.5																																																																	
40-60	0.02-0.03	75	0.5	0.5	1.0	1.0	1.0																																																																	
BELOW 40	0.02-0.03	75	0.5	1.0	1.0	1.0	1.5																																																																	
3. HEATING AND COOLING EQUIPMENT FANS, HEATING AND COOLING CIRCULATION PUMPS, AND TERMINAL UNIT FANS SHALL CYCLE OFF AND TERMINAL UNIT PRIMARY COOLING AIR SHALL BE SHUT OFF WHEN THERE IS NO CALL FOR HEATING OR COOLING IN THE ZONE AS REQUIRED BY SECTION C403.3.2 OF THE WSEC.	33. AUTOMATIC-CIRCULATING HOT WATER AND HEAT-TRACED SYSTEM PIPING SHALL BE INSULATED AS REQUIRED BY SECTION C404.6.																																																																							
4. HVAC SYSTEMS SHALL BE PROVIDED WITH THERMOSTATIC CONTROLS AS REQUIRED BY SECTIONS C403.4.1 THROUGH C403.4.11 OF THE WSEC.	<table border="1"> <thead> <tr> <th>SYSTEM</th> <th>INSULATION CONDUCTIVITY</th> <th>INSULATION THICKNESS</th> </tr> </thead> <tbody> <tr> <td>AUTOMATIC CIRCULATING HOT WATER</td> <td>≤ 0.27</td> <td>1.0</td> </tr> <tr> <td>HEAT TRACED SYSTEMS</td> <td>≤ 0.27</td> <td>1.0</td> </tr> <tr> <td>SERVED BY EQUIPMENT WITHOUT INTEGRAL HEAT TRAPS</td> <td>≤ 0.27</td> <td>(FIRST 8" OF PIPE)</td> </tr> </tbody> </table>	SYSTEM	INSULATION CONDUCTIVITY	INSULATION THICKNESS	AUTOMATIC CIRCULATING HOT WATER	≤ 0.27	1.0	HEAT TRACED SYSTEMS	≤ 0.27	1.0	SERVED BY EQUIPMENT WITHOUT INTEGRAL HEAT TRAPS	≤ 0.27	(FIRST 8" OF PIPE)																																																											
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5. WHERE A ZONE HAS A SEPARATE HEATING AND A SEPARATE COOLING THERMOSTATIC CONTROL LOCATED WITHIN THE ZONE, THE ZONE CONTROL SHALL BE CONFIGURED TO PREVENT THE HEATING SET POINT FROM EXCEEDING THE COOLING SET POINT AND TO MAINTAIN A DEAD BAND IN ACCORDANCE WITH SECTION C403.4.1.2 AS REQUIRED BY SECTION C403.4.1.3 OF THE WSEC.	<table border="1"> <thead> <tr> <th colspan="4">TABLE C403.10.1.2</th> </tr> <tr> <th colspan="4">SUPPLY, RETURN, EXHAUST AND RELIEF AIR DUCTWORK INSULATION</th> </tr> <tr> <th>DUCT SYSTEM</th> <th>DUCT LOCATION AND USE</th> <th>CLIMATE ZONE</th> <th>MINIMUM INSTALLED DUCT INSULATION R-VALUE "I"</th> </tr> </thead> <tbody> <tr> <td>SUPPLY AIR OR RETURN AIR</td> <td>OUTSIDE THE BUILDING (OUTDOORS AND EXPOSED TO WEATHER) *</td> <td>4C</td> <td>R-8</td> </tr> <tr> <td>SUPPLY AIR OR RETURN AIR</td> <td>OUTSIDE THE BUILDING (OUTDOORS AND EXPOSED TO WEATHER) *</td> <td>5B</td> <td>R-12</td> </tr> <tr> <td>SUPPLY AIR OR RETURN AIR</td> <td>UNCONDITIONED SPACE (ENCLOSED BUT NOT IN THE BUILDING CONDITIONED ENVELOPE)</td> <td>4C AND 5B</td> <td>R-6</td> </tr> <tr> <td>SUPPLY AIR OR RETURN AIR</td> <td>UNCONDITIONED SPACE WHERE THE DUCT CONVEYS AIR THAT IS WITHIN 15°F OF THE AIR TEMPERATURE OF THE SURROUNDING UNCONDITIONED SPACE</td> <td>4C AND 5B</td> <td>R-3.3</td> </tr> <tr> <td>SUPPLY AIR OR RETURN AIR</td> <td>WHERE LOCATED IN A BUILDING ENVELOPE ASSEMBLY</td> <td>4C AND 5B</td> <td>R-16</td> </tr> <tr> <td>SUPPLY AIR</td> <td>WITHIN CONDITIONED SPACE WHERE THE SUPPLY DUCT CONVEYS AIR THAT IS LESS THAN 55°F OR GREATER THAN 105°F</td> <td>4C AND 5B</td> <td>R-3.3</td> </tr> <tr> <td>SUPPLY AIR</td> <td>WITHIN CONDITIONED SPACE THAT THE DUCT DIRECTLY SERVES WHERE THE SUPPLY DUCT CONVEYS AIR THAT IS LESS THAN 55°F OR GREATER THAN 105°F</td> <td>4C AND 5B</td> <td>NONE</td> </tr> <tr> <td>SUPPLY AIR</td> <td>WITHIN CONDITIONED SPACE WHERE THE SUPPLY DUCT CONVEYS AIR THAT IS 55°F OR GREATER THAN 105°F OR LESS</td> <td>4C AND 5B</td> <td>NONE</td> </tr> <tr> <td>RETURN OR EXHAUST AIR</td> <td>WITHIN CONDITIONED SPACE, DOWNSTREAM OF AN ENERGY RECOVERY MEDIA, UPSTREAM OF AN AUTOMATIC SHUTOFF DAMPER</td> <td>4C</td> <td>R-8</td> </tr> <tr> <td>RETURN OR EXHAUST AIR</td> <td>WITHIN CONDITIONED SPACE, DOWNSTREAM OF AN ENERGY RECOVERY MEDIA, UPSTREAM OF AN AUTOMATIC SHUTOFF DAMPER</td> <td>5B</td> <td>R-16</td> </tr> <tr> <td>RELIEF OR EXHAUST AIR</td> <td>CONDITIONED SPACE AND DOWNSTREAM</td> <td>4C</td> <td>R-16</td> </tr> </tbody> </table>	TABLE C403.10.1.2				SUPPLY, RETURN, EXHAUST AND RELIEF AIR DUCTWORK INSULATION				DUCT SYSTEM	DUCT LOCATION AND USE	CLIMATE ZONE	MINIMUM INSTALLED DUCT INSULATION R-VALUE "I"	SUPPLY AIR OR RETURN AIR	OUTSIDE THE BUILDING (OUTDOORS AND EXPOSED TO WEATHER) *	4C	R-8	SUPPLY AIR OR RETURN AIR	OUTSIDE THE BUILDING (OUTDOORS AND EXPOSED TO WEATHER) *	5B	R-12	SUPPLY AIR OR RETURN AIR	UNCONDITIONED SPACE (ENCLOSED BUT NOT IN THE BUILDING CONDITIONED ENVELOPE)	4C AND 5B	R-6	SUPPLY AIR OR RETURN AIR	UNCONDITIONED SPACE WHERE THE DUCT CONVEYS AIR THAT IS WITHIN 15°F OF THE AIR TEMPERATURE OF THE SURROUNDING UNCONDITIONED SPACE	4C AND 5B	R-3.3	SUPPLY AIR OR RETURN AIR	WHERE LOCATED IN A BUILDING ENVELOPE ASSEMBLY	4C AND 5B	R-16	SUPPLY AIR	WITHIN CONDITIONED SPACE WHERE THE SUPPLY DUCT CONVEYS AIR THAT IS LESS THAN 55°F OR GREATER THAN 105°F	4C AND 5B	R-3.3	SUPPLY AIR	WITHIN CONDITIONED SPACE THAT THE DUCT DIRECTLY SERVES WHERE THE SUPPLY DUCT CONVEYS AIR THAT IS LESS THAN 55°F OR GREATER THAN 105°F	4C AND 5B	NONE	SUPPLY AIR	WITHIN CONDITIONED SPACE WHERE THE SUPPLY DUCT CONVEYS AIR THAT IS 55°F OR GREATER THAN 105°F OR LESS	4C AND 5B	NONE	RETURN OR EXHAUST AIR	WITHIN CONDITIONED SPACE, DOWNSTREAM OF AN ENERGY RECOVERY MEDIA, UPSTREAM OF AN AUTOMATIC SHUTOFF DAMPER	4C	R-8	RETURN OR EXHAUST AIR	WITHIN CONDITIONED SPACE, DOWNSTREAM OF AN ENERGY RECOVERY MEDIA, UPSTREAM OF AN AUTOMATIC SHUTOFF DAMPER	5B	R-16	RELIEF OR EXHAUST AIR	CONDITIONED SPACE AND DOWNSTREAM	4C	R-16															
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8. FOR ALL OCCUPANCIES OTHER THAN GROUP R, TRANSFER FAN OR MIXING FAN SYSTEMS SERVING SPACES WITHIN THE CONDITIONED ENVELOPE SHALL BE CONTROLLED AS REQUIRED BY SECTION C403.4.2.5 OF THE WSEC.																																																																								
9. DIRECT DIGITAL CONTROL (DDC) SYSTEMS SHALL BE REQUIRED AS SPECIFIED IN SECTIONS C403.4.11.1 THROUGH C403.4.11.3 OF THE WSEC.																																																																								
10. MECHANICAL SYSTEMS SERVING MULTIPLE ZONES INCLUDING VARIABLE AIR VOLUME (VAV), SINGLE DUCT VARIABLE AIR VOLUME (SDV), DUAL DUCT AND MIXING VAV SYSTEMS SHALL HAVE ZONE CONTROLS AS REQUIRED BY SECTION C403.6.1 THROUGH C403.6.10 OF THE WSEC.																																																																								
11. VENTILATION AND EXHAUST REQUIREMENTS IN ADDITION TO OTHER REQUIREMENTS OF SECTION C403 SHALL BE IN ACCORDANCE WITH SECTIONS C403.7.1 THROUGH C403.7.8 OF THE WSEC.																																																																								
12. DUCTS, SHAFTS AND PLENUMS CONVEYING OUTDOOR AIR FROM THE EXTERIOR OF THE BUILDING TO THE MECHANICAL SYSTEM SHALL MEET ALL AIR LEAKAGE AND BUILDING ENVELOPE INSULATION REQUIREMENTS OF SECTION C402 OF THE WSEC, PLUS BUILDING ENVELOPE VAPOR CONTROL AS REQUIRED BY TABLE C403.10.1.1 OF THE WSEC.																																																																								
13. OTHER SUPPLY AND RETURN DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES, AND WHERE LOCATED OUTSIDE THE BUILDING AS REQUIRED BY SECTION C403.10.1.2 AND TABLE C403.10.1.2 OF THE WSEC.																																																																								
14. ALL DUCTWORK SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE AS REQUIRED BY SECTION C403.10.2 OF THE WSEC. DUCTWORK STATIC PRESSURE AND SEAL CLASS: WATER COLUMN SEAL CLASS LESS THAN OR EQUAL TO 2" IN ACCORDANCE WITH SECTION C403.10.1 GREATER THAN 2" LESS THAN 3" IN ACCORDANCE WITH SECTION C403.10.1 EQUAL TO OR GREATER THAN 3" DUCTS AND PLENUMS SHALL BE LEAK-TESTED IN ACCORDANCE WITH THE SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL.																																																																								
15. THE DOMESTIC HOT WATER SYSTEM SHALL BE INSTALLED SUCH THAT THE MAXIMUM LENGTH OF UNCIRCULATED HOT WATER PIPING SHALL NOT EXCEED THE VALUES LISTED IN TABLE C404.3.1. THE UNCIRCULATED PIPE IS THE SECTION THAT EXPERIENCES ZERO FLOW WHEN THE PLUMBING FIXTURE IS NOT IN USE.																																																																								
16. HEATED-WATER CIRCULATING AND TEMPERATURE MAINTENANCE SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION C404.7 OF THE WSEC.																																																																								
17. SERVICE WATER HEATING SYSTEMS SHALL BE COMMISSIONED IN ACCORDANCE WITH SECTION C408.																																																																								
18. METERS SHALL BE PROVIDED TO COLLECT ENERGY USE DATA FOR EACH END-USE CATEGORY AS REQUIRED BY SECTION C409.3 OF THE WSEC.																																																																								
19. PROVIDE DEADBAND BETWEEN HEATING/COOLING SPACE SENSOR SETPOINTS OF 5 DEGREES AS REQUIRED BY SECTION C403.4.1.2 OF THE WSEC OR AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES.																																																																								
20. HVAC SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC CONTROLS CAPABLE OF BEING SET FOR SEVEN DIFFERENT DAY TYPES PER WEEK AND ALSO ACCOMPLISHING SETBACK OR SHUTDOWN DURING UNOCCUPIED PERIODS AS REQUIRED BY SECTION C403.4.2.1 THROUGH C403.4.2.5 OF THE WSEC AND AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES.																																																																								
21. HEATING AND COOLING SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC START CONTROLS PER SECTION C403.4.2.3 OF THE WSEC.																																																																								
22. PROVIDE BALANCING DAMPERS, TEMPERATURE AND PRESSURE TEST CONNECTIONS AND BALANCING VALVES IN ALL AIR OUTLETS/INLETS, BRANCH DUCTS AND PIPE RUNS TO TERMINAL DEVICES AS REQUIRED BY SECTION C408.2.2 OF THE WSEC AND AS INDICATED ON THE CONTRACT DOCUMENTS.																																																																								
23. INDIVIDUAL ZONE TERMINAL UNITS AND HVAC SYSTEMS SERVING PORTIONS OF THE BUILDING HAVING LESS THAN 24-HOUR OPERATION OR DIFFERENT USES SHALL BE SHUT OFF OR SET BACK DURING UNOCCUPIED PERIODS AS REQUIRED BY SECTION C403.4.2 OF THE WSEC AND AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES.																																																																								
24. RECORD DRAWINGS SHALL BE PROVIDED TO THE OWNER AS REQUIRED BY SECTION C103.6.1 OF THE WSEC. THE DRAWINGS SHALL INDICATE THE LOCATION AND PERFORMANCE DATA OF EQUIPMENT, GENERAL CONFIGURATION OF DUCTWORK AND PIPING DISTRIBUTION SYSTEMS, INCLUDING FLOW RATES AS A MINIMUM.																																																																								
25. OPERATION AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE OWNER AS REQUIRED BY SECTION C103.6 OF THE WSEC AND AS SPECIFIED.																																																																								
26. HVAC SYSTEMS SHALL BE BALANCED AS REQUIRED BY SECTION C408.2.2 AND OF THE WSEC AND AS SPECIFIED.																																																																								
27. COMMISSIONING SHALL BE PROVIDED AND REPORT OF COMMISSIONING BE SUBMITTED TO THE OWNER AS REQUIRED BY SECTION C408 OF THE WSEC. COMMISSIONING SHALL CONSIST OF A COMMISSIONING PLAN, BALANCING, FUNCTIONAL PERFORMANCE TESTING, POST CONSTRUCTION COMMISSIONING, TRAINING, REPORTS, ACCEPTANCE AND COMMISSIONING COMPLIANCE CHECKLIST.																																																																								
28. DUCTWORK DESIGNED TO OPERATE IN EXCESS OF 3 INCHES W.G. SHALL BE TESTED AS REQUIRED BY SECTION C403.10.2 OF THE WSEC. PROVIDE TEST REPORTS TO THE OWNER.																																																																								
29. LOCATION OF LOW, MEDIUM AND HIGH PRESSURE DUCTWORK IS IDENTIFIED IN THE PROJECT MANUAL AS REQUIRED BY SECTION C403.2.8.3.1-3.																																																																								
30. DOMESTIC HOT WATER PIPING SHALL NOT EXCEED THE FLOW RATE LIMITATIONS PER C404.3.																																																																								
31. SUPPLY AIR TEMPERATURES SHALL BE AUTOMATICALLY RESET AS REQUIRED IN SECTION C403.6.4 OF THE WSEC OR AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES.																																																																								



ASHRAE-170 COMPLIANCE, ROOM AIR BALANCE														
ROOM NO.	ROOM NAME	ROOM TYPE	LOCATION	AREA	CLG	ROOM	AIR CHANGE/HR	CFM CODE	SUPPLY AIR CFM	EXHAUST AIR CFM	OUTSIDE AIR CHANGE/HR	ROOM PRESS.	ROOM 100% EXH.	REMARKS
				(FT <sup>2</sup> )	(FT)	(FT <sup>3</sup> )	(ACHR)				CODE (ACHR)	DESIGN (ACHR)		
M343	NUCLEAR MED 1	DIAGNOSTIC AND IMAGING	3RD FLOOR	334	10.0	3340	6	10.8	354	600	2	7.2	NR	YES
M341	NUCLEAR MED 3	DIAGNOSTIC AND IMAGING	3RD FLOOR	267	10.0	2670	6	9.0	300	400	2	6.7	NR	YES

NOTES:  
1. CFMS SHOWN ARE THE MINIMUM VALUES, CFM ON PLANS ARE SHOWN FOR EQUIPMENT LOADS

**TERMINAL UNITS**

MARK	SERVES	TP-M343	EP-M343	TP-M343.1	EP-M343.1	TP-M341	EP-M341
		INU. MED. 1	EXHAUST	CONTROL	EXHAUST	INU. MED. 3	EXHAUST
<b>TYPE</b>		VAV	EXHAUST	VAV	EXHAUST	VAV	EXHAUST
<b>CAPACITY</b>	AIRFLOW, MAX: CFM	1600	1800	725	325	900	1100
	AIRFLOW, MIN: CFM	400	600	125	0	300	400
	DAMPER PD, MAX: IN WG	0.3	0.3	0.3	0.3	0.3	0.3
<b>UNIT</b>	BRANCH SIDE DIA: IN [8]	18	18	16	12	16	18
	ROOM SIDE SIZE: WxH, IN	30x12	30x12	16	12	16	18
<b>NOISE CRITERIA [1]</b>	MAX NC: RADIATED	35	26	26	24	26	26
	MAX NC: DISCHARGE	20	20	21	20	21	20
<b>HEATING COIL [3]</b>	MAX CAPACITY: MBH [5]	61.8	23.3	53.7			
	MAX AIR PD: IN WG	0.2	0.2	0.2			
	EAT: F	85	85	85			
	EAT: F	85	85	85			
	MAX LMT: F	150	150	150			
	FLOW: GPM [5]	3.5	1.0	2.5			
	PIPING SIZE: IN [6]	1.0	3/4	3/4			
<b>COILS (TP UNITS ONLY)</b>	TITUS SIZE: IN	14	10	12			
	ROWS	2	2	2			
	COIL SIZE HxW	17.5x20	13x14	15x16			
<b>BASIS OF DESIGN</b>	MANUFACTURER	PHOENIX	PHOENIX	PHOENIX	PHOENIX	PHOENIX	PHOENIX
	MODEL	THERIS 12	THERIS 12	THERIS 12	THERIS B	THERIS 12	THERIS 14
	VALVE	DOUBLE	DOUBLE	SINGLE	SINGLE	SINGLE	SINGLE
	NOTES	[2, 4, 7, 9]	[2, 4, 7, 9]	[2, 4, 7, 9]	[2, 4, 7, 9]	[10]	[10]

- NOTES:  
 1. MAXIMUM NC VALUES CALCULATED USING MODELING ASSUMPTIONS BASED ON ARI 885-90, 1" INLET SP AND 0.25" DOWNSTREAM SP.  
 2. TERMINAL UNIT ROOM SIDE DUCT SHALL EQUAL SIZE AS INDICATED IN SCHEDULE UNLESS OTHERWISE NOTED ON FLOOR PLANS.  
 3. HEATING COIL FLUID IS GLYCOL AND WATER. MAX WATER PD = 4 FT.  
 4. SEE DETAILS 1 AND 2 ON SHEET M700 FOR TERMINAL UNIT AND COIL DETAILS.  
 5. UNIT PERFORMANCE CORRESPONDING TO MAXIMUM AIRFLOW.  
 6. BRANCH PIPING TO TERMINAL UNIT, UNLESS NOTED OTHERWISE.  
 7. TERMINAL UNIT BRANCH SIDE DUCT SIZE AS INDICATED IN SCHEDULE UNLESS OTHERWISE NOTED ON FLOOR PLANS.  
 8. PROVIDE DUCT TRANSITION FROM BRANCH DUCT TO UNIT INLET COLLAR, 15 DEGREE MAXIMUM TRANSITION ANGLE.  
 9. PROVIDE ACCESS SPACE NEXT TO UNIT THAT IS MIN 14" BUT NO SHORTER THAN THE WIDTH OF THE UNIT.

**DIFFUSERS - CEILING**

MARK	DESCRIPTION	CD1	CD2
		MOD CORE	MOD CORE
<b>TYPE</b>	MATERIAL	STEEL	STEEL
	NOM FACE SIZE: IN	24x24	24x24
<b>CAPACITY</b>	NECK SIZE: IN	16x16	18x18
	MAX AIRFLOW: CFM	800	900
	MAX SP: IN WG	0.03	0.03
	MAX NECK VEL: FPM	500	450
	MAX NC	23	25
<b>BRANCH CONN</b>	SIZE: IN	14	16
<b>BASIS OF DESIGN</b>	MANUFACTURER	TITUS	TITUS
	MODEL	MCD	MCD
	NOTES	[1, 2, 3]	[1, 2, 3]

- NOTES:  
 1. PROVIDE DIFFUSERS WITH BORDER STYLES THAT ARE COMPATIBLE WITH ADJACENT CEILING SYSTEMS. REFER TO ARCHITECTURAL PLANS.  
 2. NC BASED ON OCTAVE BANDS 2 - 7 SOUND POWER LEVELS MINUS A ROOM ABSORPTION OF 10 DB, MEASURED PER ASHRAE 70-91.  
 3. PROVIDE ATTACHED PLENUM. SEE DETAIL 3 ON M700.

**GRILLES - EXHAUST AND TRANSFER**

MARK	DESCRIPTION	EG1	EG2	TO1
		LOUVERED	PERFORATED	LOUVERED
<b>TYPE</b>	MATERIAL	STEEL	STEEL	STEEL
	NOM FACE SIZE: IN	24x24	24x24	24x12
<b>CAPACITY</b>	NECK SIZE: IN	10x10	22x22	22x10
	MAX AIRFLOW: CFM	400	1,600	400
	MAX SP: IN WG	0.02	0.02	0.01
	MAX CORE VEL: FPM	500	500	300
	MAX NC	25	25	20
<b>BRANCH CONN</b>	SIZE: IN [3]	10	16	16x16
<b>BASIS OF DESIGN</b>	MANUFACTURER	TITUS	TITUS	TITUS
	MODEL	PAR	PAR	350RL
	NOTES	[1, 2, 3]	[1, 2, 3]	[1, 2, 3, 4]

- NOTES:  
 1. PROVIDE DIFFUSERS WITH BORDER STYLES THAT ARE COMPATIBLE WITH ADJACENT CEILING SYSTEMS. REFER TO ARCHITECTURAL PLANS.  
 2. NC BASED ON OCTAVE BANDS 2 - 7 SOUND POWER LEVELS MINUS A ROOM ABSORPTION OF 10 DB, MEASURED PER ASHRAE 70-91.  
 3. TRANSITION BRANCH CONNECTION TO GRILLE DUCT SIZE AS REQUIRED.  
 4. REFER TO DETAIL 4 ON SHEET M700.

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 Project Number: 206-030

**SPECT/CT REPLACEMENT**  
 Multicare Good Samaritan Hospital  
 401 16th Ave. SE, Puyallup WA 98372



ISSUE DATE: 07.02.21  
 REVISIONS:

CONSTRUCTION DOCUMENTS

MECHANICAL SCHEDULES

**M010**  
 PROJECT NO.: 20046

**B-21-0829**

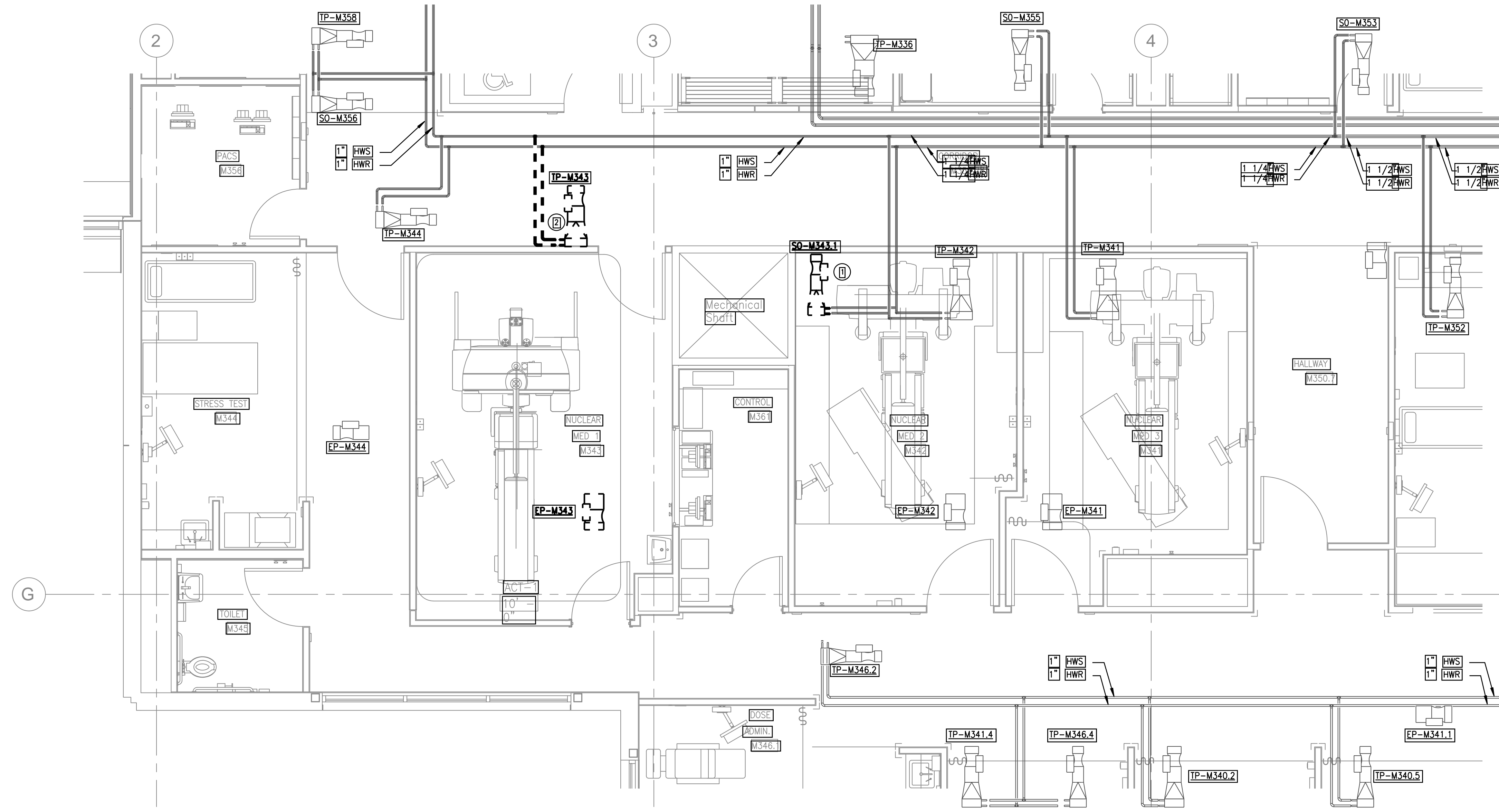






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**DEMO 3RD FLOOR MECHANICAL PIPE PLAN**  
SCALE: 1/4" = 1'-0"

**KEYED NOTES**

1. DISCONNECT PIPING FROM EXISTING TERMINAL UNIT AND CAP FOR FUTURE USE.
2. DEMO PIPE BACK TO MAIN AND CAP FOR FUTURE USE.



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DEMO 3RD FLOOR  
MECHANICAL PIPING  
PLANS

**MD300**  
PROJECT NO.: 20046

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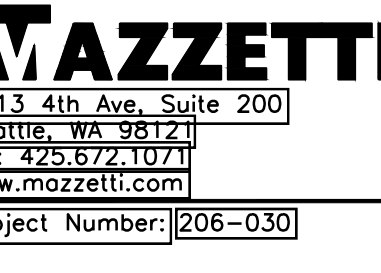
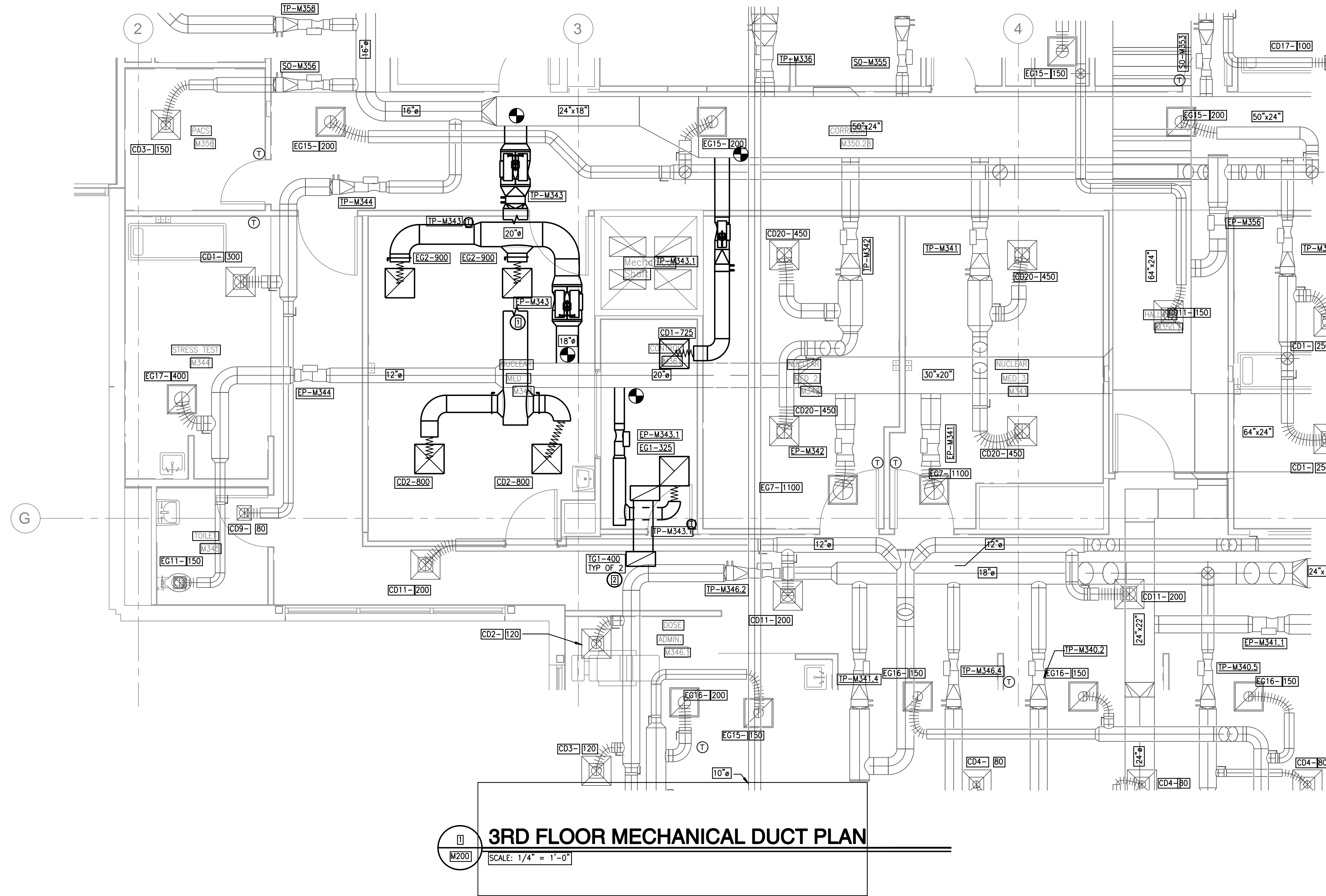
CONSTRUCTION DOCUMENTS



Building	Planning
Engineering	Public Works
Fire	Traffic

**KEYED NOTES**

- ROUTE 20X16 SUPPLY DUCT OVER (N) EXHAUST DUCT.
- ROUTE 16X16 TRANSFER GRILLE DUCTWORK OVER 10X10 EXHAUST DUCTWORK. REFER TO DETAIL 4 ON SHEET M700 FOR TRANSFER GRILLE DETAIL.



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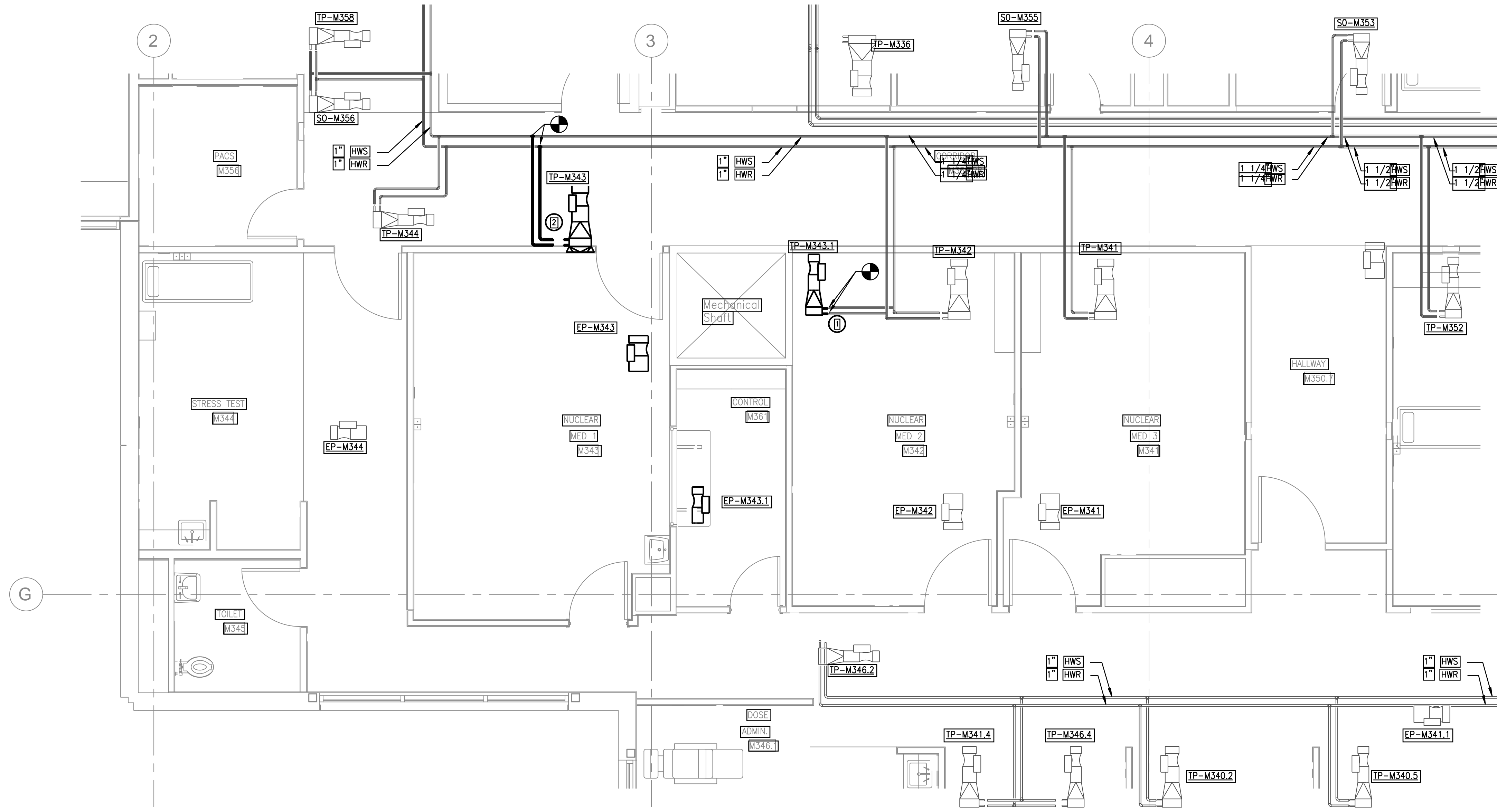
3RD FLOOR  
MECHANICAL DUCT  
PLANS

**M200**  
PROJECT NO.: 20046



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Building	Planning
Engineering	Public Works
Fire	Traffic



**3RD FLOOR MECHANICAL PIPE PLAN**  
SCALE: 1/4" = 1'-0"

**KEYED NOTES**

1. RECONNECT EXISTING PIPING INTO NEW TERMINAL UNIT.
2. CONNECT NEW PIPING INTO MAIN AND ROUTE TO NEW TERMINAL UNIT.



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3RD FLOOR  
MECHANICAL PIPING  
PLANS

**M300**  
PROJECT NO.: 20046

**B-21-0829**



**SEQUENCE OF OPERATION**

GENERAL REQUIREMENTS

PROVIDE COMPLETE AND OPERATIONAL DDC CONTROL OF ALL MECHANICAL SYSTEMS AS DESCRIBED HEREIN.

REFER TO THE DDC POINT LIST, CONTROL DIAGRAMS, OTHER DRAWINGS, AND THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. SENSORS AND OTHER DDC DEVICES ARE NOT NECESSARILY LISTED BELOW. DDC INPUTS AND DDC OUTPUTS, INCLUDING REQUIRED SAFETIES, INTERLOCKS, MONITORS AND ALARMS, ARE NOT NECESSARILY LISTED IN THE SEQUENCE OF OPERATION.

ALL VALUES LISTED BELOW, INCLUDING TEMPERATURE SETPOINTS, PRESSURE SETPOINTS, TIME SCHEDULES, ETC. SHALL BE PROGRAMMED AS VARIABLES AND THEY SHALL BE CAPABLE OF CONVENIENT ADJUSTMENT BY THE BUILDING OPERATORS.

INITIAL ROOM TEMPERATURE SETPOINTS SHALL BE PER FGI GUIDELINES UNLESS NOTED OTHERWISE. CONFIRM ALL FINAL SETPOINT TEMPERATURES WITH ENGINEER AND OWNER'S REPRESENTATIVE.

OPERATING SCHEDULES (TIME SCHEDULES): INITIAL AND FINAL SCHEDULES OF SYSTEM OPERATION SHALL BE INPUT BY THE CONTRACTOR. CONFIRM FINAL OPERATING SCHEDULE, INCLUDING OCCUPIED AND UNOCCUPIED HOURS OF OPERATION, FOR EACH SYSTEM AND EACH PIECE OF EQUIPMENT THROUGH CONSULTATION WITH THE OWNER'S REPRESENTATIVE.

PROVIDE MINIMUM RUN TIME ROUTINES FOR ALL DDC CONTROLLED EQUIPMENT TO PREVENT SHORT CYCLING.

PROVIDE SOFTWARE AND SYSTEMS THAT ARE CONVENIENTLY EXPANDABLE TO INCLUDE OPERATION OF INDICATED AND ANTICIPATED FUTURE EQUIPMENT.

TERMINAL UNIT CONTROL, GENERAL:

THE TERMINAL UNITS WILL BE ENABLED AND DISABLED BY THE DDC SYSTEM.

SPACE COOLING IS PROVIDED FROM PRIMARY SUPPLY AIR TO TERMINAL UNITS. REFER TO SHELL AND CORE DOCUMENTS FOR AIR HANDLING UNIT SEQUENCES OF OPERATION.

OPERATIONAL SCHEDULE: SYSTEMS SHALL BE INDEPENDENTLY ENABLED TO OPERATE ACCORDING TO A TIME SCHEDULE. INITIAL TIME SCHEDULE SHALL BE CONTINUOUS OPERATION 24 HOURS/DAY, 7 DAYS/WEEK. CONFIRM FINAL TIME SCHEDULE, INCLUDING OCCUPIED AND UNOCCUPIED HOURS OF OPERATION, FOR EACH TERMINAL UNIT THROUGH CONSULTATION WITH THE OWNER'S REPRESENTATIVE (TYPICAL).

SAFETIES AND ALARMS: REFER TO POINT LIST.

INTERLOCKS: PROVIDE SOFTWARE INTERLOCK WITH THE ASSOCIATED SUPPLY AIR HANDLING UNIT.

TRACKING PAIR TERMINAL UNIT (TP AND EP) CONTROL:

DESCRIPTION: PAIR OF SUPPLY AND EXHAUST AIR TERMINAL UNITS WITH INTEGRATED CONTROLS. SUPPLY AIR (TP UNIT): VARIABLE AIR VOLUME, PRESSURE INDEPENDENT AIR TERMINAL UNIT WITH PRIMARY AIR VALVE AND DOWNSTREAM HEATING WATER COIL. EXHAUST AIR (EP UNIT): VARIABLE AIR VOLUME, PRESSURE INDEPENDENT EXHAUST AIR TERMINAL UNIT WITH AIR VALVE.

DDC CONTROLS SHALL MODULATE PRIMARY SUPPLY AIR VALVE BETWEEN MINIMUM AND MAXIMUM AIRFLOW TO MAINTAIN COOLING SPACE TEMPERATURE SETPOINT. ON CALL FOR HEATING, AIRFLOW SHALL BE AT MINIMUM FLOW AND THE HEATING WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN HEATING SPACE TEMPERATURE SETPOINT.

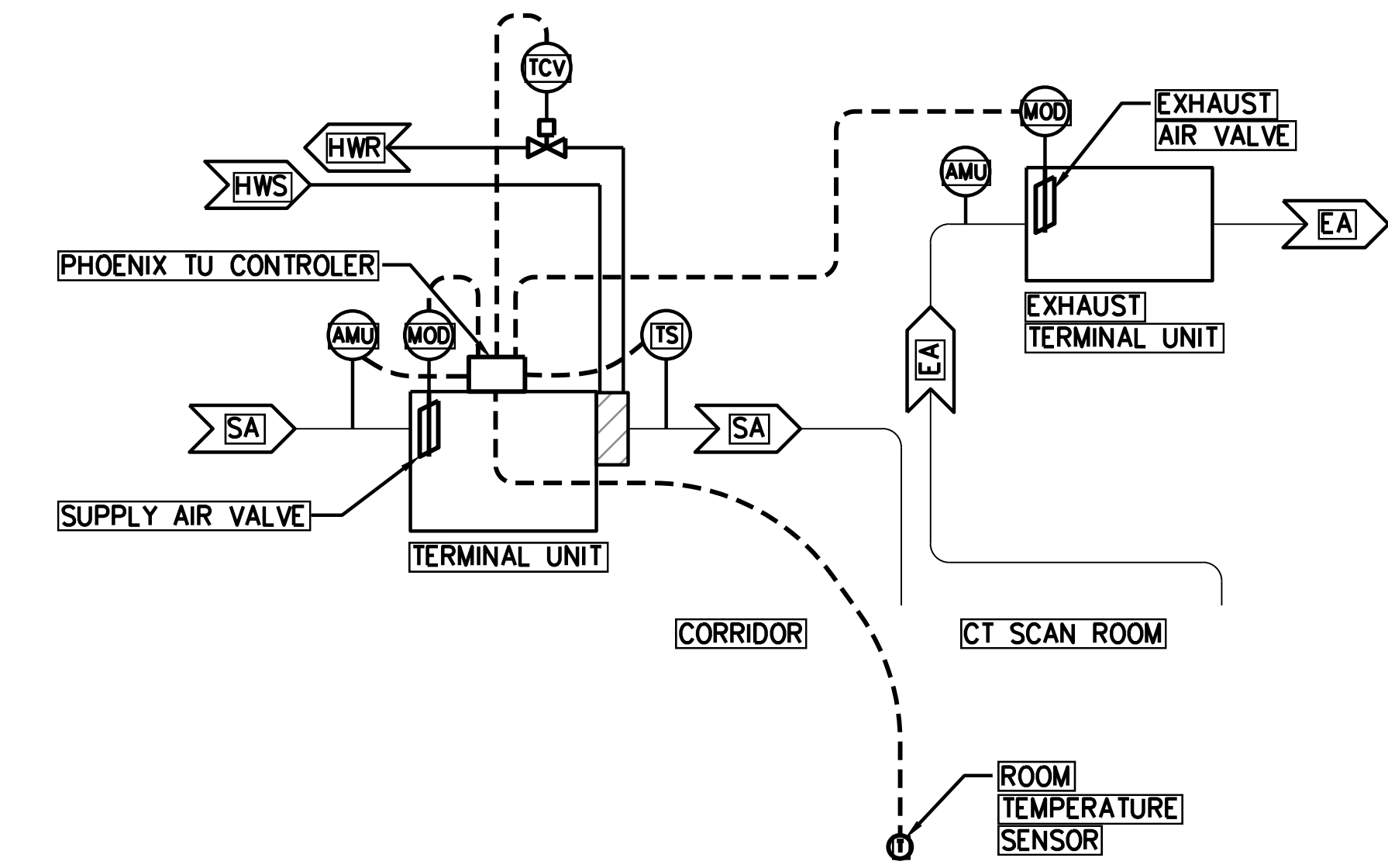
SPACE PRESSURIZATION: EXHAUST AIR VALVE SHALL MODULATE BETWEEN MINIMUM AND MAXIMUM AIRFLOW, IN PROPORTION WITH THE SUPPLY AIR VALVE, IN ORDER TO MAINTAIN THE DIFFERENTIAL SPACE PRESSURE RELATIONSHIP AS SCHEDULED ON THE DRAWINGS.

TRACKING PAIR OFFSET:

EP-M343 TO MAINTAIN 200 CFM OFFSET FROM TP-M343 TO KEEP THE ROOM NEGATIVELY PRESSURE.

EP-M343.1 TO MAINTAIN 400 CFM OFFSET FROM TP-M343.1 TO NOT OVERPRESSURIZE THE CORRIDOR.

CONTROL FUNCTION	DEVICE	INPUTS		OUTPUTS		ALARMS		REMARKS
		ANALOG	DIGITAL	ANALOG	DIGITAL	ANALOG	DIGITAL	
<b>TRACKING PAIR TERMINAL CONTROL (TYPICAL TP/EP)</b>								
PHOENIX TERMINAL UNIT CONTROLLER	AUX		X					TRACCEL TIER 3 CONTROLLER
SPACE TEMPERATURE	TI		X				X	
PRIMARY SUPPLY AIR FLOW	AMU		X				X	
EXHAUST AIR FLOW	AMU		X				X	
SUPPLY AIR VALVE	MOD				X			
TRACKING EXHAUST AIR VALVE	MOD				X			
HEATING WATER CONTROL VALVE	TCV				X			
DISCHARGE AIR TEMPERATURE	TS		X				X	



**TYPICAL TRACKING PAIR CONTROL DIAGRAM**  
SCALE: NONE

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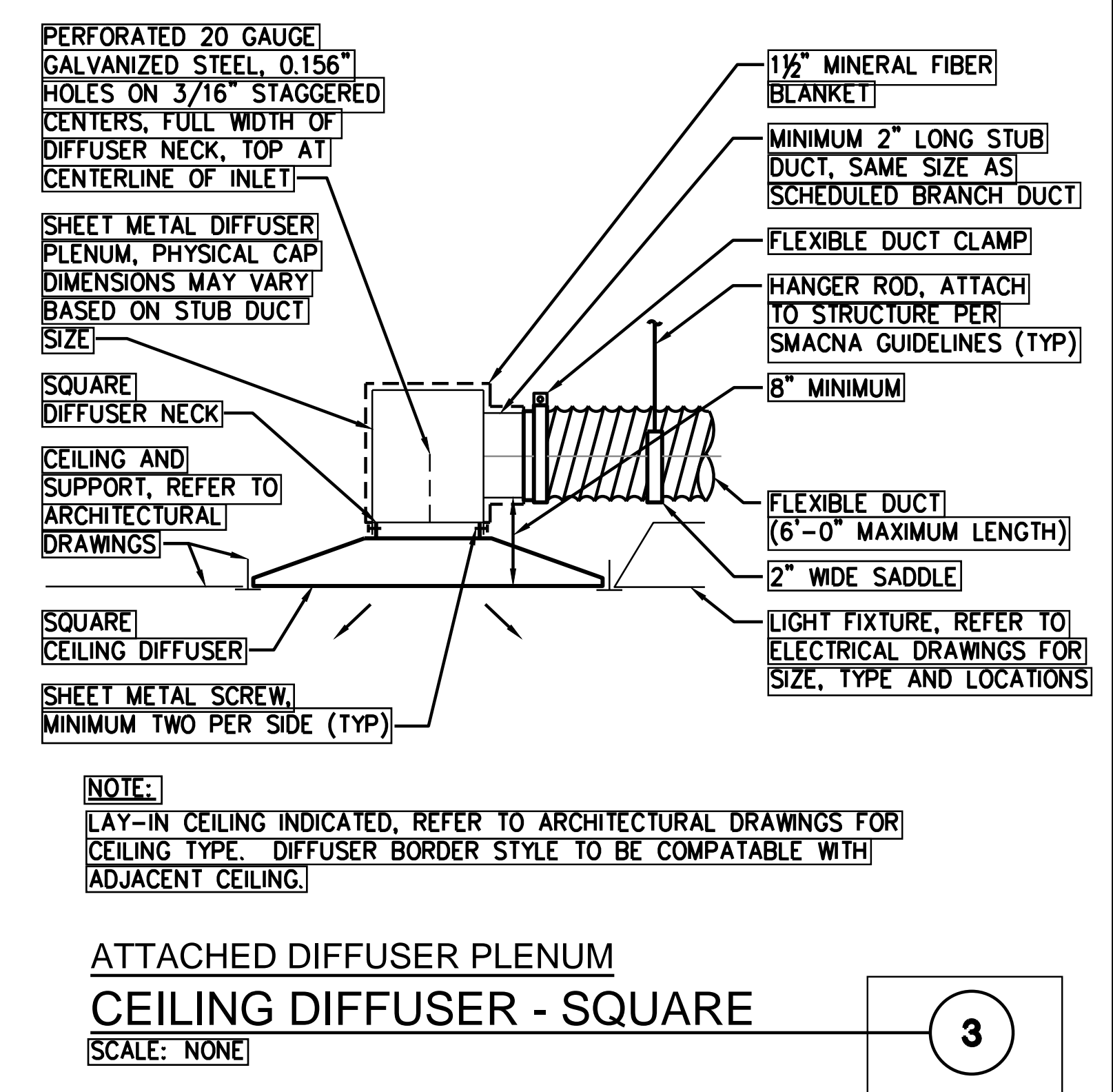
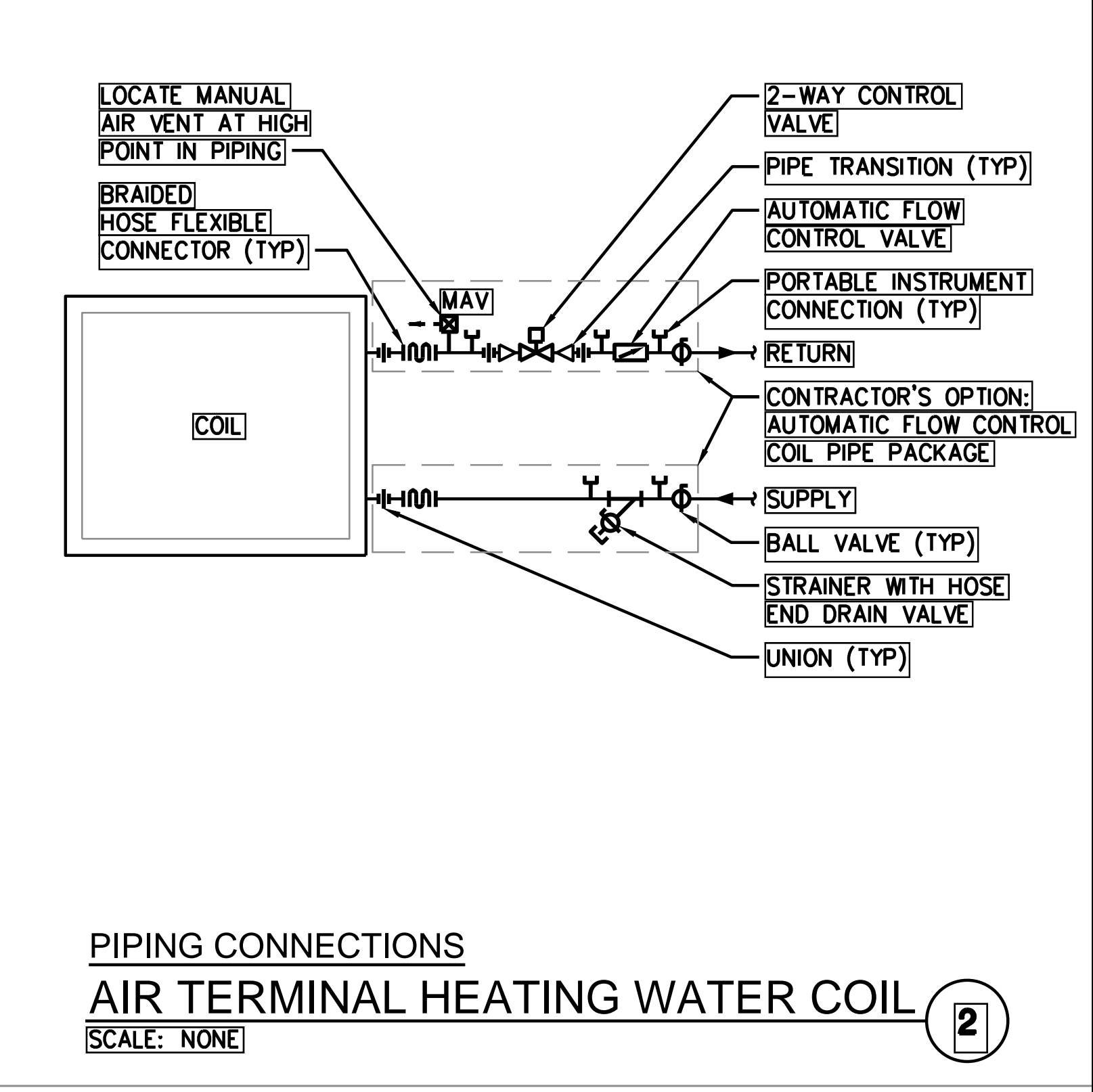
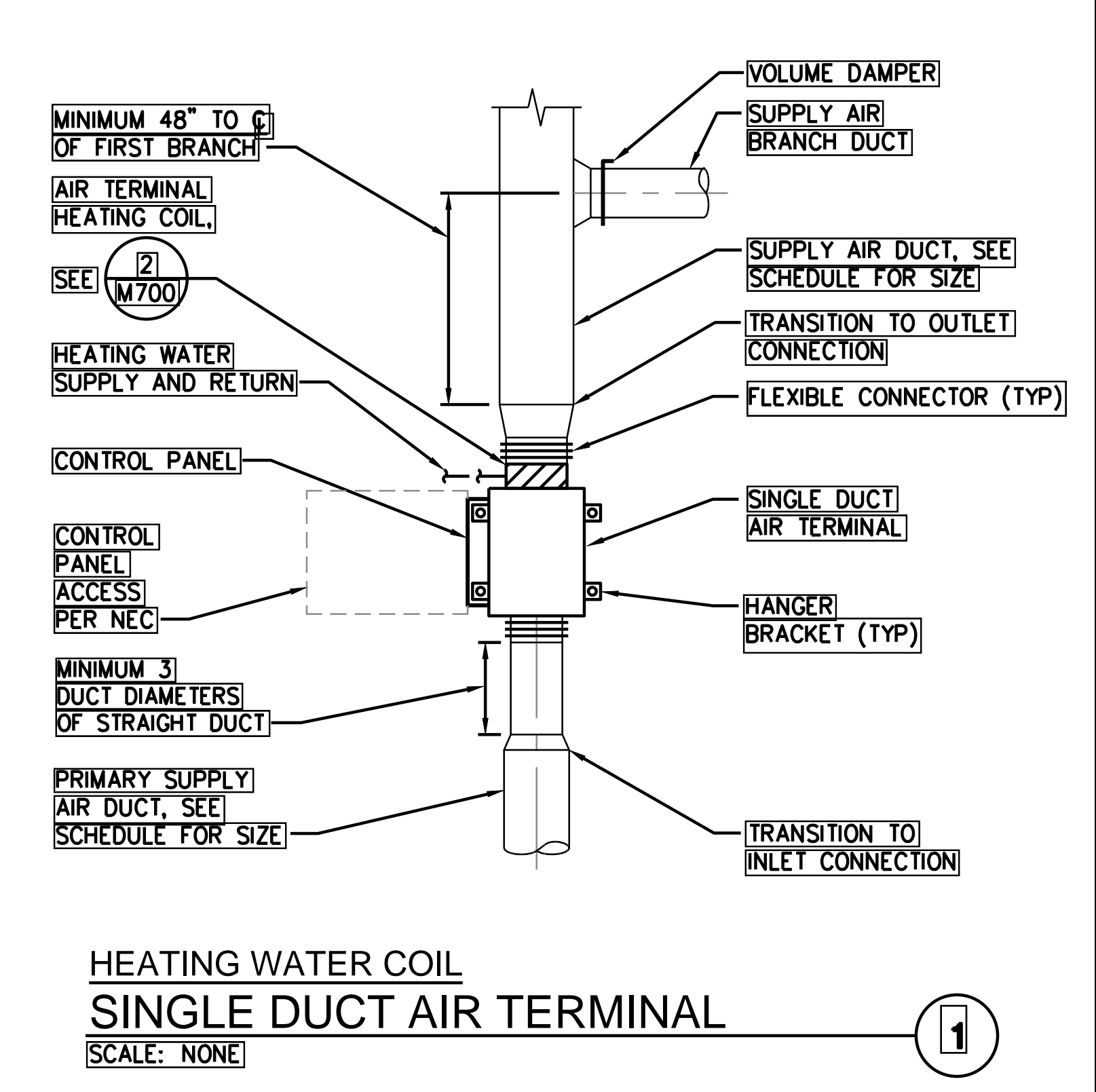
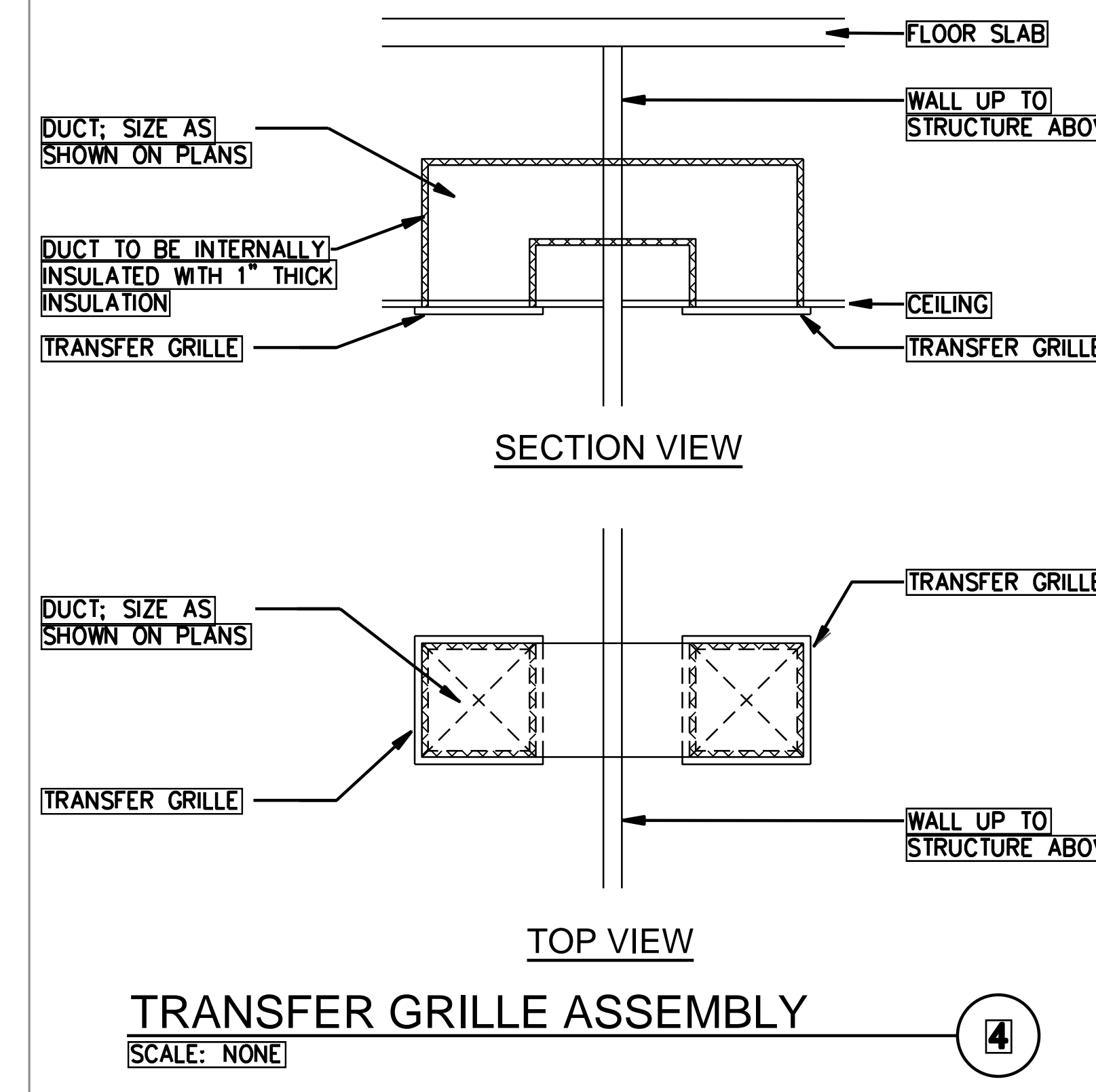
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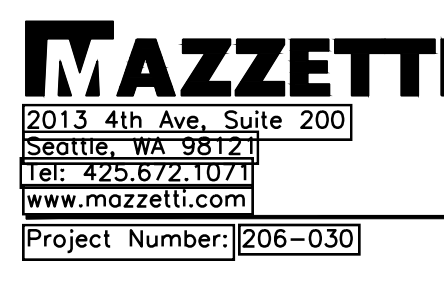
CONSTRUCTION DOCUMENTS

MECHANICAL DETAILS

**M700**  
PROJECT NO.: 20046

B-21-0829





**PLUMBING SYMBOL SCHEDULE**

SYMBOL LEGEND	
	EXISTING PIPE
	EXISTING PIPE, FIXTURE OR EQUIPMENT TO BE REMOVED
	SOIL OR WASTE PIPING ABOVE FLOOR
	SOIL OR WASTE PIPING BELOW FLOOR
	VENT PIPING
	COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
	SOFT WATER PIPING
	CONDENSATE DRAINAGE PIPING
	STORM DRAIN
	STORM DRAIN BELOW FLOOR
	OVERFLOW DRAINAGE PIPING
	OXYGEN PIPING
	MEDICAL VACUUM PIPING
	WASTE ANESTHETIC GAS DISPOSAL PIPE
	SHUT OFF VALVE, SEE SPECIFICATIONS
	BALL VALVE
	CHECK VALVE
	CIRCUIT SETTER
	BALANCING VALVE
	GAS COCK
	UNION
	REDUCER
	DIRECTION FLOW
	PIPE ANCHOR
	PIPE UP
	PIPE DOWN
	VALVE IN VERTICAL
	PIPE CONNECTION, TOP
	PIPE CONNECTION, BOTTOM
	CAPPED PIPE
	PIPE SLEEVE
	WALL CLEANOUT
	FLOOR CLEANOUT
	GRADE CLEANOUT
	MEDICAL GAS ALARM PRESSURE SWITCH
	MEDICAL GAS ZONE VALVE BOX
	MEDICAL GAS ALARM PANEL
	FLOOR SINK (FULL GRADE) (HALF GRATE)
	FLOOR DRAIN
	ROOF DRAIN
	OVERFLOW DRAIN
	POINT OF CONNECTION
	SHEET NOTE DESIGNATION
	EQUIPMENT DESIGNATION
	DETAIL REFERENCE BUBBLE
	SHEET BEARING DETAIL

**GENERAL NOTES**

- ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE PLUMBING CODE, BUILDING CODE, NATIONAL FIRE PROTECTION CODE, AND ALL OTHER APPLICABLE CODES AND REGULATIONS AS CURRENTLY ADOPTED BY AUTHORITY HAVING JURISDICTION.
- COORDINATE PLUMBING SYSTEMS WITH WORK OF OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. PROVIDE ALL FITTINGS, OFFSETS AND TRANSITIONS AS REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
- COORDINATE LOCATIONS OF ALL ROOF OPENINGS WITH STRUCTURAL, MECHANICAL AND ARCHITECTURAL PLANS PRIOR TO ANY INSTALLATION.
- PLATFORMS, CURBS AND FLASHINGS FOR PLUMBING EQUIPMENT SHALL BE AS INDICATED ON THE STRUCTURAL AND ARCHITECTURAL PLANS, UNLESS NOTED OTHERWISE. COORDINATE EXACT SIZES OF REQUIRED OPENINGS AND SUPPORTS FOR FURNISHED EQUIPMENT.
- MAINTENANCE LABEL SHALL BE AFFIXED TO ALL PLUMBING EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED TO OWNER'S REP.
- PIPES SHALL BE SUPPORTED AND BRACED PER SMACNA "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS."
- HORIZONTAL PIPING THRU METAL STUDS IS PROHIBITED.

**2018 WASHINGTON STATE ENERGY CODE**

- THE DOMESTIC HOT WATER SYSTEM SHALL BE INSTALLED SUCH THAT THE MAXIMUM LENGTH OF UNCIRCULATED HOT WATER PIPING SHALL NOT EXCEED THE VALUES LISTED IN TABLE C404.3.1. THE UNCIRCULATED PIPE IS THE SECTION THAT EXPERIENCES ZERO FLOW WHEN THE PLUMBING FIXTURE IS NOT IN USE.
- HEATED-WATER CIRCULATING AND TEMPERATURE MAINTENANCE SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION C404.7 OF THE WSEC.
- SERVICE WATER PRESSURE-BOOSTER SYSTEMS SHALL BE DESIGNED AND CONFIGURED AS REQUIRED BY SECTION C404.13 OF THE WSEC.
- SERVICE WATER HEATING SYSTEMS SHALL BE COMMISSIONED IN ACCORDANCE WITH SECTION C408.
- RECORD DRAWINGS SHALL BE PROVIDED TO THE OWNER AS REQUIRED BY SECTION C103.6.1 OF THE WSEC. THE DRAWINGS SHALL INDICATE THE LOCATION AND PERFORMANCE DATA OF EQUIPMENT, GENERAL CONFIGURATION OF DUCTWORK AND PIPING DISTRIBUTION SYSTEMS, INCLUDING FLOW RATES AS A MINIMUM.
- OPERATION AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE OWNER AS REQUIRED BY SECTION C103.6 OF THE WSEC AND AS SPECIFIED.
- COMMISSIONING SHALL BE PROVIDED AND REPORT OF COMMISSIONING BE SUBMITTED TO THE OWNER AS REQUIRED BY SECTION C408 OF THE WSEC. COMMISSIONING SHALL CONSIST OF A COMMISSIONING PLAN, BALANCING, FUNCTIONAL PERFORMANCE TESTING, POST CONSTRUCTION COMMISSIONING, TRAINING, REPORTS, ACCEPTANCE AND COMMISSIONING COMPLIANCE CHECKLIST.
- DOMESTIC HOT WATER CIRCULATION PUMPS SHALL BE SHUT DOWN DURING UNOCCUPIED PERIODS AS REQUIRED BY SECTION C404.7.1 OF THE WSEC AND AS DESCRIBED IN THE TEMPERATURE CONTROL SEQUENCES.
- DOMESTIC HOT WATER PIPING SHALL NOT EXCEED THE FLOW RATE LIMITATIONS PER C404.3.
- ALL PIPING SHALL BE INSULATED AS REQUIRED BY SECTION C403.10.3 AND TABLE C403.2.9 OF THE WSEC AND AS DESCRIBED IN THE PROJECT MANUAL.

TEMPERATURE °F	INSULATION CONDUCTIVITY		PIPE DIAMETER			
	CONDUCTIVITY BTU*IN/(H*FT**F)	MEAN RATING TEMP °F	1" 1" TO < 1-1/2"	1-1/2" TO < 4"	4" TO < 8"	8"
ABOVE 350	.32-.34	250	4.5	5.0	5.0	5.0
251-350	.29-.32	200	5.0	4.0	4.5	4.5
201-250	.27-.30	150	2.5	2.5	3.0	3.0
141-200	.25-.29	125	1.5	1.5	2.0	2.0
105-140	.21-.28	100	1.0	1.0	1.5	1.5
40-60	.21-.27	75	0.5	0.5	1.0	1.0
BELOW 40	.20-.26	75	0.5	1.0	1.0	1.5

NOTE: PIPING INSULATION MEETS OR EXCEEDS WSEC.

SYSTEM	INSULATION CONDUCTIVITY	INSULATION THICKNESS
AUTOMATIC CIRCULATING HOT WATER	< .27	1.0
HEAT TRACED SYSTEMS	< .27	1.0
SERVED BY EQUIPMENT WITHOUT INTEGRAL HEAT TRAPS	< .27	0.5 (FIRST 8' OF PIPE)

**TABLE C404.3.1 PIPING VOLUME AND MAXIMUM PIPING LENGTHS**

NOMINAL PIPE SIZE (INCHES)	VOLUME (LIQUID OUNCES PER FOOT LENGTH)	MAXIMUM PIPING LENGTH (FEET)	
		PUBLIC LAVATORY FAUCETS	OTHER FIXTURES AND APPLIANCES
1/4	0.33	6	50
5/16	0.5	4	50
3/8	0.75	3	50
1/2	1.5	2	43
5/8	2	1	32
3/4	3	0.5	21
7/8	4	0.5	16
1	5	0.5	13
1 1/4	8	0.5	8
1 1/2	11	0.5	6
2 OR LARGER	18	0.5	4

ABBREVIATIONS	
AAP	AREA ALARM PANEL (MED. GAS)
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
ARCH	ARCHITECTURAL
AS	AUTOMATIC FIRE SPRINKLER
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BHP	BRAKE HORSEPOWER
BV	BALANCING VALVE
CD	CONDENSATE DRAIN
CF	CAPPED FOR FUTURE CONNECTION
CFM	CUBIC FEET PER MINUTE
CHV	CHECK VALVE
COND	CONDENSATE
CONN	CONNECTION
CONT	CONTINUATION
CSP	COMBINATION EXISTING
CTE	CONNECT TO EXISTING
CU. FT.	CUBIC FEET
CU. IN.	CUBIC INCHES
CW	COLD WATER
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNITS
DM	DIAMETER
DR	DRAIN
DW	DISHWASHER
(E)	EXISTING
EEW	EMERGENCY EYE WASH
EL	ELEVATION
ESH	EMERGENCY SHOWER
ETV	EEW/ESH TEMPERING VALVE
EW/C	ELECTRIC WATER COOLER
F	FIRE MAIN
FCD	FLOOR CLEANOUT
FCV	FLOW CONTROL VALVE
FD	FLOOR DRAIN
FHC	FIRE HOSE CABINET
FRV	FIRE HOSE VALVE
FIN.FLR.	FINISHED FLOOR
FS	FLOOR SINK
FT	FEET
GAL	GALLON
GC	GRADE CLEANOUT
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HB	HOSE BIBB
HP	HORSEPOWER
HW	HOT WATER
HWR	HOT WATER RETURN
HZ	HERTZ
IN	INCHES
I.E.	INVERT ELEVATION
IND	INDIRECT WASTE
KWH	KILOWATT
LAV	LAVATORY
LB	POUND
MA	MEDICAL AIR
MAI	MEDICAL AIR INTAKE
MAP	MASTER ALARM PANEL (MED. GAS)
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MG	NATURAL GAS - MEDIUM PRESSURE
MIN	MINIMUM
MV	MEDICAL VACUUM
MVE	MEDICAL VACUUM EXHAUST
N2O	NITROUS OXIDE
N2	NITROGEN
(N)	(N) NEW
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NO.	NUMBER
OD, OFD	OVERFLOW DRAIN TO DAYLIGHT
OPCI	OWNER FURNISHED CONTRACTOR INSTALLED
OS&Y GV	OUTSIDE STEM AND YOKE GATE VALVE
PAS	PRE-ACTION AUTOMATIC SPRINKLER
PD	PUMPED DISCHARGE
PG	PRESSURE GAUGE
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE ASSEMBLY
PSI	POUNDS PER SQUARE INCH
PWS	PURE WATER SUPPLY
PWR	PURE WATER RETURN
R	RELOCATE OR RELOCATED
RD	ROOF DRAIN
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
S	SOIL OR WASTE
SD	STORM DRAINAGE
SOV	SHUT-OFF VALVE IN RISER
SNK	SINK
SPD	SPRINKLER DRAIN
SF	SQUARE FEET
SO. FT.	SQUARE FEET
SS	SANITARY SEWER
TDL	TOTAL DEVELOPED LENGTH OF PIPE
TP	TRAP PRIMER
TS	TAMPER SWITCH
TW	TEMPERED WATER
TYP	TYPICAL
UN	UNLESS OTHERWISE NOTED
UR	URINAL
V	VENT
VTR	VENT THROUGH ROOF
W	WASTE
WAGD	WASTE ANESTHETIC GAS DISPOSAL
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTER
WHB	WALL HYDRANT BOX
WSPU	WATER SUPPLY FIXTURE UNITS
WSP	WET STAND PIPE
ZVB	ZONE VALVE BOX - MEDICAL GAS

**FIRE PROTECTION GENERAL NOTES**

- THE AUTOMATIC SPRINKLER SYSTEM SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE NFPA 13. PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE-STOPPED. FIRE-STOPPING SHALL BE AN APPROVED MATERIAL. INSTALLATION OF THE SYSTEM SHALL NOT BE STARTED UNTIL COMPLETE PLANS AND SPECIFICATIONS (INCLUDING WATER SUPPLY INFORMATION AND TYPE OF EXISTING SPRINKLER SYSTEM, IF ANY) HAVE BEEN APPROVED BY THE AUTHORITY HAVING JURISDICTION. AT VARIOUS STAGES AND UPON COMPLETION, THE SYSTEM MUST BE TESTED IN THE PRESENCE OF THE ENFORCING AGENCY.
- COORDINATE LOCATIONS OF ALL SPRINKLER HEADS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING LAYOUT. PRIOR TO FABRICATION, SUBMIT LAYOUT DRAWINGS FOR ARCHITECTURAL ACCEPTANCE. COORDINATE LOCATIONS OF ALL SPRINKLER MAINS, BRANCH PIPING, ETC. WITH OTHER TRADES.
- SPRINKLER HEAD TOLERANCE IN CEILING TILES IS +1" FROM CENTER OF TILE.
- DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL OFFSETS OR FITTINGS REQUIRED. THE FIRE SPRINKLER CONTRACTOR IS TO COORDINATE WITH ALL OTHER TRADES TO AVOID CONFLICTS WITH DUCTS, LIGHTS, FIXTURES, PIPING, ETC.
- THE SPACING AND DETAILS OF THE SUPPORT AND BRACING OF THE FIRE SPRINKLER PIPING SHALL COMPLY WITH THE CURRENT EDITION OF NFPA 13. PROVIDE ANCHORAGE DETAILS AND CALCULATIONS FOR THE CONNECTION OF SWAY BRACING TO THE STRUCTURE. DESIGN LOADS FOR THE ANCHORAGE MAY BE COMPUTED PER NFPA 13, CURRENT EDITION. ALL SHOP DRAWINGS OF THE SPRINKLER SYSTEM SHALL BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

**DRAWING INDEX**

P001	PLUMBING COVER SHEET, ENERGY CODE AND SCHEDULES
P200	2ND FLOOR PLUMBING PLANS
P300	3RD FLOOR PLUMBING NEW AND DEMO PLANS

**PLUMBING FIXTURES**

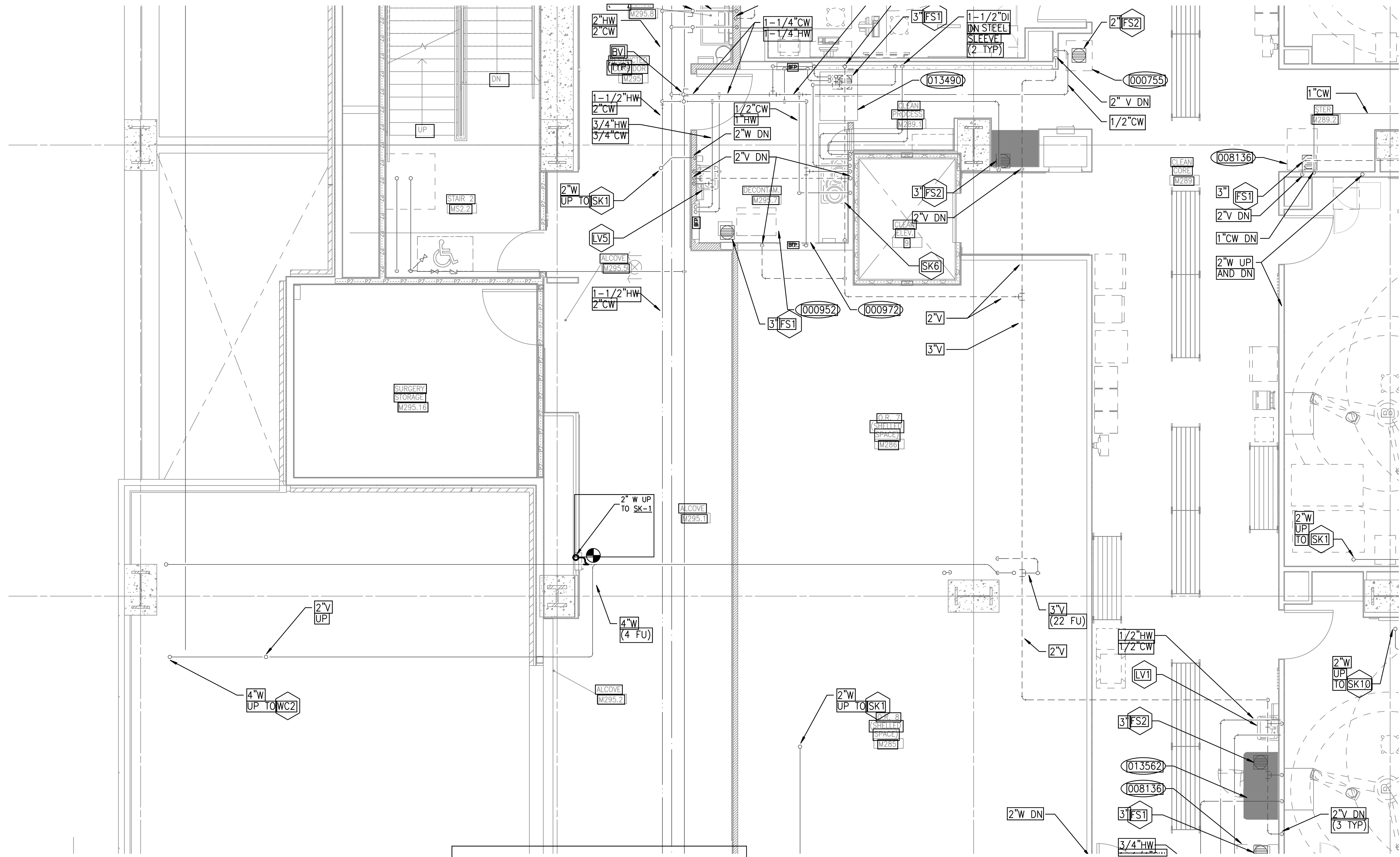
MARK TYPE	DESCRIPTION	LV1	HANDWASH
CONNECTIONS	COLD WATER: IN	1/2	
	HOT WATER: IN	1/2	
	WASTE: IN	2	
	VENT: IN	2	
	NOTES		

MARK TYPE	DESCRIPTION	LV1	HANDWASH
CONNECTIONS	COLD WATER: IN	1/2	
	HOT WATER: IN	1/2	
	WASTE: IN	2	
	VENT: IN	2	
	NOTES		

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Engineering	Public Works
Fire	Traffic





**2ND FLOOR PLUMBING PLAN**  
 SCALE: 1/4" = 1'-0"

**GENERAL NOTES**

1. COORDINATE PENETRATION FROM FLOOR ABOVE TO AVOID CONFLICTS WITH WALLS ABOVE CEILING

**City of Puyallup  
 Development & Permitting Services  
 ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic



**MAZZETTI**  
 2013 4th Ave, Suite 200  
 Everett, WA 98201  
 Tel: 425.674.1071  
 www.mazzetti.com  
 Project Number: 206-030

**SPECT/CT REPLACEMENT**  
 Multicare Good Samaritan Hospital  
 401 15th Ave. SE, Puyallup WA 98372



ISSUE DATE: 07.02.21  
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2ND FLOOR  
 PLUMBING PLANS

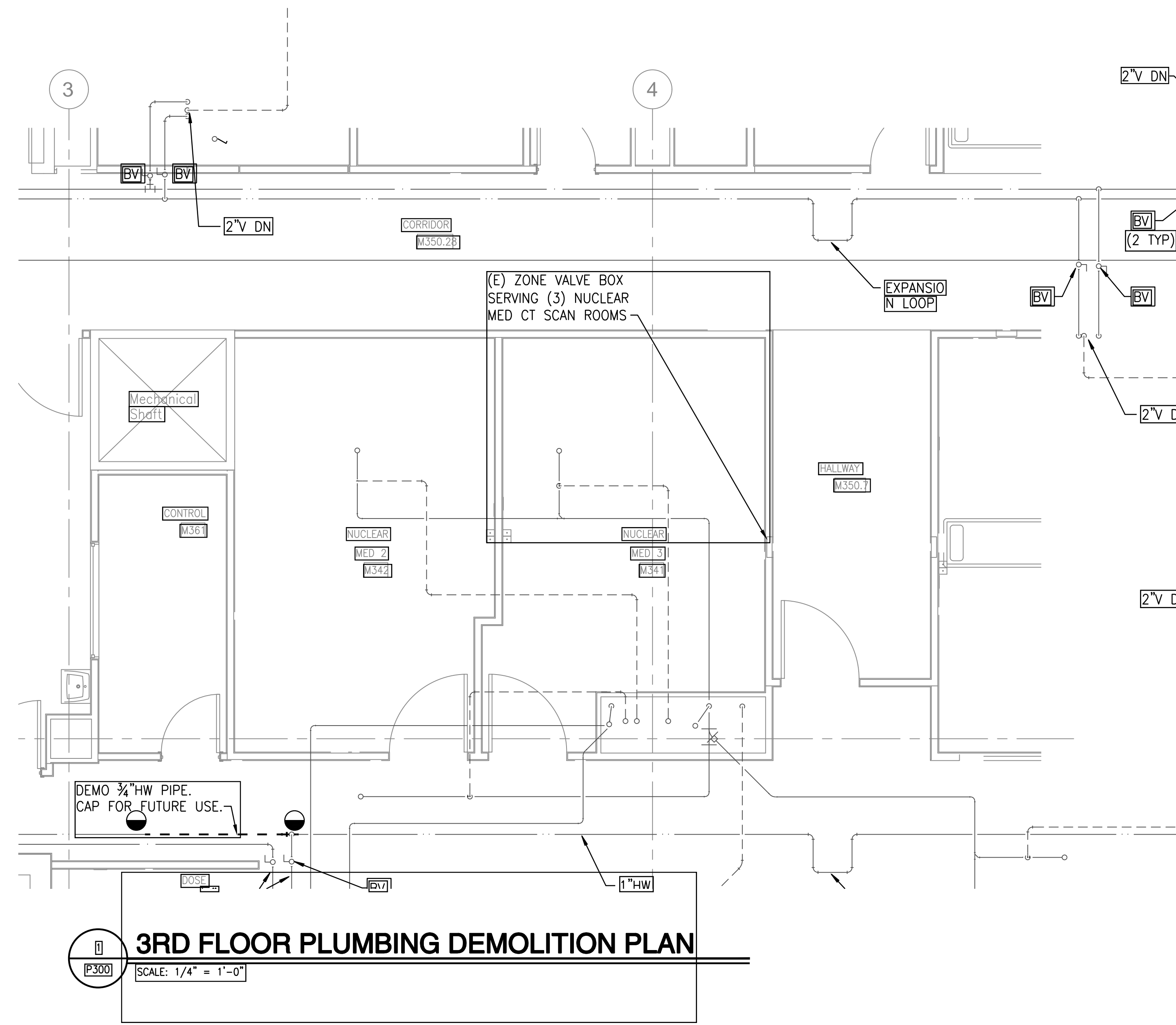
**P200**  
 PROJECT NO.: 20046

**B-21-0829**

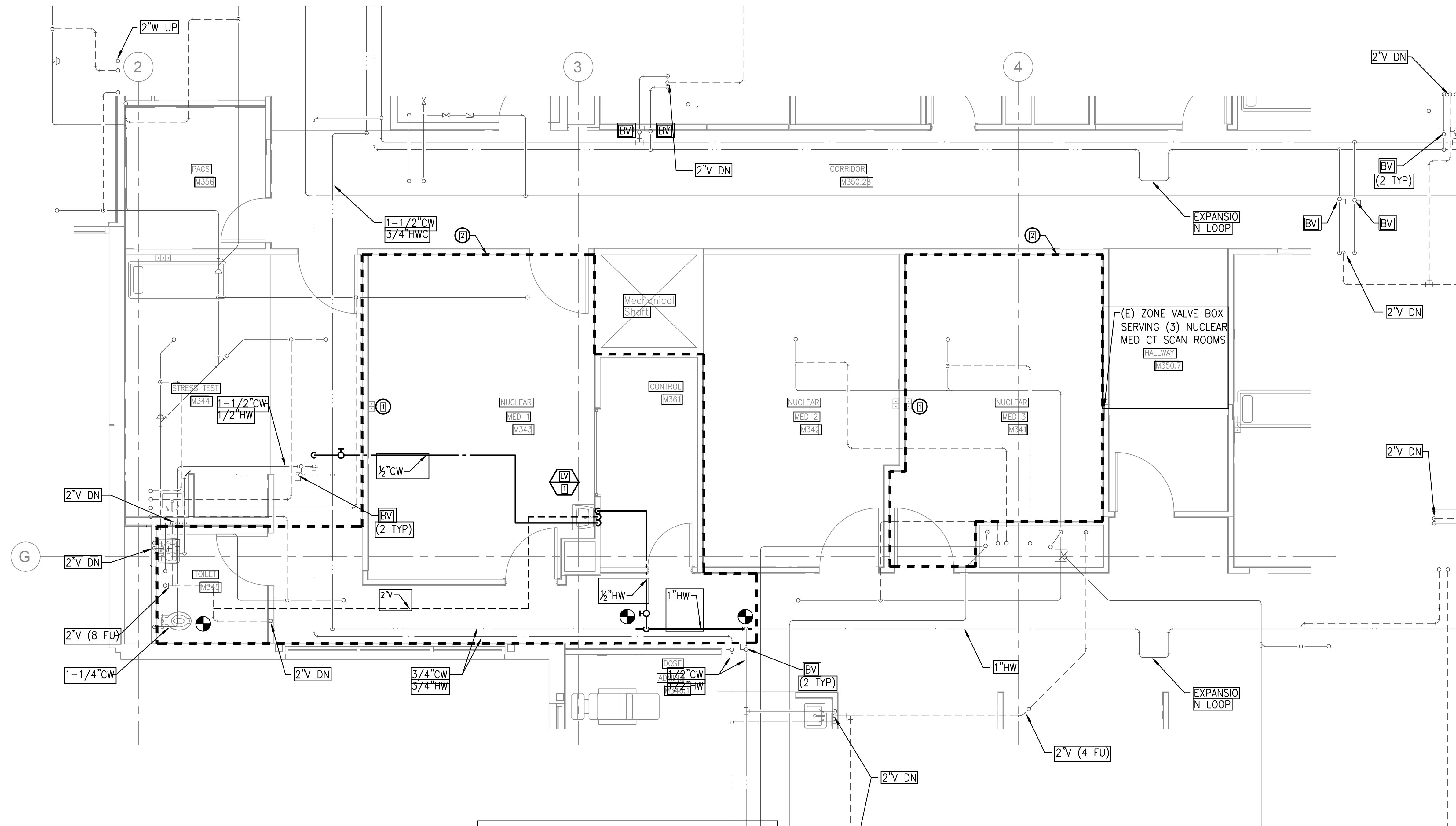


**City of Puyallup**  
Development & Permitting Services  
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Building	Planning
Engineering	Public Works
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**3RD FLOOR PLUMBING DEMOLITION PLAN**  
SCALE: 1/4" = 1'-0"



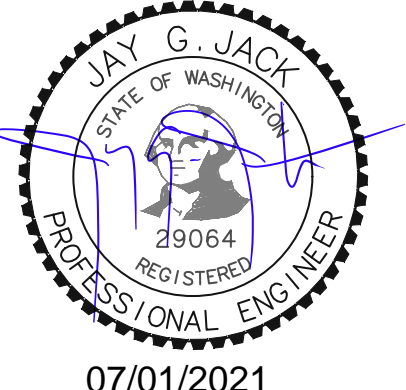
**3RD FLOOR PLUMBING PLAN**  
SCALE: 1/4" = 1'-0"

- GENERAL NOTES**
- EXISTING MEDICAL GAS PIPING, OUTLETS AND ZONE VALVE BOXES TO REMAIN.
  - REVISE FIRE SPRINKLER LAYOUT AS NECESSARY TO ACCOMMODATE CHANGES IN PROJECT AREA.
- KEYED NOTES**
- EXISTING WALL OUTLETS WITH (1) MV AND (1) O2.
  - REVISE FIRE PROTECTION PLAN IN PROJECT AREA TO MATCH NEW FLOOR PLAN LAYOUT.



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GENERAL NOTES, ABBREVIATIONS AND SHEET INDEX

**E0.00**

**B-21-0829**

**DEMOLITION NOTES:**

- A. THE EXISTING CONDITIONS SHOWN WERE TAKEN FROM AVAILABLE RECORD INFORMATION. FIELD VERIFY ALL CONDITIONS THAT MAY AFFECT CONSTRUCTION. IF ANY DISCREPANCIES ARE DISCOVERED, NOTIFY THE ENGINEER IN WRITING AND REQUEST DIRECTION PRIOR TO COMMENCING WORK.
- B. EXISTING LIGHT FIXTURES SHALL BE CAREFULLY REMOVED (DO NOT DAMAGE) AND RETURNED TO THE OWNER.
- C. ANY AND ALL EQUIPMENT HAVING ELECTRICAL CONNECTIONS THAT REQUIRE DISCONNECTING AND/OR RE-CONNECTING AS A RESULT OF CONSTRUCTION SHALL BE INCLUDED AS A PART OF THIS CONTRACT.
- D. THE EXISTING ELECTRICAL DEVICES, CONDUIT, AND/OR EQUIPMENT THAT FOR ANY REASON OBSTRUCTS CONSTRUCTION SHALL BE RELOCATED UNLESS OTHERWISE NOTED. LOCATION IS TO BE AS CLOSE AS POSSIBLE TO THE ORIGINAL LOCATION.
- E. ALL CIRCUITS, CONDUIT AND WIRE THAT ARE NOT TO REMAIN IN SERVICE SHALL BE REMOVED BACK TO THE FIRST ACCESSIBLE JUNCTION BOX WHERE IT SHALL BE TIED OFF AND LABELED AS SPARE WITH CIRCUIT NUMBER INDICATED.
- F. REMOVE ALL ABANDONED WIRE AND CABLING.

**GENERAL NOTES:**

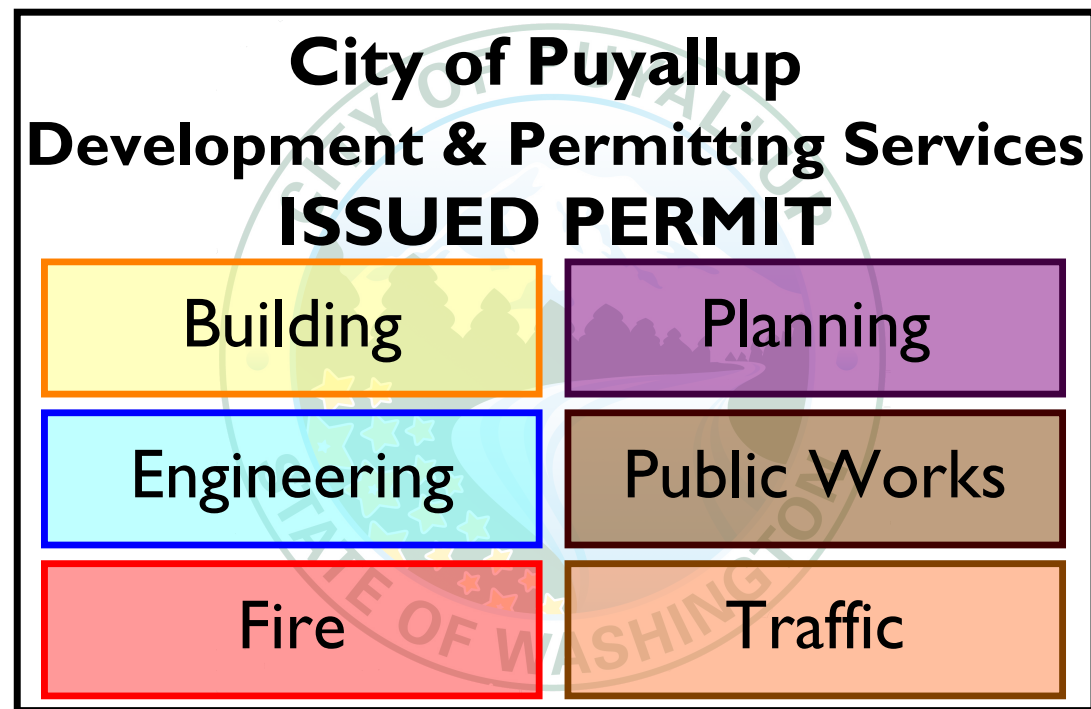
1. SYMBOL LEGENDS ARE PROVIDED FOR REFERENCE PURPOSES ONLY. THE SYMBOLS REPRESENT THE TYPE OF DEVICES THAT MAY BE REQUIRED IN THE WORK, QUANTITIES AND LOCATIONS ARE AS SHOWN ON THE PLAN SHEETS.
2. PROVIDE 3/4" CONDUIT & #12 CONDUCTORS UNLESS NOTED OTHERWISE. PROVIDE ONE NEUTRAL CONDUCTOR FOR EACH UNGROUNDED CONDUCTOR OF SINGLE PHASE LINE/NEUTRAL BRANCH CIRCUITS. DO NOT SHARE NEUTRAL CONDUCTORS.
3. EACH FEEDER AND BRANCH CIRCUIT CONDUIT SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NFPA 70, ARTICLE 250
4. ALL ELECTRICAL EQUIPMENT IN PORTIONS OF THE BUILDING NOT BEING REMODELED SHALL BE LEFT IN WORKING CONDITION. RESTORE ANY CIRCUITS INTERRUPTED.
5. ALL NEW LIGHT FIXTURES AND FIXTURES IN AREAS ADJACENT DEMOLITION & CONSTRUCTION AREAS ARE TO BE THOROUGHLY CLEANED IMMEDIATELY PRIOR TO NOTICE OF SUBSTANTIAL COMPLETION.
6. THE FOLLOWING IS PART OF THIS PROJECT AND ALL COSTS PERTAINING THERETO SHALL BE INCLUDED IN THE BASE BID:
  - A. NEW ELECTRICAL EQUIPMENT AND APPARATUS SHALL BE COORDINATED AND CONNECTED INTO THE EXISTING SYSTEM AS REQUIRED.
  - B. POWER WIRING AND CABLE INSTALLATIONS SHALL BE CONCEALED ABOVE ACCESSIBLE CEILING AND IN WALLS. EXPOSED WIRING SHALL BE INSTALLED IN APPROVED SURFACE METAL RACEWAY WHERE INDICATED.
  - C. WHERE EXISTING CONDUITS ARE INDICATED FOR REUSE, FIELD VERIFY INTEGRITY OF REUSED RACEWAYS PRIOR TO INSTALLATION OF CONDUCTORS. PROVIDE NEW RACEWAYS WHERE EXISTING ARE UNUSABLE.
  - D. LOCATIONS OF ALL WALL MOUNTED DEVICES SUCH AS SWITCHES, RECEPTACLE, AND OUTLETS ARE SHOWN DIAGRAMMATICALLY. VISIT THE SITE TO CONFIRM EXACT DEVICE LOCATIONS AND COORDINATE INSTALLATIONS WITH FIXED CASEWORK, DOORS AND RELIEFS.
  - E. PROVIDE PENETRATIONS THROUGH WALLS, FLOORS, AND CEILING AS REQUIRED. PROVIDE SUITABLE FIRE RATED MATERIALS AND SEAL ALL CEILING, FLOOR, AND WALL PENETRATIONS TO MATCH FIRE RATING OF SURFACES PENETRATED.

**LIGHTING AND RECEPTACLE NOTES:**

1. LIGHTING SYSTEMS SHALL BE PROVIDED WITH CONTROLS AS ZONED ON THE LIGHTING PLANS. SWITCHING AND DIMMING ZONES ARE INDICATED ADJACENT TO EACH FIXTURE.
2. MANUAL CONTROLS SHALL ALLOW OCCUPANTS TO UNIFORMLY REDUCE ILLUMINATION LEVELS AT LEAST 50%. EXCEPTION: CORRIDORS, RESTROOMS, LOBBIES, MECHANICAL, ELECTRICAL, AND INFORMATION TECHNOLOGY (IDF) ROOMS CONTROLLED BY OCCUPANCY SENSORS.
3. EACH AREA THAT IS REQUIRED TO HAVE A MANUAL CONTROL SHALL ALSO HAVE AUTOMATIC TIME SWITCH CONTROL. PROVIDE TIMED OVERRIDE SWITCHES THAT WILL SERVE A MAXIMUM AREA OF 2000 S.F. IN LOCATIONS SHOWN ON PLANS.
  - A. EMERGENCY EGRESS LIGHTING CONTROLLED BY OCCUPANCY SENSORS.
  - B. LIGHTING IN SPACES CONTROLLED BY OCCUPANCY SENSORS.
4. LUMINAIRES PROVIDING MEANS OF EGRESS ILLUMINATION AND HAVING BOTH NORMAL AND EMERGENCY POWER SOURCES SHALL BE CONTROLLED BY A COMBINATION OF UL 924 LISTED EMERGENCY RELAYS AND OCCUPANCY SENSORS THAT ENABLES THE LIGHTING TO BE SHUT OFF WHEN THE AREAS SERVED ARE UNOCCUPIED AND AUTOMATICALLY ILLUMINATES IN THE EVENT OF NORMAL POWER SOURCE FAILURE.
5. THE MAXIMUM LIGHTING POWER THAT MAY BE CONTROLLED FROM A SINGLE SWITCH OR AUTOMATIC CONTROL SHALL NOT EXCEED THAT WHICH IS PROVIDED BY A 20 AMPERE CIRCUIT LOADED TO NOT MORE THAN 80 PERCENT.
6. PROVIDE FUNCTIONAL TESTING OF AUTOMATIC LIGHTING CONTROLS. SUBMIT WRITTEN PROCEDURES FOR FUNCTIONAL TESTING OF ALL AUTOMATIC CONTROLS WITH DESCRIPTION OF THE EXPECTED SYSTEM RESPONSE.

SYMBOL	DESCRIPTION
	FIRE ALARM PULL STATION
	FIRE ALARM HORN ONLY
	FIRE ALARM HORN STROBE
	FIRE ALARM SPEAKER ONLY
	FIRE ALARM SPEAKER STROBE
	FIRE ALARM STROBE ONLY - WALL
	FIRE ALARM STROBE ONLY - CEILING
	FIRE ALARM BELL
	HEAT DETECTOR
	F - FIXED TEMPERATURE
	R - RATE OF RISE ONLY
	RC - RATE COMPENSATION
	RIF - RATE OF RISE AND FIXED TEMPERATURE
	SMOKE DETECTOR
	BT - BEAM TRANSMITTER
	BR - BEAM RECEIVER
	I - IONIZATION
	P - PHOTOELECTRIC
	FIRE ALARM DUCT SMOKE DETECTOR WITH SAMPLING TUBE
	FIRE ALARM EQUIPMENT CONNECTION

SYMBOL	DESCRIPTION
	NURSE CALL CONTROL EQUIPMENT PANEL
	NURSE CALL MASTER STATION - AUDIO
	NURSE CALL MASTER STATION - NON AUDIO
	ZONE DOME LIGHT, CEILING MOUNTED (NUMBER DENOTES ZONE)
	DOME LIGHT, CEILING MOUNTED
	DOME LIGHT, WALL MOUNTED
	MEDICAL EMERGENCY STATION (MES)
	CODE BLUE STATION
	DUTY STATION
	STAFF STATION
	IN/OUT PUSH BUTTON
	TOILET PULL STATION
	SHOWER PULL STATION
	SHOWER PULL STATION - LIGATURE RESISTANT PUSHBUTTON TYPE
	NURSE CALL ANNUNCIATOR
	SINGLE PATIENT STATION (PS)
	SINGLE PATIENT STATION (PS) - LIGATURE RESISTANT PUSHBUTTON TYPE
	SINGLE PATIENT STATION (PS) WITH EMERGENCY CALL BUTTON
	DUAL PATIENT STATION (PS)
	DUAL PATIENT STATION (PS) WITH EMERGENCY CALL BUTTON



SYMBOL	DESCRIPTION
	EXISTING TO BE REMOVED
	HEAVY LINEWEIGHT INDICATES NEW WORK
	LIGHT LINEWEIGHT INDICATES EXISTING INFORMATION
	POINT OF CONNECTION (POC) BETWEEN NEW AND EXISTING
	EQUIPMENT IDENTIFIER (XX + ABBREVIATION Y = EQUIPMENT SCHEDULE NUMBER)
	DRAWING CONSTRUCTION ("FLAG") NOTE
	EQUIPMENT IDENTIFIER
	RACEWAY/CABLE/CONDUCTOR ROUTING IDENTIFIER-REFER TO RACEWAY/CABLE/CONDUCTOR SCHEDULE
	MATCHLINE
	REVISION CLOUD (ENCIRCLES DRAWING CHANGES MADE SINCE THE PREVIOUS RELEASE)
	REVISION REFERENCE
	DETAIL REFERENCE
	DETAIL IDENTIFICATION NUMBER SHEET WHERE DETAIL IS DRAWN
	ELEVATION REFERENCE
	ELEVATION IDENTIFICATION NUMBER SHEET WHERE ELEVATION IS DRAWN
	SECTION REFERENCE
	SECTION IDENTIFICATION NUMBER SHEET WHERE SECTION IS DRAWN
	NORTH REFERENCE

SYMBOL	DESCRIPTION
	MINIMUM 3/4" CONDUIT CONCEALED IN CEILING SPACE OR IN WALL. MINIMUM 3/4" WITH #12 AWG CONDUCTORS WITH DEDICATED NEUTRAL EACH CIRCUIT, UNLESS OTHERWISE NOTED ON PLAN. PROVIDE EQUIPMENT GROUNDING CONDUCTORS SIZED PER NFPA 70.
	FLEXIBLE METAL CONDUIT
	CONDUIT - CONCEALED IN OR UNDER FLOOR OR ROUTED UNDERGROUND
	LOW-VOLTAGE WIRING (CLASS B)
	CONDUIT OR CABLE VERTICAL DOWN
	CONDUIT OR CABLE VERTICAL UP
	CONDUIT STUB - TERMINATE WITH BUSHING OR CAP IF UNDERGROUND
	CONDUIT SEAL
	EXPANSION FITTING
	JUNCTION BOX
	POWER PACK
	CABLE TRAY
	BRANCH CIRCUIT NUMBERS
	PANEL DESIGNATION
	HOME RUN TO SOURCE OF SUPPLY

SYMBOL	DESCRIPTION
	COMMUNICATIONS - OUTLET (# = REPRESENTS THE NUMBER OF COMMUNICATION PORTS, (IE 1,2,3)) (W = SINGLE COMMUNICATIONS PORT WALL MOUNTED AT +54" AFF.) (P = PAYPHONE, WALL MOUNTED AT +48" AFF.)
	INTERCOM - OUTLET (D = DESK MOUNTED) (W = WALL MOUNTED AT +54" AFF.)
	COMPUTER NETWORK WIRELESS ACCESS POINT - CEILING MOUNTED
	COMMUNICATIONS - PAINTED FIRE RESISTANT 3/4" PLYWOOD BACKBOARD

SYMBOL	DESCRIPTION
	TRANSFORMER
	METER
	480Y/277V, 30, 4W PANELBOARD
	208Y/120V, 30, 4W PANELBOARD
	EQUIPMENT CABINET - TYPE AS NOTED
	PANELBOARD
	TRANSFER SWITCH ( AUTO )
	AMPERES SHORT CIRCUIT AVAILABLE (SYMMETRICAL)
	FEEDER TAG - REFER TO FEEDER SCHEDULE
	FUSE
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	EQUIPMENT CONNECTION
	GENERATOR
	MOTOR CONNECTION
	SMOKE DAMPER
	FIRE SMOKE DAMPER
	MOTOR-RATED SWITCH - SIZE PER MOTOR REQUIREMENTS
	EQUIPMENT EMERGENCY SHUTDOWN SWITCH

SYMBOL	DESCRIPTION
	BREAKER WITH EXTERNAL GROUND FAULT RELAY AND CT
	CIRCUIT BREAKER WITH GROUND FAULT PROTECTION
	STARTER 3-POLE, NEMA SIZE 1 MINIMUM UNLESS NOTED OTHERWISE
	COMBINATION STARTER
	HP RATED, 3-POLE, NEMA SIZE 1 MINIMUM, UNLESS NOTED OTHERWISE - OVERCURRENT PROTECTION AS REQUIRED BY EQUIPMENT MANUFACTURER OR AS NOTED
	DISCONNECT SWITCH
	3-POLE UNLESS NOTED OTHERWISE
	FUSED DISCONNECT SWITCH
	3-POLE UNLESS NOTED OTHERWISE - OVERCURRENT PROTECTION AS REQUIRED BY EQUIPMENT MANUFACTURER OR AS NOTED
	CONTACTOR
	RELAY COIL
	CR-CONTROL RELAY; TD-TIME DELAY RELAY; UV-UNDERVOLTAGE RELAY; M-MOTOR CONTACTOR;

SYMBOL	DESCRIPTION
	GROUND CONNECTION
	GROUND ROD
	GROUND WELL
	AIR TERMINAL

SYMBOL	DESCRIPTION
	SINGLE-POLE WALL SWITCH MOUNT SWITCHES AT 48" AFF. TO CL. UON.
	WALL SWITCH - SUBSCRIPT
	2 = 2-POLE
	3 = 3-WAY
	4 = 4-WAY
	K = KEYS
	LOWER CASE LETTER INDICATES SWITCHING GROUP
	ANY COMBINATION OF SWITCH TYPES CAN BE USED (IE. 3K = 3-WAY KEYS SWITCH)
	SPECIAL PURPOSE RECEPTACLE TYPE AS SHOWN ON PLANS
	SINGLE SERVICE OR COMBINATION FLUSH MOUNTED FLOOR BOX. REFER TO FLOOR PLANS FOR DEVICES.
	SINGLE SERVICE OR COMBINATION FLUSH FLOOR POKE THRU. REFER TO FLOOR PLANS FOR DEVICES.
	POWER/COMM POLE - FLOOR TO CEILING.
	SURFACE MOUNTED FLOOR BOX (PEDESTAL TYPE).
	PUSH BUTTON
	SIMPLEX RECEPTACLE NEMA 5-20R, +18" AFF UON
	DUPLEX/DOUBLE DUPLEX RECEPTABLES
	NEMA 5-20R, +18" AFF UON
	TAMPER RESISTANT, NEMA 5-20R, +18" AFF UON
	ISOLATED GROUND, NEMA 5-20R, +18" AFF UON
	NEMA 5-20R W/ GROUND FAULT CIRCUIT INTERRUPTER, +18" AFF UON
	SPLIT WIRED, NEMA 5-20R, +18" AFF UON
	CONTROLLED, NEMA 5-20R, +18" AFF UON
	NEMA 5-20R, ABOVE COUNTER, +18" AFF UON
	NEMA 5-20R WITH GROUND FAULT CIRCUIT INTERRUPTER, ABOVE COUNTER, COORDINATE WITH CASEWORK SHOP DRAWINGS AND ARCHITECTURAL DRAWINGS.
	TAMPER RESISTANT, NEMA 5-20R WITH GROUND FAULT CIRCUIT INTERRUPTER, ABOVE COUNTER, COORDINATE WITH CASEWORK SHOP DRAWINGS AND ARCHITECTURAL DRAWINGS.
	NEMA 5-20R, CONNECTED TO EMERGENCY CIRCUIT, +18" AFF UON
	NEMA 5-20R MOUNTED ABOVE COUNTER. COORDINATE WITH CASEWORK SHOP DRAWINGS AND ARCHITECTURAL DRAWINGS.
	NEMA 5-20R WITH USB CHARGER - (2) TYPE A USB PORTS
	TAMPER RESISTANT, NEMA 5-20R WITH USB CHARGER - (2) TYPE A USB PORTS

SYMBOL	DESCRIPTION
	LIGHT FIXTURE IDENTIFIER - REFER TO LIGHTING FIXTURE SCHEDULE
	SHADING INDICATES LUMINAIRE ON EMERGENCY CIRCUIT OR WITH BATTERY BACKUP BALLAST
	2x4 LUMINAIRE
	1x4 LUMINAIRE
	2x2 LUMINAIRE
	WALL MOUNTED LUMINAIRE LUMINAIRE
	UNDER-CABINET LUMINAIRE LUMINAIRE
	STRIP LUMINAIRE
	DOWNLIGHT
	WALL MOUNTED LUMINAIRE
	WALL WASH LUMINAIRE
	WALL MOUNTED DIRECTIONAL LUMINAIRE
	DECORATIVE PENDENT LUMINAIRE - TYPE AS NOTED
	TRACK LIGHT - LENGTH AS INDICATED ON PLANS NUMBER OF LUMINAIRES AS SHOWN
	ILLUMINATED EXIT SIGN - SINGLE FACE ARROW INDICATES DIRECTION OF EGRESS, UNIVERSAL MOUNT
	ILLUMINATED EXIT SIGN - DOUBLE FACE ARROW INDICATES DIRECTION OF EGRESS, UNIVERSAL MOUNT
	BATTERY-POWERED EMERGENCY WALL PACK
	COMBINATION BATTERY POWERED EMERGENCY WALL PACK AND ILLUMINATED EXIT SIGN
	TIME CLOCK - TYPE AS NOTED
	SWITCH BYPASS DEVICE
	ILLUMINATION CONTROL STATION
	OCCUPANCY SENSOR WITH POWER PACK AS REQUIRED - MULTITECHNOLOGY TYPE UNLESS NOTED: U = ULTRASONIC IR = INFRARED
	PHOTOELECTRIC CONTROL

**ABBREVIATIONS**

@	AT	E	EXIST, EAST	H	HEIGHT	MCB	MAIN CIRCUIT BREAKER	PF	POWER FACTOR	TYP	TYPICAL
A/C	AIR CONDITIONING(ER)	EDH	ELECTRIC DUCT HEATER	HID	HIGH INTENSITY DISCHARGE	MECH	MECHANICAL	PH	PHASE	UFC	UNIFORM FIRE CODE
A (AMP)	AMPERE	EF	EXHAUST FAN	HOA	HAND OFF AUTOMATIC	MEZZ	MEZZANINE	PV	POST INDICATOR VALVE	UG	UNDERGROUND
AC	ABOVE COUNTER, ALTERNATING CURRENT	ECC	EQUIPMENT GROUNDING CONDUCTOR	HOR	HORIZONTAL	MG	MOTOR GENERATOR	PANL	PANEL	UH	UNIT HEATER
ADJ	ADJUSTABLE	EL	ELEVATION	HP	HORSEPOWER	MH	METAL HALIDE / MANHOLE	POC	POINT OF CONNECTION	UL	UNDERWRITERS LABORATORIES
ADJT	ADJACENT	ELEC	ELECTRICAL	HR	HOUR	MIN	MINIMUM	PWR	POWER	UNO	UNLESS NOTED OTHERWISE
AFF	ABOVE FINISHED FLOOR	ELEV	ELEVATION	MISC	MISCELLANEOUS	MLO	MAIN LUG ONLY	QTY	QUANTITY	UV	UNIT VENTILATOR
AHJ	AUTHORITY HAVING JURISDICTION	EM	EMERGENCY	HW	HOT WATER	MOCP	MAXIMUM OVERCURRENT PROTECTION	R (R)	RELOCATE (D)	V	VOLT
AIC	AMPERE INTERRUPTING CAPACITY	EMT	ELECTRICAL METALLIC TUBING	HZ	HERTZ	MS	MOUNTED	RD	RADIUS	VAV	VARIABLE AIR VOLUME
ALT	ALTERNATE	ENCL	ENCLOSURE	IBC	INTERNATIONAL BUILDING CODE	MTD	MOUNTING	RECP	RECEPTACLE	VEL	VELOCITY
ANN	ANNUNCIATOR	ENTR	EXPLOSION PROOF	IC	INTERCOM	MTG	MOUNTING	REF	REFRIGERATOR	VM	VOLTMETER
ARCH	ARCHITECT, ARCHITECTURAL	EQUIPEQP	EQUIPMENT	IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS	MTR	MOTOR	RFLA	RATED LOAD AMPS	VOL	VOLUME
ATS	AUTOMATIC TRANSFER SWITCH	EWC	ELECTRIC WATER COOLER	IG	ISOLATED GROUND	N	NORTH-NEUTRAL	RPM	REVOLUTIONS PER MINUTE	W	WATT
AUTO	AUTOMATIC	EXH	EXHAUST	IMC	INTERMEDIATE METAL CONDUIT	N/A	NOT APPLICABLE	SC	SOUTH	W	WITH
AUX	AUXILIARY	EXT	EXTERIOR	IN	INCH	NC	NORMALLY CLOSED	SCOR	SHORT CIRCUIT CURRENT RATING	W/O	WITHOUT
AWG	AMERICAN WIRE GAUGE	EXIST	EXISTING	JB	JUNCTION BOX	NEC	NATIONAL ELECTRICAL CODE	SD	SMOKE DETECTOR	WH	WATER HEATER
BKBD	BACKBOARD	F	FAHRENHEIT/FAUSE	KB	THOUSAND CIRCULAR MILLS	NEMA	NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION	SECT	SECTION	WHM	WATT HOUR METER
BKR	BREAKER	FAA	FIRE ALARM	KMIL	KILOVOLT AMPERES	NEC	NATIONAL ELECTRICAL SAFETY CODE	SF	SUPPLY FAN	WP	WEATHERPROOF
BLDG	BUILDING	FACP	FIRE ALARM CONTROL PANEL	KVA	KILOVOLT AMPERES	NEUT	NEUTRAL	SHT	SHEET	X	REACTANCE
C	CONDUIT	FC	FAN COIL UNIT	KVAR	KILOVOLT AMPERES REACTIVE	NFPA	NATIONAL FIRE PROTECTION AGENCY	SPD	SURGE PROTECTIVE DEVICE	XFMR	TRANSFORMER
CAP	CAPACITY	FCU	FAN COIL UNIT	KWH	KILOWATT HOUR						

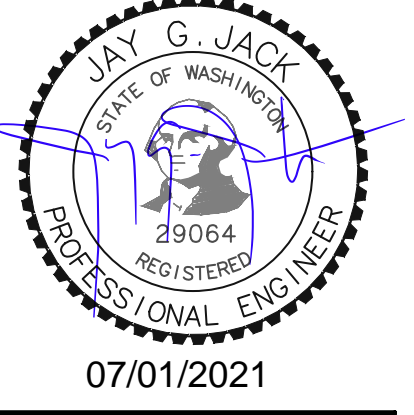


**City of Puyallup**  
**Development & Permitting Services**  
**ISSUED PERMIT**

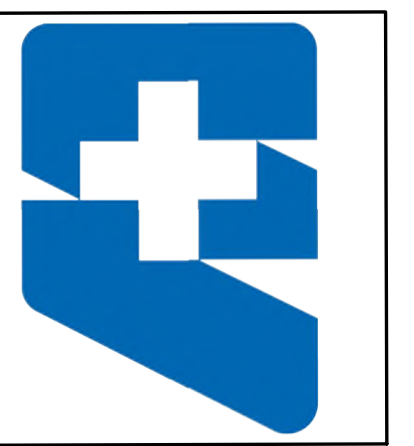
Building	Planning
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LUMINAIRE SCHEDULE									
FIXTURE TYPE	MANUFACTURER / CATALOG # / DESCRIPTION	CCT / CRI	INPUT WATTS (W)	LUMEN OUTPUT	BALLAST / TRANSFORMER / DRIVER	VOLTAGE	LENS / REFLECTOR / BEAM	TRIM / FLANGE / BAFFLE / FINISH	REMARKS / ACCESSORIES/ OPTIONS
R1	LITHONIA - 2BLT4-48L-XX-MVOLT-DIMMIMG-LP935 2X4 DIRECT LED LUMINAIRE, STEEL HOUSING, RECESS MOUNT, T-BAR	3500K/90CRI	38	4800	INTEGRAL 0-10V	UNV		WHITE FINISH	
R1E	LITHONIA - 2BLT4-48L-XX-MVOLT-DIMMIMG-LP935 2X4 DIRECT LED LUMINAIRE, STEEL HOUSING, RECESS MOUNT, T-BAR	3500K/90CRI	38	4800	INTEGRAL 0-10V	UNV		WHITE FINISH	PROVIDE INTEGRAL UL924 BATTERY BACKUP BALLAST

**CLARK K J O S**  
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 Portland, OR 97205  
 Phone: 503/224-4848



**SPECT/CT REPLACEMENT**  
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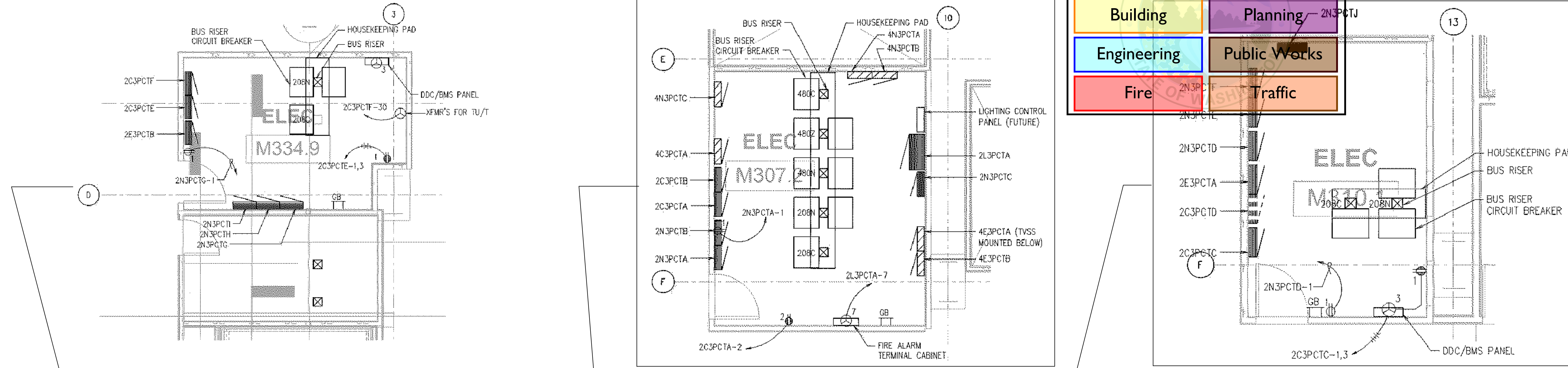
LUMINAIRE SCHEDULE

**E1.00**

**B-21-0829**

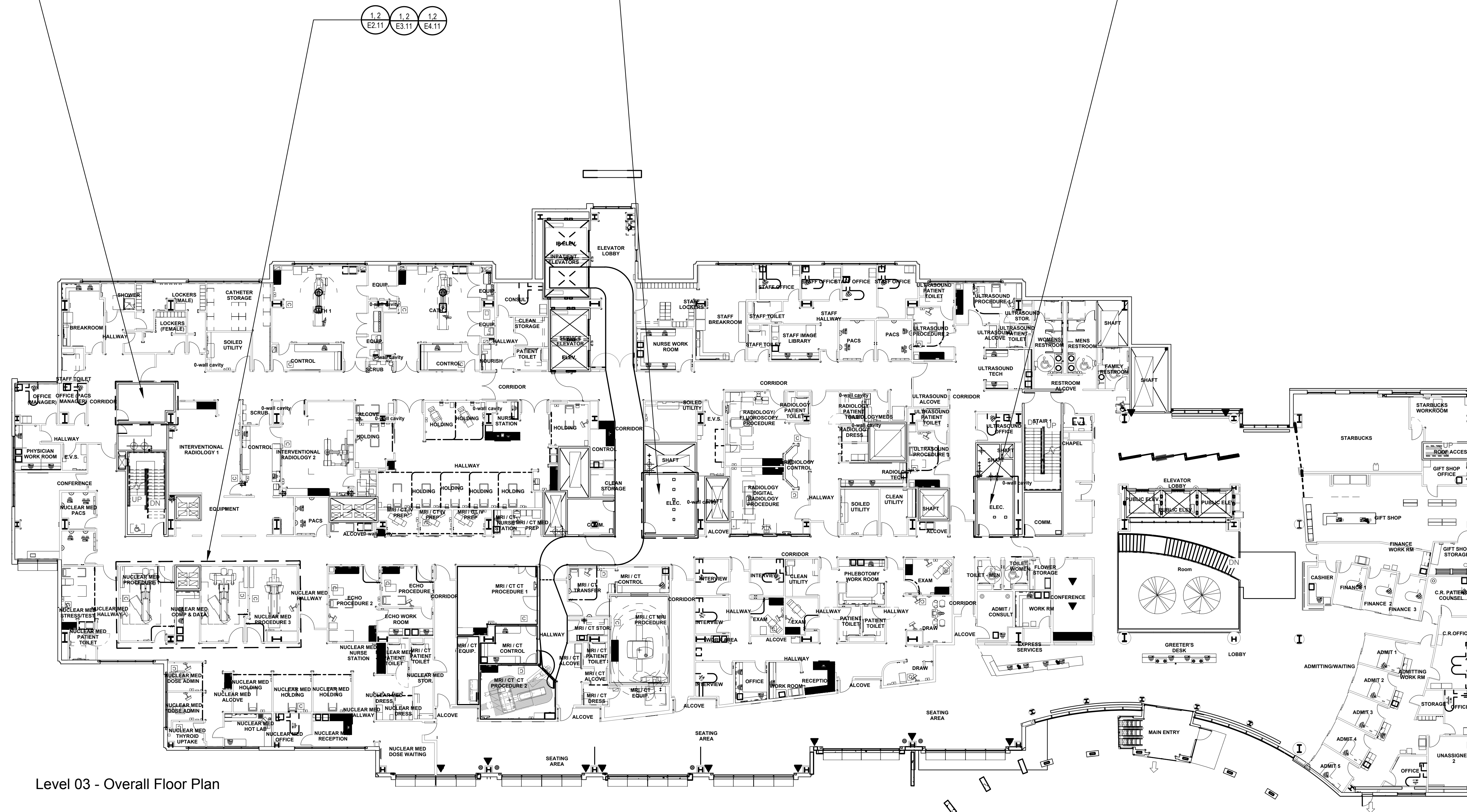


Building	Planning - 2N3PCTU
Engineering	Public Works
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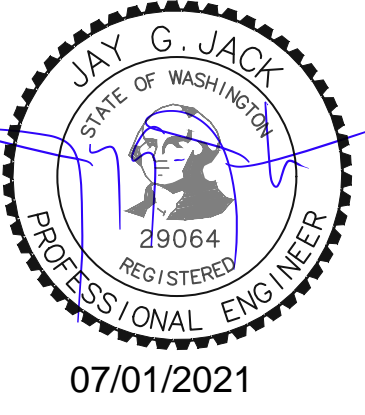
**GENERAL NOTES**

- UNLESS NOTED OTHERWISE, ALL WORK ON THIS PLAN IS EXISTING



Level 03 - Overall Floor Plan

① Level 03 - Overall Floor Plan  
1/16" = 1'-0"



**SPECT/CT REPLACEMENT**

Multicare Good Samaritan Hospital

401 15th Ave. SE, Puyallup WA 98372



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ELECTRICAL KEY  
PLAN - OVERALL  
AND LEVEL 3

**E1.01**

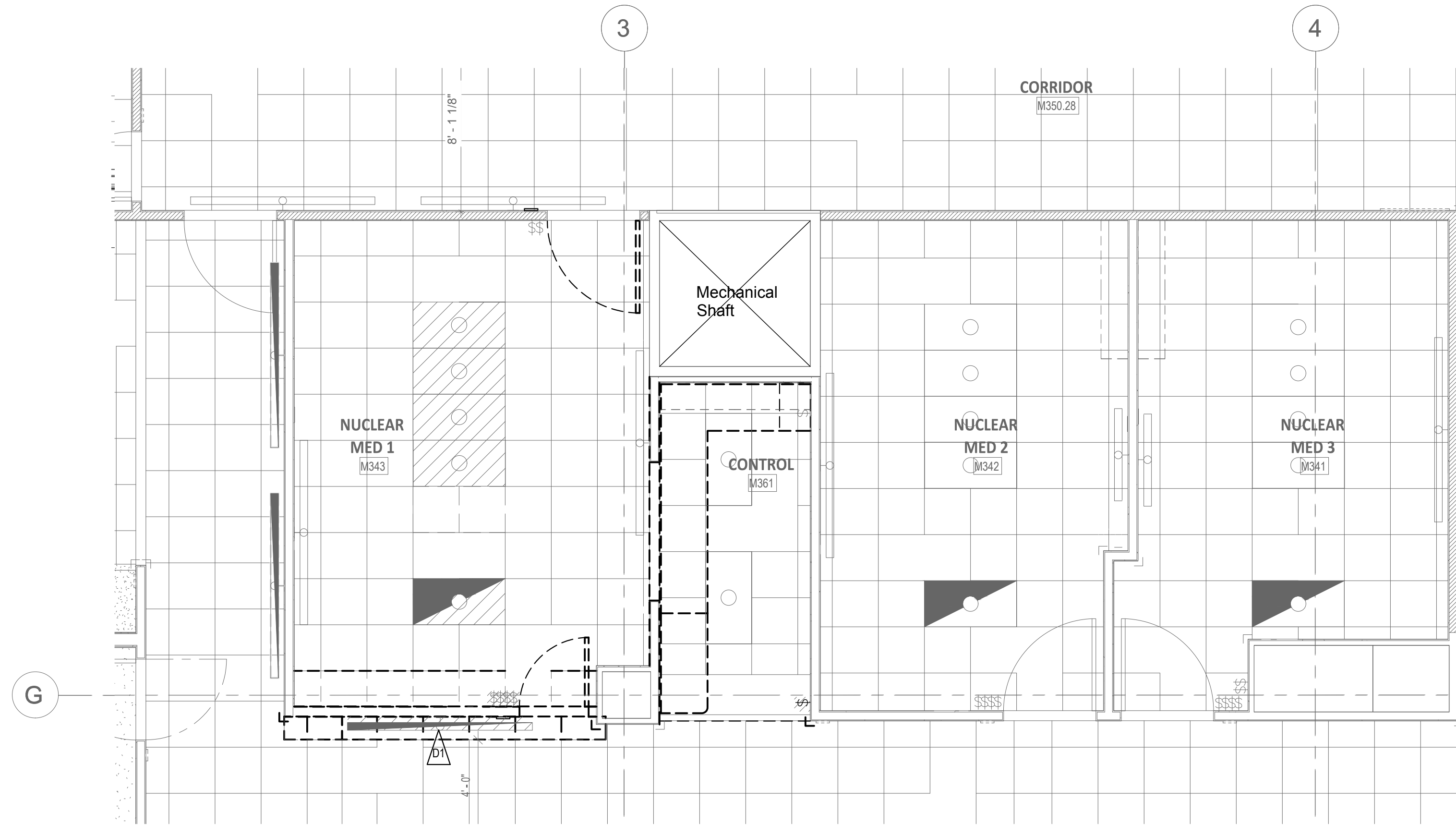
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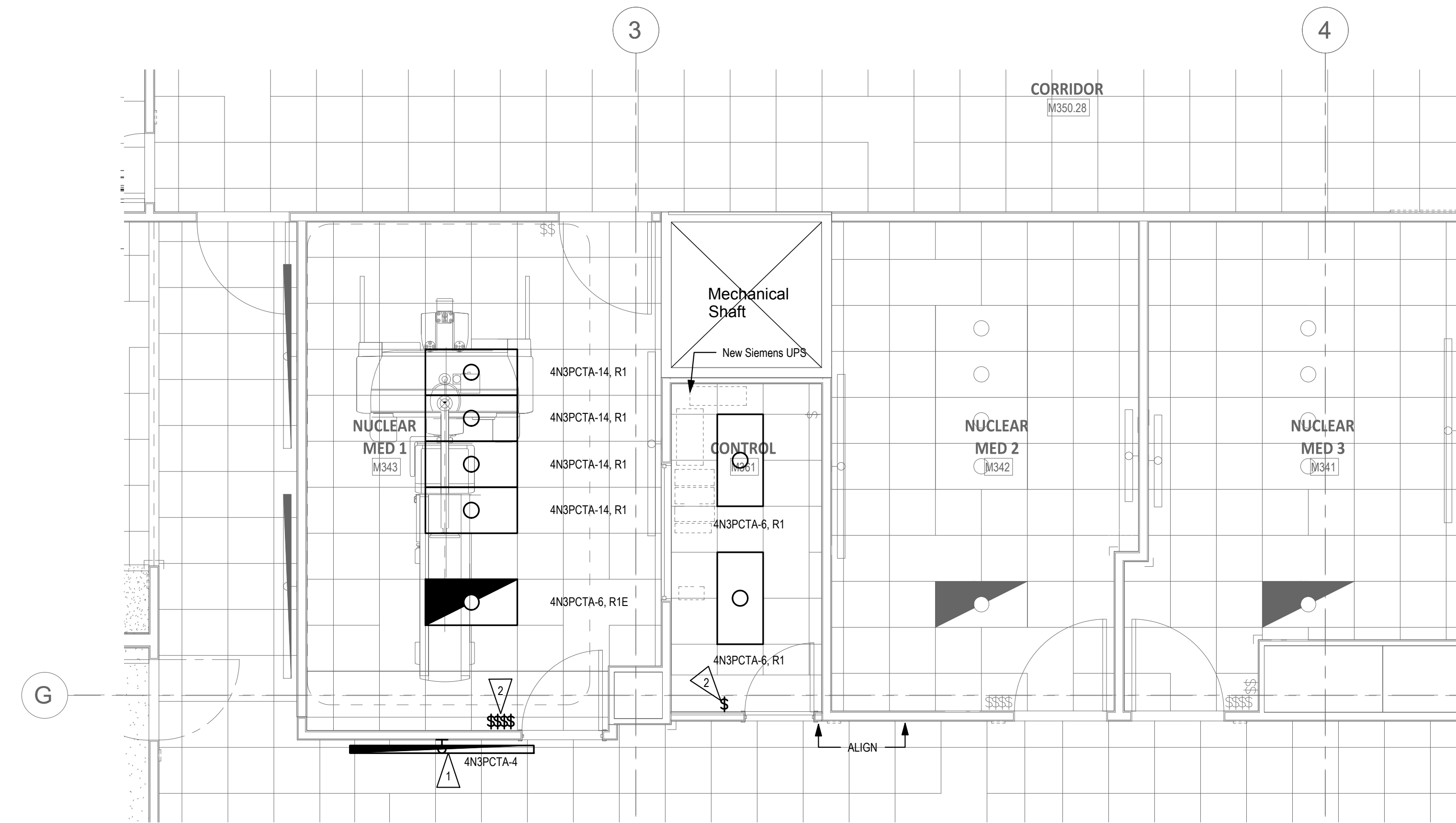
- GENERAL NOTES**
- UNLESS OTHERWISE NOTED, ALL WORK ON THIS PLAN IS EXISTING.
  - EXISTING LINE WORK DENOTES EXISTING WORK.
  - HEAVY LIGHT WORK DENOTES NEW WORK.

- DEMOLITION NOTES**
- CAREFULLY REMOVE FIXTURE AND RELOCATE AS INDICATED.

- FLAG NOTES**
- INSTALL EXISTING FIXTURE AND RECONNECT TO EXISTING CIRCUIT.
  - PROVIDE NEW WIRING AS REQUIRED TO RE-INSTALL SWITCHES IN NEW WALL AND TO RECONNECT TO LIGHT FIXTURES.



① PARTIAL LIGHTING DEMOLITION PLAN - LEVEL 03  
SCALE ::1/4" = 1'-0"



② PARTIAL LIGHTING PLAN - LEVEL 03  
SCALE ::1/4" = 1'-0"

**SPECT/CT REPLACEMENT**

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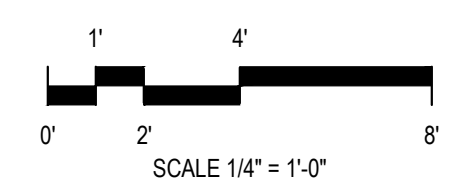


ISSUE DATE: 07.02.21  
REVISIONS:

CONSTRUCTION DOCUMENTS

PARTIAL LIGHTING  
PLANS - DEMO AND  
NEW - LEVEL 03

**E2.11**



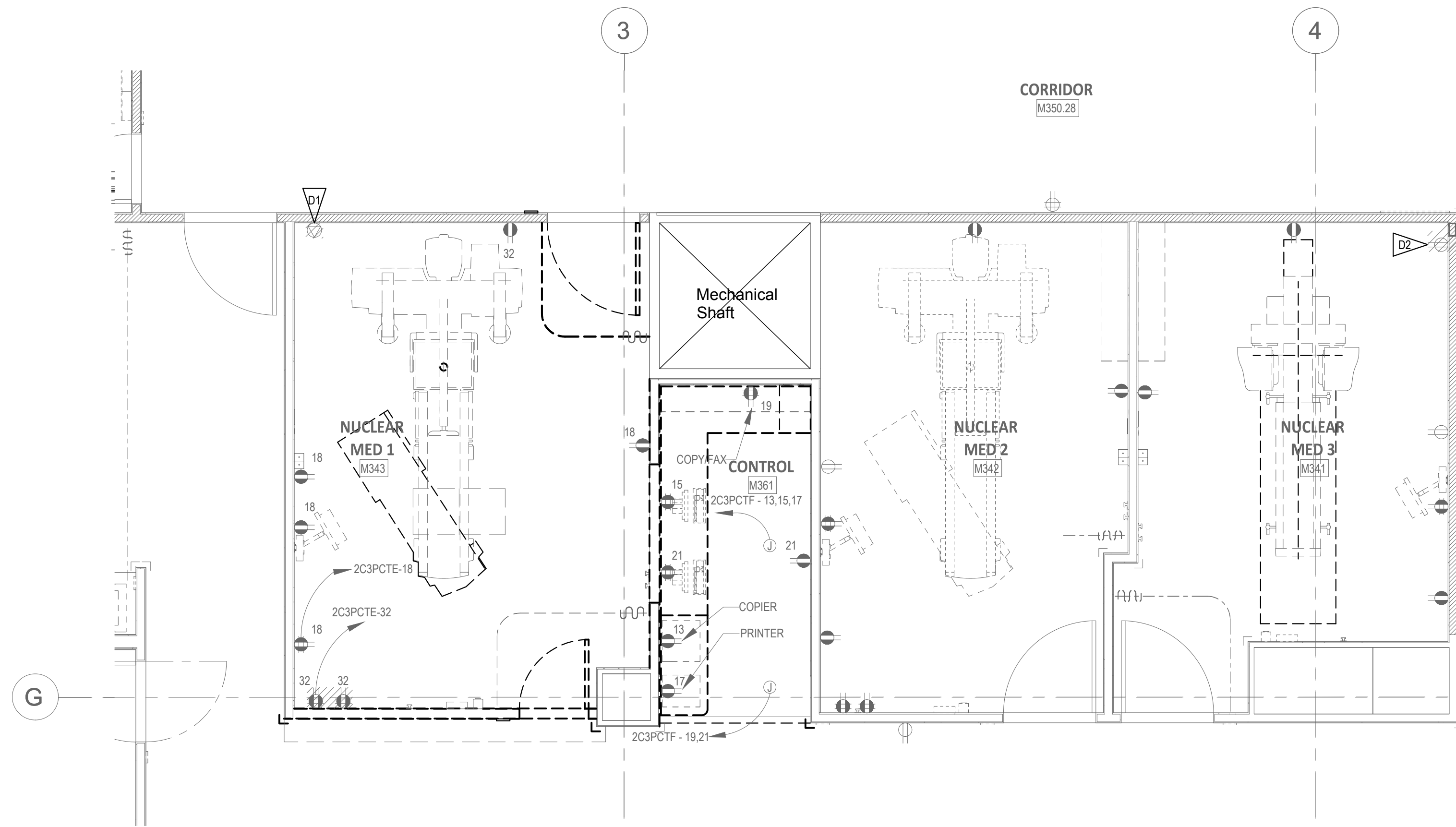
SCALE 1/4" = 1'-0"  
**B-21-0829**



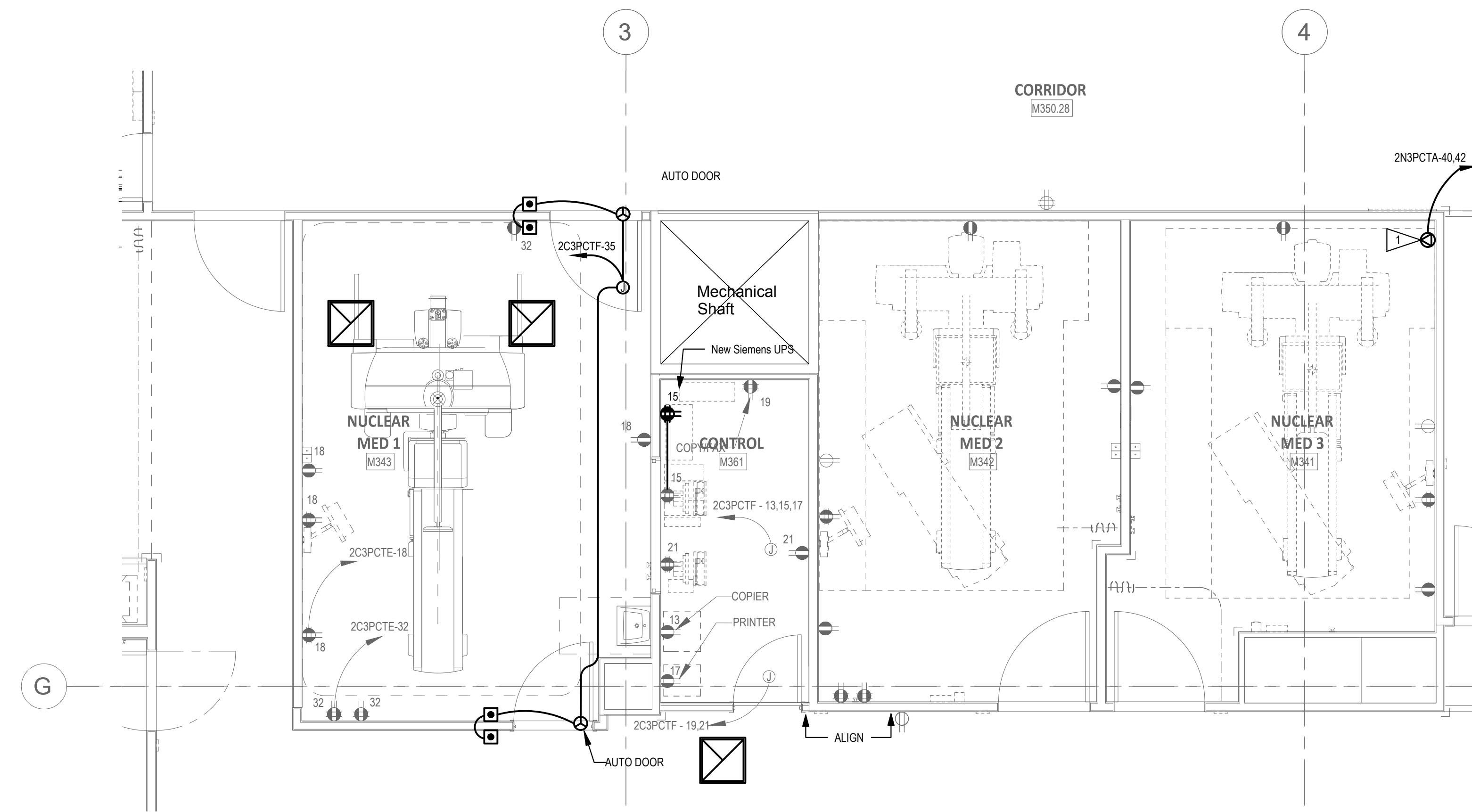
- GENERAL NOTES**
- UNLESS OTHERWISE NOTED, ALL WORK ON THIS PLAN IS EXISTING.
  - EXISTING LINE WORK DENOTES EXISTING WORK.
  - HEAVY LIGHT WORK DENOTES NEW WORK.

- DEMOLITION NOTES**
- REMOVE EXISTING 30A, 208V RECEPTACLE. INTERCEPT EXISTING CIRCUIT IN CEILING SPACE ABOVE AND EXTEND 3/4" #10 TO ROOM M341.
  - REMOVE EXISTING 120V, 20A CIRCUIT BREAKER DISCONNECT AND ASSOCIATED WALL RECEPTACLE. PATCH WALL.

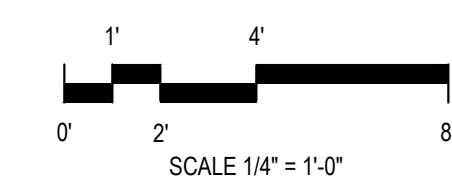
- FLAG NOTES**
- INSTALL EXISTING 30A, 208V RECEPTACLE PREVIOUSLY USED IN ROOM M343 FOR RELOCATED NUC MED MACHINE. EXTEND FEEDER FROM ROOM M343 AS INDICATED.



1 PARTIAL EXISTING POWER/DEMOLITION PLAN - LEVEL 03  
SCALE ::1/4" = 1'-0"



2 PARTIAL POWER PLAN - LEVEL 03  
SCALE ::1/4" = 1'-0"



**SPECT/CT REPLACEMENT**  
Multicare Good Samaritan Hospital

401 15th Ave. SE, Puyallup WA 98372



ISSUE DATE: 07.02.21  
REVISIONS:

CONSTRUCTION DOCUMENTS

PARTIAL POWER  
PLANS - DEMO AND  
NEW - LEVEL 03

**E3.11**

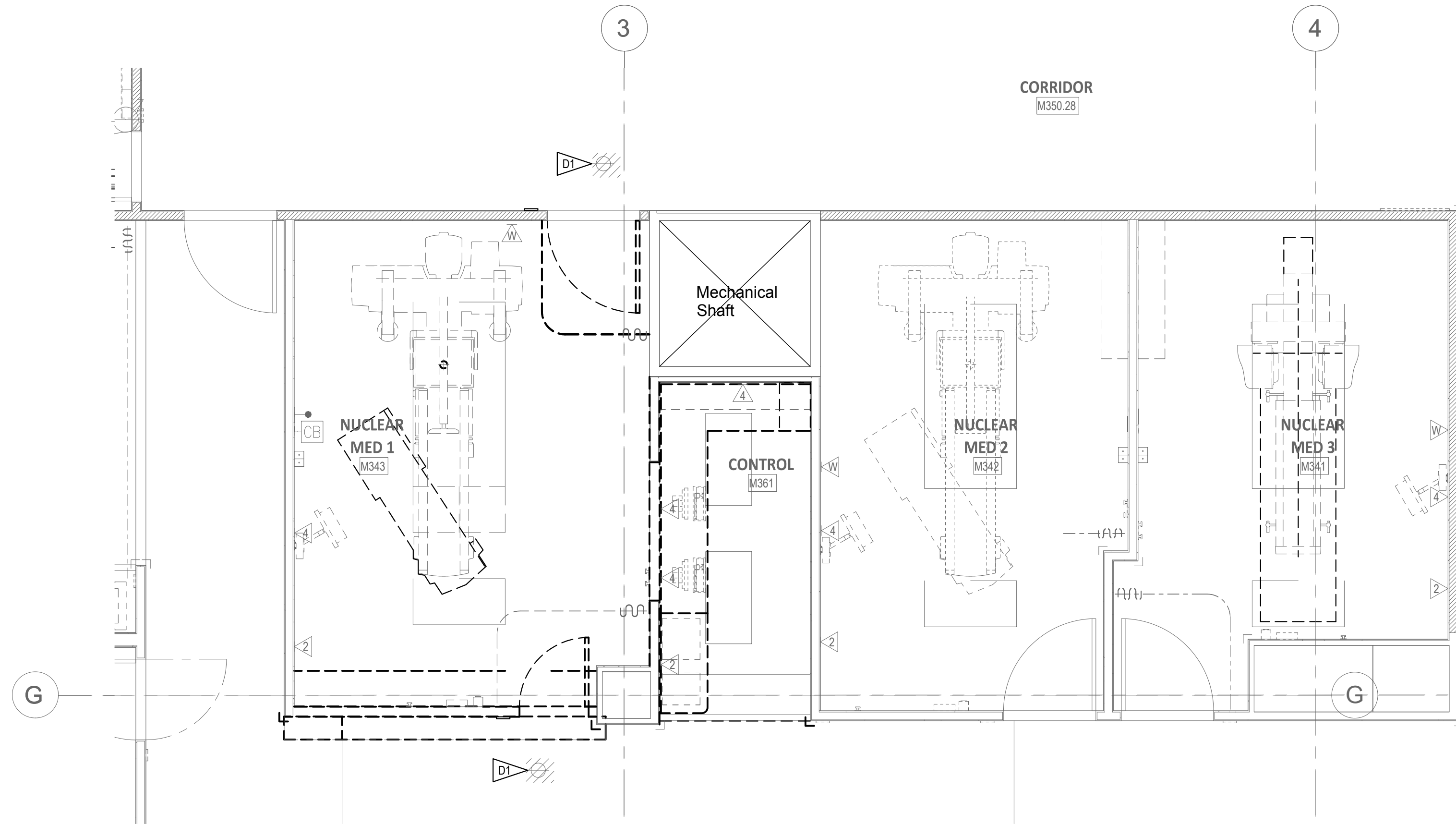
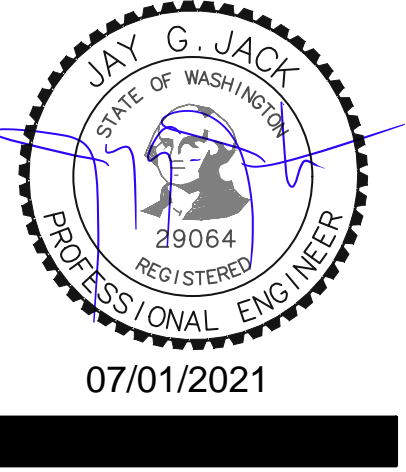
**B-21-0829**



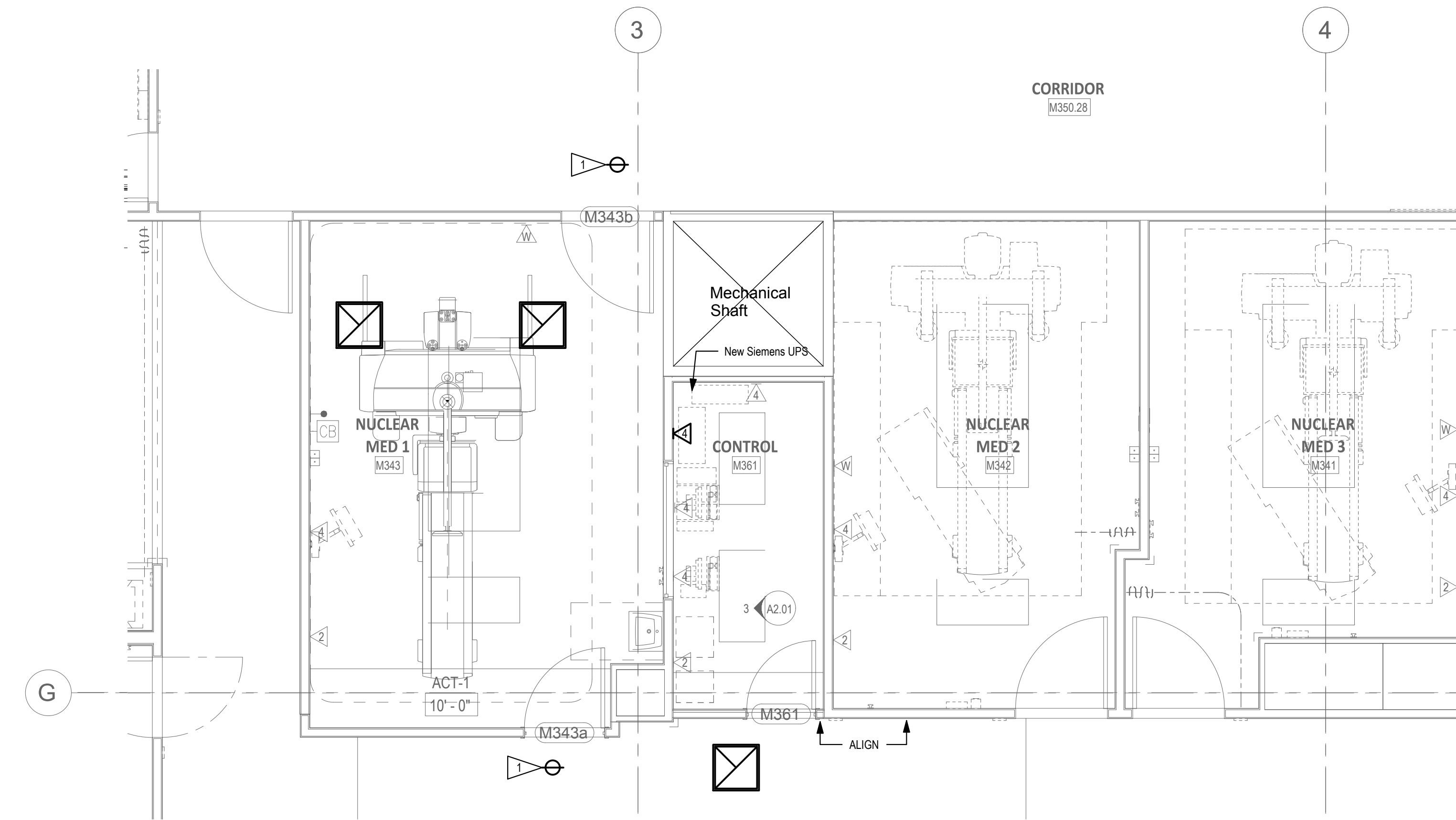
- GENERAL NOTES**
- UNLESS OTHERWISE NOTED, ALL WORK ON THIS PLAN IS EXISTING.
  - EXISTING LINE WORK DENOTES EXISTING WORK.
  - HEAVY LIGHT WORK DENOTES NEW WORK.

- DEMOLITION NOTES**
- CAREFULLY REMOVE AND RELOCATE EXISTING DOME LIGHT.

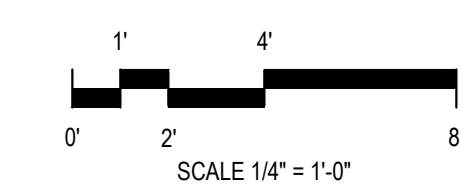
- FLAG NOTES**
- INSTALL EXISTING DOME LIGHT AND RECONNECT TO EXISTING CIRCUIT.



1 PARTIAL EXISTING SYSTEMS & COMMUNICATION/DEMOLITION PLAN - LEVEL 03  
 SCALE ::1/4" = 1'-0"



2 PARTIAL SYSTEMS & COMMUNICATION PLAN - LEVEL 03  
 SCALE ::1/4" = 1'-0"



**SPECT/CT REPLACEMENT**

Multicare Good Samaritan Hospital

401 15th Ave. SE, Puyallup WA 98372



ISSUE DATE: 07.02.21  
 REVISIONS:

CONSTRUCTION DOCUMENTS

PARTIAL SYSTEMS  
 AND COMM PLANS -  
 DEMO AND NEW -  
 LEVEL 03

**E4.11**

**B-21-0829**





**ELECTRICAL NOTES**

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

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

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

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

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

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

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

CONDUIT RUNS ARE SHOWN SCHEMATICALLY. INSTALL CONDUIT WITH A MINIMUM OF BENDS IN THE SHORTEST PRACTICAL DISTANCE CONSIDERING THE BUILDING CONSTRUCTION AND OBSTRUCTIONS, EXCEPT AS OTHERWISE NOTED. THE CONTRACTOR SHALL MAKE CERTAIN THAT ANY CONDUIT/RACEWAY RUNS CONTAINING SIEMENS HEALTHCARE CABLES DO NOT EXCEED THE SPECIFIED MAXIMUM DISTANCES AS SHOWN ON THE ELECTRICAL DRAWINGS WITH DIVIDERS TO SEPARATE THE DUCT INTO TWO OR THREE SEPARATE COMPARTMENTS AS SHOWN ON THE SIEMENS PLANS (FOR POWER AND SIEMENS HEALTHCARE CABLING). DIVIDERS AND CROSSOVER PIECES TO BE PROVIDED AS NECESSARY. THE CABLE TO CABLE AS WELL AS THE CIRCUIT TO CIRCUIT SEPARATION REQUIREMENT WAS EVALUATED DURING THE UL SYSTEM CERTIFICATION OF THE EQUIPMENT. ADDITIONAL SEPARATION OF THE SYSTEM CABLE ASSEMBLIES INTO SEPARATE OR PARTITIONED RACEWAYS, UNLESS OTHERWISE NOTED, IS NOT NECESSARY TO INSURE SEPARATION OF CIRCUITS.

PROVIDE WIRE DUCT/RACEWAY WITH ACCESSIBLE REMOVABLE COVERS. LOCATIONS OF BUILDING MATERIAL OPENINGS (I.E. ACCESS PANELS) TO BE CUT IN FIELD ARE TO BE COORDINATED WITH THE DRAWING REQUIREMENTS AND BUILDING STRUCTURE. THOSE THAT ARE NOT INDICATED OR INTERFERE WITH BUILDING ELEMENTS SHALL BE COORDINATED WITH SIEMENS PROJECT MANAGER. ELECTRICAL PULL BOXES AND RACEWAY COVERS SHALL BE INSTALLED IN A MANNER TO ALLOW ACCESSIBILITY FOR INSTALLATION AND MAINTENANCE. CONTRACTORS MUST PROVIDE PULL STRINGS FOR ALL CONDUIT AND WIRE DUCT/RACEWAY. IN-FLOOR TRENCH DUCT AND FLUSH FLOOR BOXES SHALL BE PROVIDED WITH FULLY GASKETED REMOVABLE COVERS. WHEN JUNCTION BOXES AND WIRE DUCT/RACEWAY ARE MOUNTED HIGHER THAN 14 FEET ABOVE FINISHED FLOOR, THE ELECTRICAL CONTRACTOR SHALL PROVIDE TWO ELECTRICIANS TO HELP THE SIEMENS INSTALLERS PULL SIEMENS SUPPLIED CABLES AT CUSTOMER'S EXPENSE. WHEN JUNCTION BOXES AND WIRE DUCT/RACEWAY ARE MOUNTED ABOVE A HARD CEILING (I.E. SHEET ROCK), A 24" x 24" ACCESS PANEL IS REQUIRED AT EACH JUNCTION BOX AND WITHIN 2 FEET OF EACH RACEWAY TRANSITION (SUCH AS A 90 DEGREE ELBOW OR TEE) IN DUCT/RACEWAY. THERE MUST BE FREE AND CLEAR ACCESS TO JUNCTION BOXES AND WIRE DUCT/RACEWAY. WHEN ACCESS PANELS ARE LOCATED MORE THAN 3 FEET FROM JUNCTION BOXES AND WIRE DUCT/RACEWAY THE ELECTRICAL CONTRACTOR SHALL PROVIDE TWO ELECTRICIANS TO HELP SIEMENS INSTALLERS PULL SIEMENS SUPPLIED CABLES AT CUSTOMER'S EXPENSE.

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

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

**CABLE PROTECTION**

CABLES ARE NOT PLENUM RATED. ALL CABLES MUST BE ROUTED IN CABLE DUCTS OR CABLE CONDUITS.

**DRAWING CROSS-REFERENCE TABLE\***

SIEMENS DRAWING#	DRAWING LOCATION (THIS SET)
E-101	E5.01
E-102	E5.02

\*WHERE THE SIEMENS INSTALLATION DRAWINGS MAKE REFERENCE TO OTHER SIEMENS DRAWINGS USE THIS CROSS-REFERENCE TABLE TO LOCATE THE SHEET WITHIN THIS SET OF DRAWINGS. A COMPLETE SET OF SIEMENS DRAWINGS ARE ALSO AVAILABLE FOR REFERENCE IN A STAND-ALONE SET.

**SIEMENS REFERENCE DRAWING**

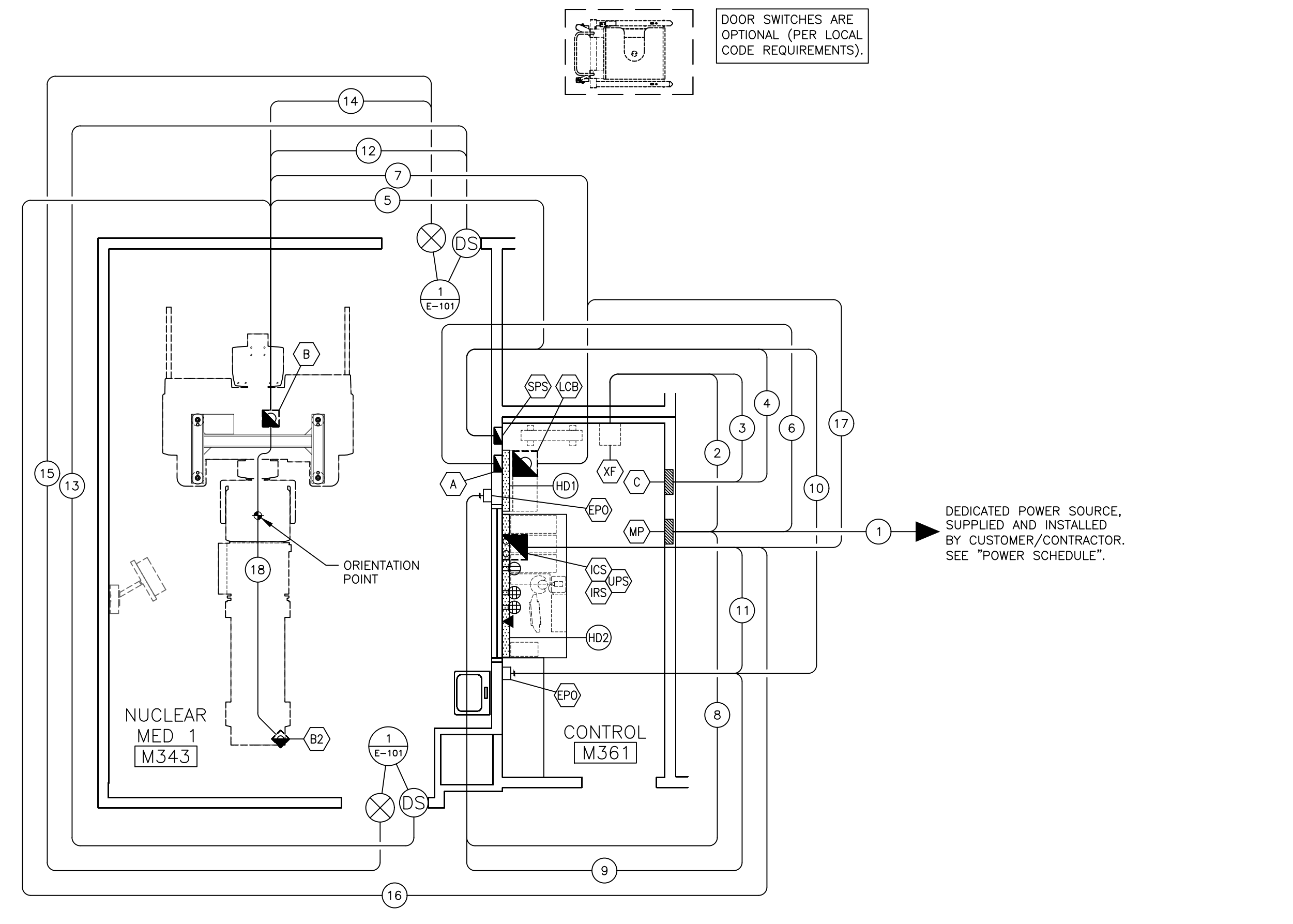
NOTE: THIS DRAWING IS BASED ON DRAWINGS AND A DESIGN PREPARED BY SIEMENS. ALL WORK INDICATED TO BE BY CONTRACTOR IS PART OF THIS CONTRACT. COORDINATE WITH THE GC TO CONFIRM TRADE RESPONSIBILITY.

SYM	SIZE	DESCRIPTION	REMARKS
(A)	AS REQUIRED	PULL BOX MOUNTED FLUSH WITH FINISHED WALL AT FLOOR LINE IN SHOWN LOCATION.	ANCILLARY WIRING
(B)	8" x 8"	PULL BOX MOUNTED BELOW FLOOR SLAB WITH 5" CONDUIT RUNNING THROUGH FLOOR SLAB ENDING FLUSH WITH FINISHED FLOOR IN SHOWN LOCATION.	GANTRY CABLE ACCESS
(C)	6" x 6"	PULL BOX MOUNTED BELOW FLOOR SLAB WITH 3" CONDUIT RUNNING THROUGH FLOOR SLAB ENDING FLUSH WITH FINISHED FLOOR IN SHOWN LOCATION. SIEMENS SUPPLIED COVER.	PHS CABLE ACCESS UNDER THE PHS
(D)	25A-2P, FLUSH ENCLOSED	TRANSFORMER BREAKER IN NEMA 1 ENCLOSURE SURFACE OR FLUSH MOUNTED. EXACT LOCATION DETERMINED BY CUSTOMER/CONTRACTOR BASED ON LOCATION OF MP. SUPPLIED BY CUSTOMER/CONTRACTOR.	SEE POWER SCHEDULE
(E)	---	EMERGENCY POWER OFF BUTTON WITH PROTECTIVE COVER, MOUNTED ON WALL AT 5'-0" ABOVE FINISH FLOOR THAT PREVENTS RESETTING OF CIRCUIT BREAKER WHEN IN THE OFF POSITION. THERE SHALL BE AN EPO IN EACH ROOM OF THE SUITE WHERE SIEMENS EQUIPMENT IS LOCATED. EXACT LOCATIONS TO BE DETERMINED BY CUSTOMER/CONTRACTOR, SUPPLIED BY CUSTOMER/CONTRACTOR.	SEE POWER SCHEDULE
(F)	AS REQUIRED	PULL BOX MOUNTED BELOW FLOOR SLAB WITH TWO 3" CONDUITS RUNNING THROUGH FLOOR SLAB ENDING FLUSH WITH FINISHED FLOOR IN SHOWN LOCATIONS.	IMAGE CONSTRUCTION SYS. POWER
(G)	---	FIXED POINT DESIGNATION, SAME PULL BOX/OPENING AS ICS.	IMAGE RECONSTRUCTION SYS
(H)	AS REQUIRED	PULL BOX MOUNTED BELOW FLOOR SLAB WITH 6" CONDUIT RUNNING THROUGH FLOOR SLAB ENDING FLUSH WITH FINISHED FLOOR IN SHOWN LOCATION.	LINE CONNECTION BOX
(I)	---	MAIN PANEL WITH MAIN BREAKER FLUSH OR SURFACE MOUNTED. REFER TO POWER SCHEDULE.	SEE POWER SCHEDULE
(J)	AS REQUIRED	PULL BOX MOUNTED FLUSH WITH FINISHED WALL 12" ABOVE FINISHED FLOOR IN SHOWN LOCATION PROVIDED WITH FINISHED COVER. USE SEALTIGHT WITH 90 DEGREE CONNECTORS BETWEEN SPS AND PULL BOX AND CONDUIT TO B.	UPS FOR SIMBA CAMERA SYSTEMS/UPS FOR SPECT
(K)	---	FIXED POINT DESIGNATION, SAME PULL BOX/OPENING AS ICS.	---
(L)	AS REQUIRED	TRANSFORMER PROVIDING STEP DOWN POWER FOR THE SPECT SYSTEM. EXACT LOCATION DETERMINED BY CUSTOMER/CONTRACTOR BASED ON LOCATION OF MP AND/OR SPS. SUPPLIED BY CUSTOMER/CONTRACTOR.	SEE POWER SCHEDULE
(M)	6" x 3 1/2"	ELECTRICAL DUCT THAT RUNS HORIZONTALLY ON THE WALL AT THE FLOOR LINE AND SURFACE MOUNTED ON FINISHED WALL AS SHOWN FOR EXCESS CABLE STORAGE. DUCT TO BE DIVIDED INTO THREE SECTIONS WITH METAL DIVIDERS.	RACEWAY
(N)	10" x 3 1/2"	ELECTRICAL DUCT TO RUN HORIZONTALLY ON THE WALL AT THE FLOOR LINE AND SURFACE MOUNTED ON FINISHED WALL AS SHOWN. DUCT TO BE DIVIDED INTO THREE SECTIONS WITH METAL DIVIDERS. OPENING IN FACE OF RACEWAY TO BE DETERMINED AT THE TIME OF INSTALL.	RACEWAY
(1)	AS REQUIRED	CONDUIT FROM POWER SOURCE TO "MP" SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
(2)	AS REQUIRED	CONDUIT FROM "MP" TO "XP" SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
(3)	AS REQUIRED	CONDUIT FROM "XP" TO "C" SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
(4)	AS REQUIRED	CONDUIT FROM "C" TO "SPS" SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
(5)	1/2"	CONDUIT FROM "SPS" TO "B" SIZED BY ELECTRICAL ENGINEER OF RECORD.	MAXIMUM CONDUIT LENGTH 64'-0"
(6)	1 1/4"	CONDUIT FROM "MP" TO "A" (LCB) SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
(7)	1 1/4"	CONDUIT FROM "LCB" TO "B" SIZED BY ELECTRICAL ENGINEER OF RECORD.	MAXIMUM CONDUIT LENGTH 64'-0"
(8)	AS REQUIRED	CONDUIT FROM "MP" TO "EPO" SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
(9)	AS REQUIRED	CONDUIT FROM "EPO" TO "XP" SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
(10)	AS REQUIRED	CONDUIT FROM "EPO" TO "SPS" SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
(11)	AS REQUIRED	CONDUIT FROM "EPO" TO "ICS" (UPS) SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
(12)	1/2"	CONDUIT FROM "B" TO "DOOR SAFETY SWITCH" SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE SHEET E-101
(13)	AS REQUIRED	CONDUIT FROM "DOOR SAFETY SWITCH" TO "DOOR SAFETY SWITCH" SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE SHEET E-101
(14)	1/2"	CONDUIT FROM "B" TO "WARNING LIGHT" (X-RAY ON) SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE SHEET E-101
(15)	AS REQUIRED	CONDUIT FROM "WARNING LIGHT" (X-RAY ON) TO "WARNING LIGHT" (X-RAY ON) SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE SHEET E-101
(16)	(2) 3"	CONDUIT "B" TO "ICS".	MAXIMUM CONDUIT LENGTH 53'-0"
(17)	1 1/2"	CONDUIT FROM "LCB" TO "UPS".	MAXIMUM CONDUIT LENGTH 64'-0"
(18)	3"	CONDUIT FROM "B" TO "B2". MINIMUM BENDING RADIUS 4 1/2".	MAXIMUM CONDUIT LENGTH 13'-0"

**FINISHED ROOM HEIGHT**

SIEMENS INTEVO EXCEL, INTEVO 2, INTEVO 5, INTEVO 16, INTEVO BOLD	MINIMUM 8'-0"
SIEMENS INTEVO EXCEL, INTEVO 2, INTEVO 5, INTEVO 16, INTEVO BOLD WITH CEILING MOUNTED COMPONENT OTHER THAN RADIATION ON LAMP	MINIMUM 8'-2" MAXIMUM 12'-0"

CONSIDER THE WARNING LIGHT WILL BE PLACED ON TOP OF THE PATIENT BOOM. ANY OTHER CEILING MOUNTED COMPONENT MUST BE PLACED AS TO NOT COLLIDE WITH WARNING LIGHT.



**ELECTRICAL RACEWAY PLAN**

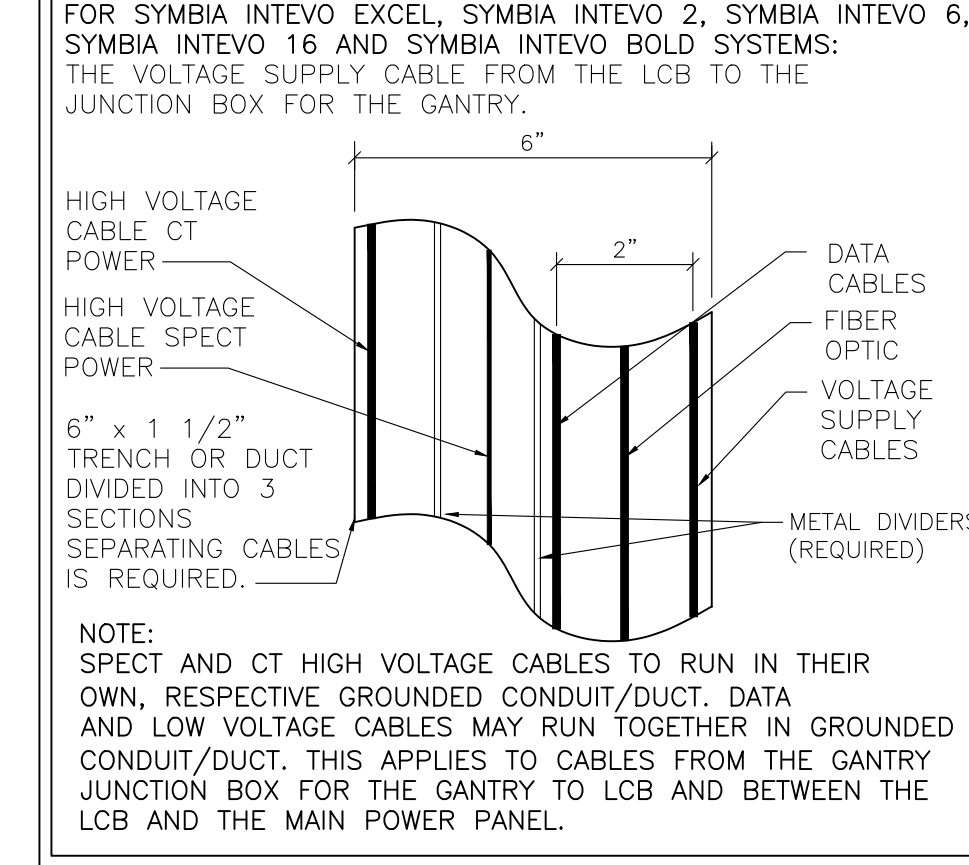
SCALE: 1/4" = 1'-0"

**TRENCH/DUCT/CONDUIT REQUIREMENTS**

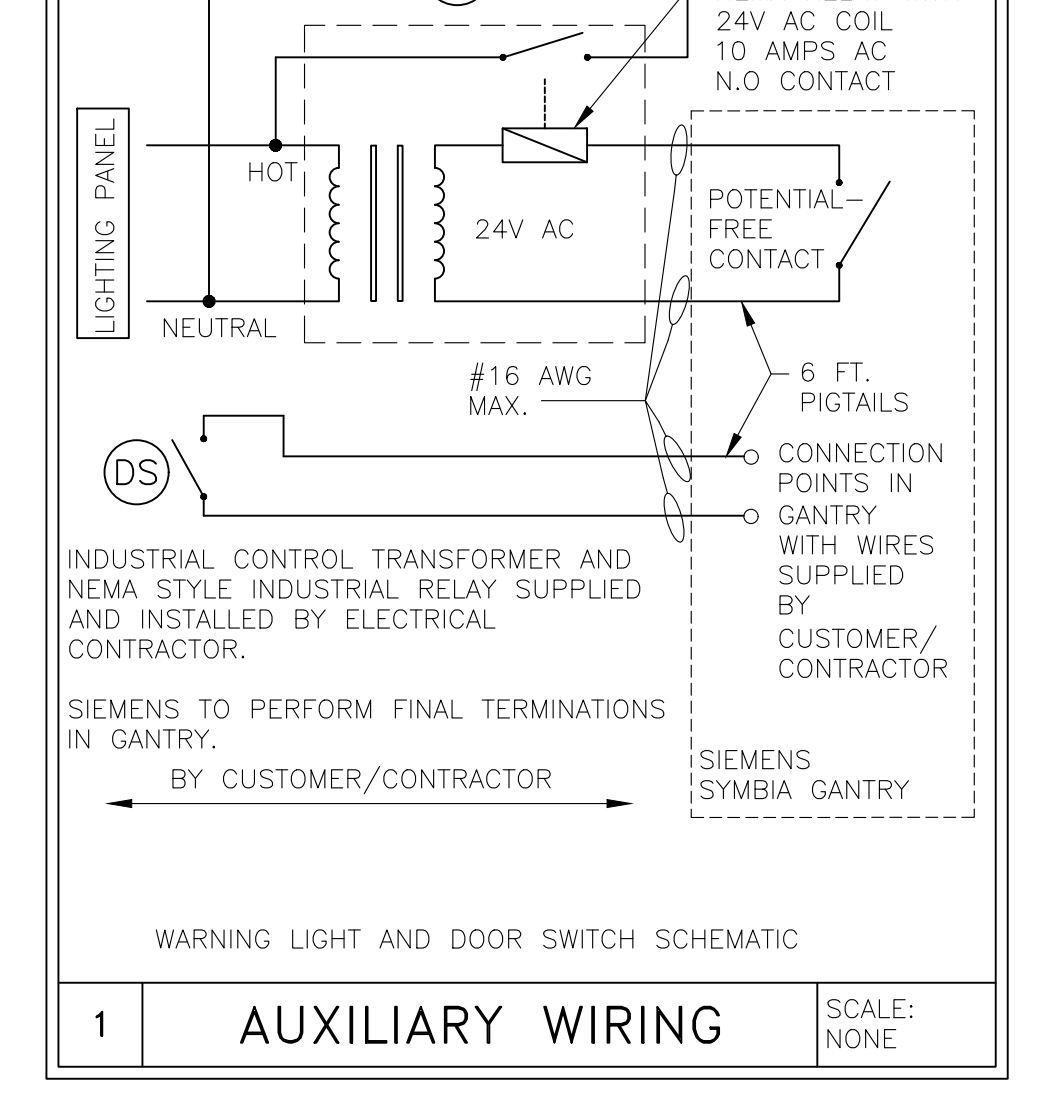
IT IS EXTREMELY IMPORTANT THAT THE CABLING IS INSTALLED EXACTLY AS SPECIFIED WITHIN THIS DETAIL. THE VOLTAGE SUPPLY CABLES AND/OR HIGH VOLTAGE CABLES MUST BE LAID SEPARATELY FROM THE DATA CABLES. SPECT AND CT POWER CABLES MUST BE ROUTED IN INDIVIDUAL GROUNDED CONDUIT OR GROUNDED DUCT. DATA CABLES TO BE ROUTED SEPARATELY. 6" x 1 1/2" TRENCH OR DUCT MUST BE SUPPLIED WITH 2 METAL DIVIDERS WITH 3 SECTIONS TO KEEP CABLES SEPARATED.

**HIGH VOLTAGE AND SUPPLY CABLES:**  
ON SITE POWER LINE CABLE TO THE SYMBIA INTEVO EXCEL, SYMBIA INTEVO 2, SYMBIA INTEVO 6, SYMBIA INTEVO 16 AND SYMBIA INTEVO BOLD SYSTEMS.

**FOR SYMBIA INTEVO EXCEL, SYMBIA INTEVO 2, SYMBIA INTEVO 6, SYMBIA INTEVO 16 AND SYMBIA INTEVO BOLD SYSTEMS:**  
THE VOLTAGE SUPPLY CABLE FROM THE LCB TO THE JUNCTION BOX FOR THE GANTRY.



**AUXILIARY WIRING**



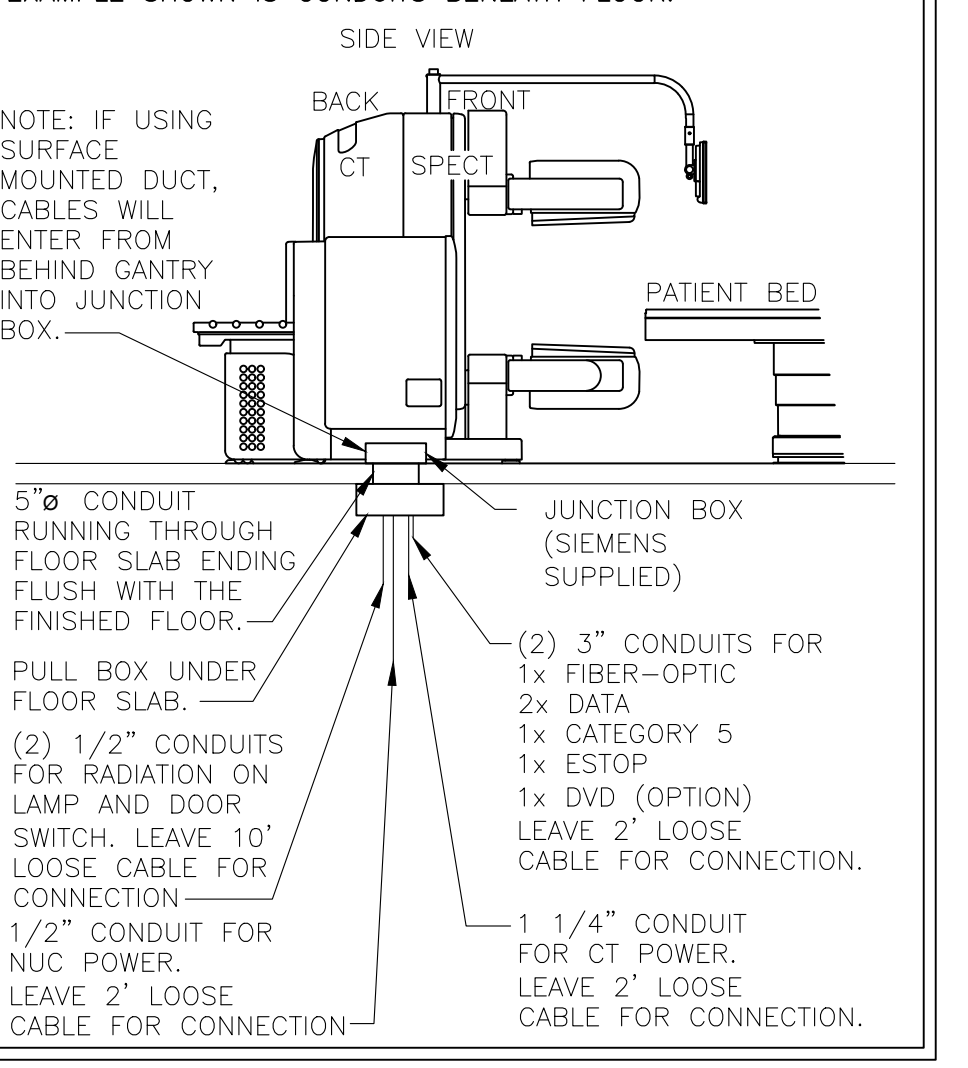
**CABLE ENTRANCES**

AN ELECTRICIAN IS REQUIRED TO BE AVAILABLE DURING THE ACTUAL INSTALLATION OF THE SYSTEM.

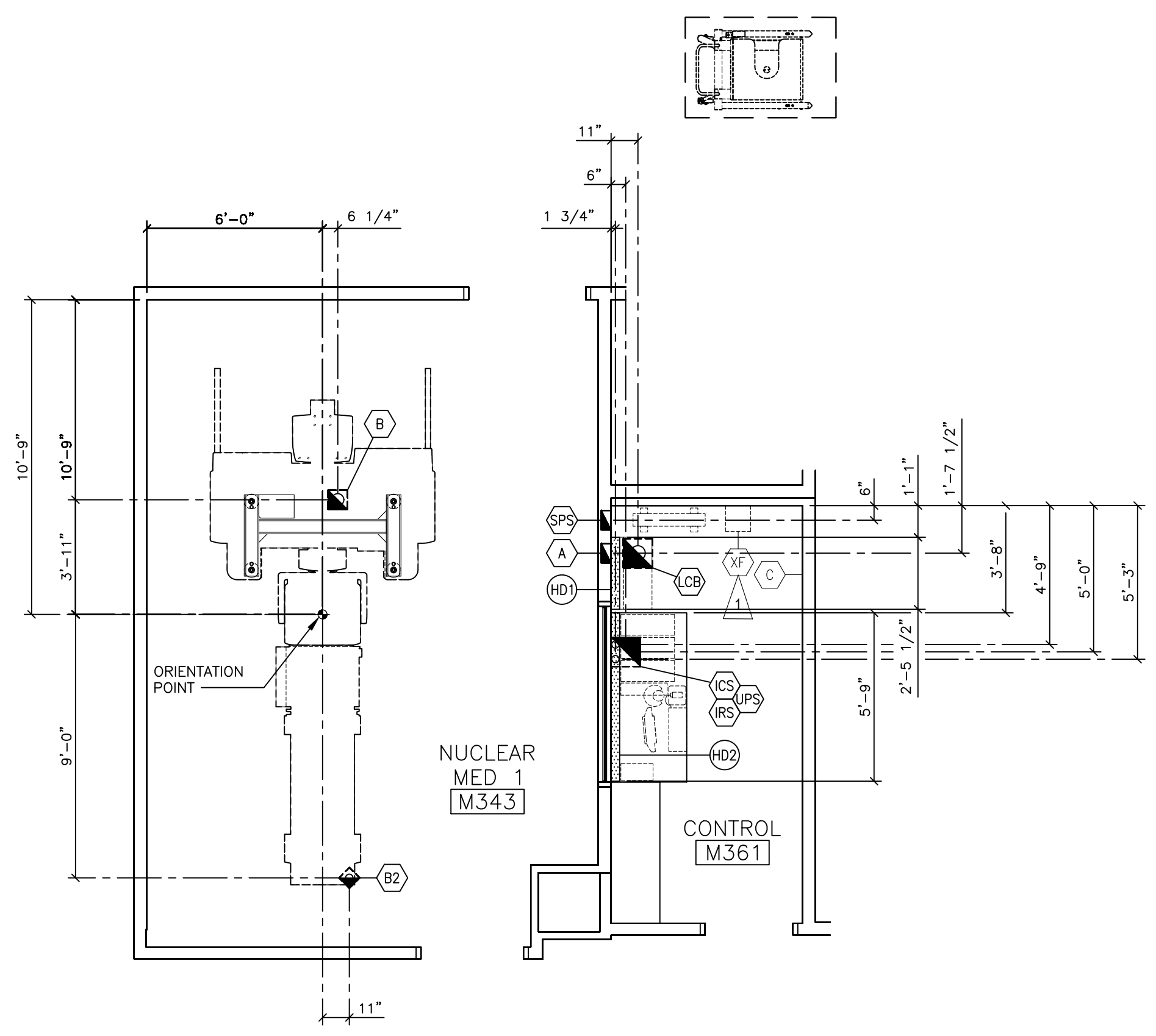
A LOCAL CERTIFIED ELECTRICIAN MUST BE AVAILABLE AT THE TIME OF INSTALL. TO BE COORDINATED WITH THE SIEMENS PROJECT MANAGER, THE SITE SHOULD BE PREPARED IN ADVANCE WITH A 2'-0" LOOSE CABLE FOR CABLE CONNECTIONS FROM THE LCB TO GANTRY (B).

CABLES MAY ENTER FROM CONDUITS BENEATH FLOOR, SURFACE MOUNTED DUCT, OR FLUSH IN FLOOR TRENCH DUCT. PLEASE REFER TO SITE SPECIFIC SHEET E-101 AND E-102 TO SEE HOW CABLES ACCESS GANTRY.

EXAMPLE SHOWN IS CONDUITS BENEATH FLOOR:

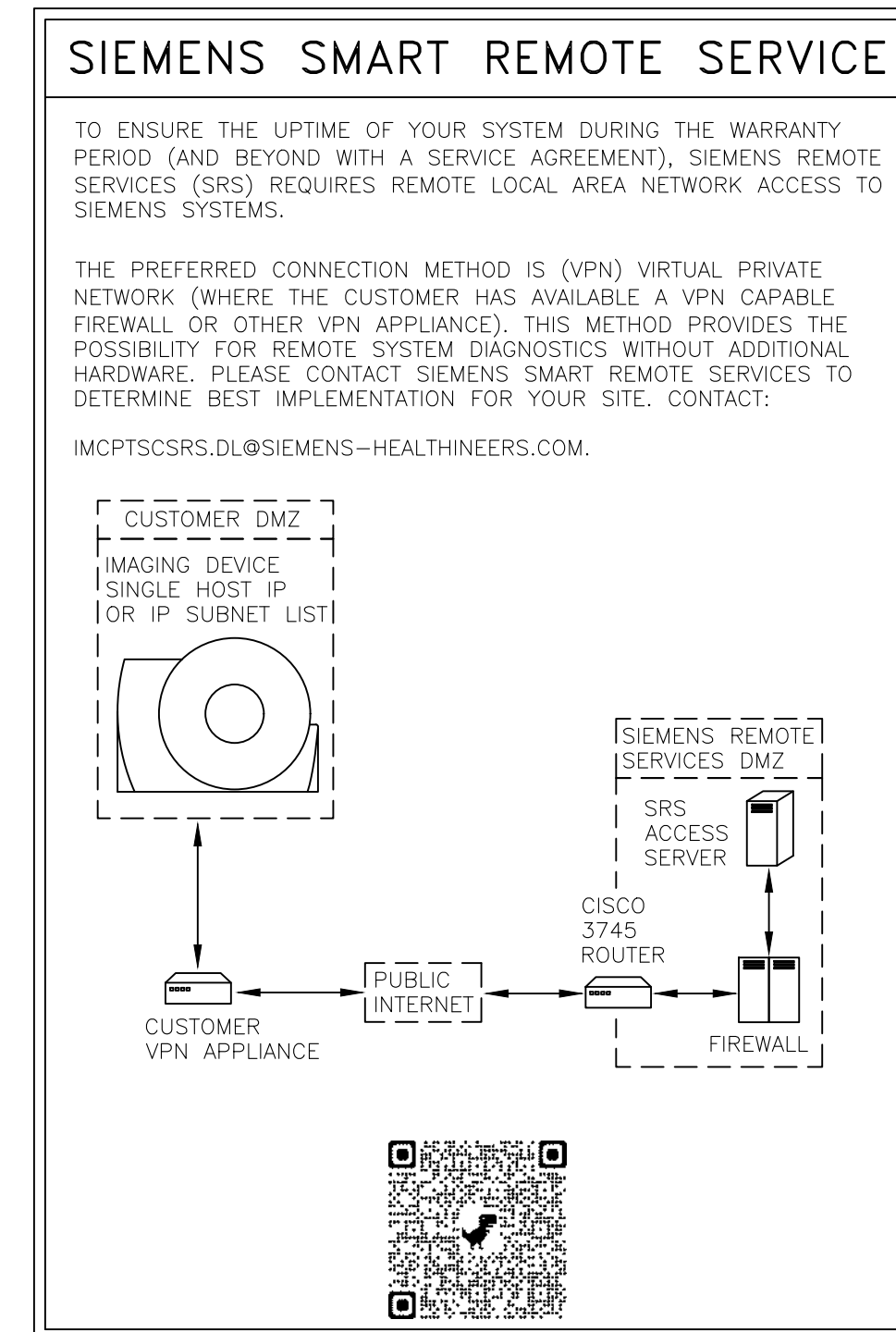






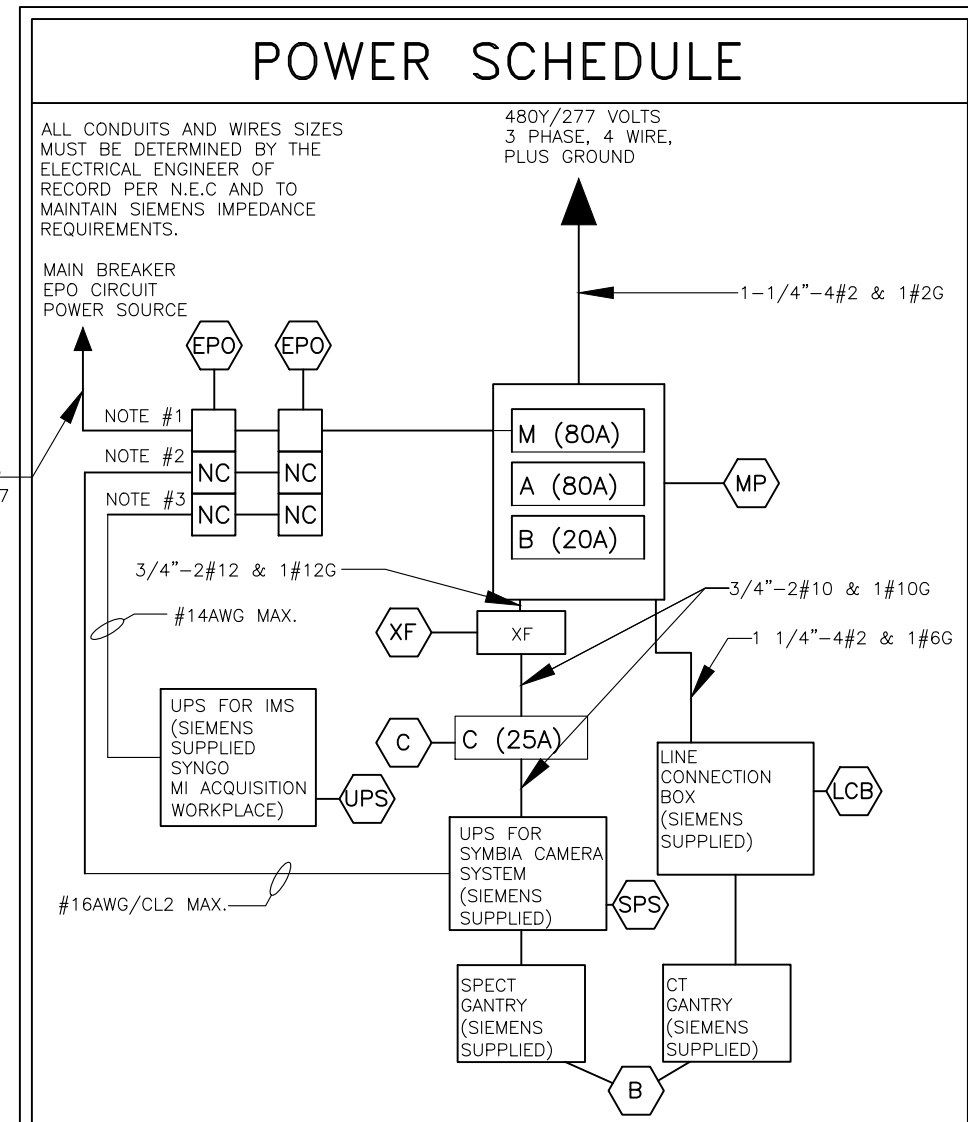
ELECTRICAL DIMENSION PLAN

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



FROM	VIA	TO	DESCRIPTION	REMARKS
POWER SOURCE	1	MP	3-PHASE CONDUCTORS, 1 NEUTRAL AND GROUND ALL TO BE THE SAME SIZE, SEE POWER SCHEDULE	SEE POWER SCHEDULE
MP	2	XF	POWER CABLE FOR SPECT PORTION OF SYMBIA, SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
XF	3	C	POWER CABLE FOR SPECT PORTION OF SYMBIA, SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
C	4	SPS	POWER CABLE FOR SPECT PORTION OF SYMBIA, SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
SPS	5	B	POWER CABLE FOR SPECT PORTION OF SYMBIA, SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
MP	6,A	LCB	POWER CABLE FOR CT PORTION OF SYMBIA, SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
LCB	7	B	POWER CABLE FOR CT PORTION OF SYMBIA, SIZED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
MP	8	EPO	DETERMINED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
EPO	9	EPO	DETERMINED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
EPO	10	SPS	DETERMINED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
EPO	11,ICS	UPS	DETERMINED BY ELECTRICAL ENGINEER OF RECORD.	SEE POWER SCHEDULE
B	12	DOOR SAFETY SWITCH	DETERMINED BY ELECTRICAL ENGINEER OF RECORD.	SEE SHEET E-101
DOOR SAFETY SWITCH	13	DOOR SAFETY SWITCH	DETERMINED BY ELECTRICAL ENGINEER OF RECORD.	SEE SHEET E-101
B	14	WARNING LIGHT	DETERMINED BY ELECTRICAL ENGINEER OF RECORD.	SEE SHEET E-101
WARNING LIGHT	15	WARNING LIGHT	DETERMINED BY ELECTRICAL ENGINEER OF RECORD.	SEE SHEET E-101

FROM	VIA	TO	DESCRIPTION	REMARKS
ICS/IRS	16	B	POWER CABLE: 300V.	MAXIMUM LENGTH 99'-0"
ICS/IRS	16	B	CAT 5 CROSS OVER CABLE: 150V.	MAXIMUM LENGTH 99'-0"
ICS/IRS	16	B	UNMARKED CABLE.	MAXIMUM LENGTH 99'-0"
ICS/IRS	16	B	FIBER CABLE.	MAXIMUM LENGTH 99'-0"
LCB	17	UPS	POWER CABLE: 300V.	MAXIMUM LENGTH 70'-0"
B	18	B2	PHS CABLE, POWER CABLE: 300V.	MAXIMUM LENGTH 19'-0"



ITEM	QTY	DESCRIPTION
MP	1	MAIN PANEL WITH CIRCUIT BREAKER FLUSH OR SURFACE MOUNTED.
M	1	MAIN BREAKER MUST HAVE TRIPPING DEVICE SO WHEN ANY EPO IS PRESSED, THE BREAKER TRIPS. MAIN BREAKER AMPS: 80
VOLTS PHASES NEUTRAL GROUND TOTAL WIRES		
480Y/277	3	1 1 1 5 (NOTE 1)
A	1	BREAKER AMPS: 80 (FOR LINE CONNECTION BOX "LCB" AND CT GANTRY "B")
VOLTS PHASES NEUTRAL GROUND TOTAL WIRES		
480Y/277	3	1 1 1 5 (NOTE 1)
B	1	BREAKER AMPS: 20 (FOR TRANSFORMER "XF")
VOLTS PHASES NEUTRAL GROUND TOTAL WIRES		
480	1	0 1 3
C	1	BREAKER AMPS: 25 (FOR UPS FOR SPECT "SPS")
VOLTS PHASES NEUTRAL GROUND TOTAL WIRES		
240	1	0 1 3

NOTE 1) ALL WIRES TO BE THE SAME SIZE UNLESS OTHERWISE NOTED, ALL BREAKERS WILL BE 80% RATED

XF 1 5kVA, 480V PRIMARY, 240/120V SECONDARY SINGLE-PHASE STEP-DOWN TRANSFORMER WITH SECONDARY BREAKER "C" PROTECTION FOR SPECT GANTRY "B".

EPO VARIES NOTE 1 - EPO CIRCUIT #1 MAIN CIRCUIT BREAKER EMERGENCY POWER OFF BUTTON WITH PROTECTIVE COVER THAT PREVENTS ACCIDENTAL ACTIVATION. THE EPO MUST BE OF FAIL-SAFE DESIGN. ALL EPO'S TO HAVE MECHANICAL LATCHING MECHANISM. EPO MUST BE RESET BEFORE MAIN BREAKER CAN RESUME OPERATION. CONTACTS AND WIRING CONFIGURATION TO BE DESIGNED BY ELECTRICAL ENGINEER OF RECORD.

NOTE 2 - EPO CIRCUIT #2 EPO CONTACTS TO BE NORMALLY CLOSED, WIRED IN SERIES, CONNECTED TO UPS FOR SYMBIA CAMERA SYSTEM.

NOTE 3 - EPO CIRCUIT #3 EPO CONTACTS TO BE NORMALLY CLOSED, WIRED IN SERIES, CONNECTED TO UPS FOR IMS.

THE EPO'S MUST BE INSTALLED BY A QUALIFIED ELECTRICAL CONTRACTOR ACCORDING TO NATIONAL ELECTRICAL CODE, STATE AND LOCAL REGULATIONS. MEASURES SHOULD BE TAKEN TO DESIGN THE CIRCUIT IN SUCH A WAY THAT IT WILL ALWAYS WORK WHEN THE MEDICAL EQUIPMENT IS POWERED. THE CUSTOMER IS SOLELY RESPONSIBLE FOR THE IMPLEMENTATION OF THE EPO'S AND THEIR ASSOCIATED CIRCUITS AND MUST MAKE THE FINAL DETERMINATION CONSIDERING ALL SITE CONDITIONS AND REGULATORY FACTORS.

UNLESS OTHERWISE NOTED, ALL ITEMS LISTED ON THIS SCHEDULE SHALL BE SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR.

FINISHED ROOM HEIGHT	
SYMBIA INTEVO EXCEL, INTEVO 2, INTEVO 6, INTEVO 16, INTEVO BOLD	MINIMUM 8'-0"
SYMBIA INTEVO EXCEL, INTEVO 2, INTEVO 6, INTEVO 16, INTEVO BOLD WITH CEILING MOUNTED COMPONENT OTHER THAN RADIATION ON LAMP	MINIMUM 8'-2" MAXIMUM 12'-0"

CONSIDER THE WARNING LIGHT WILL BE PLACED ON TOP OF THE PATIENT BOOM, ANY OTHER CEILING MOUNTED COMPONENT MUST BE PLACED AS TO NOT COLLIDE WITH WARNING LIGHT.

**CONDUIT LENGTH CALCULATIONS**

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

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

ASSUMED VALUES USED IN CALCULATING STATED MAXIMUM CONDUIT LENGTHS:  
 CONDUIT LENGTHS: - 10'-0"  
 FLOOR PENETRATIONS - 3'-0"

**GROUNDING NOTES**

EQUIPMENT GROUND CONDUCTOR TO COMPLY WITH THE FOLLOWING:

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

**SYMBOLS**

ALL MAY NOT APPLY

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

SYSTEM	SUPPLY VOLTAGE (VOLTS)	POWER CONSUMPTION (KVA)	SUPPLY IMPEDANCE (mΩ)	MAIN BREAKER (AMPS) "M"
SYMBIA INTEVO 6	3φ 480Y/277 ±10%	SEE BELOW	300	80

**POWER REQUIREMENTS**

SYMBIA INTEVO 6  
 POWER CONSUMPTION:  
 72.5 kVA MAXIMUM POWER CONSUMPTION  
 6.2 kVA STANDBY

NOTE: THE SPECT UNITS NEED TO BE WIRED SINGLE PHASE TO NEUTRAL WITH APPROPRIATE BREAKER AND WIRE SIZE.

IF AN ON-SITE TRANSFORMER IS REQUIRED TO OBTAIN SYMBIA INTEVO OPERATING VOLTAGE, IT MUST BE OF SUFFICIENT CAPACITY AND CHARACTERISTICS TO MAINTAIN SUPPLY VOLTAGE AND IMPEDANCE REQUIREMENTS (TRANSFORMER AND CONDUCTORS).

DO NOT CONNECT ANY EXTERNAL USERS TO THE SPECT/CT POWER LINE. FOR SYMBIA INTEVO EXCEL AND SYMBIA INTEVO 2, THE IMAGING SYSTEM IMS (ICS, IRS, AND MONITOR) MUST BE CONNECTED VIA THE UPS TO THE LCB. THE FUSE IS ALREADY INTEGRATED IN THE LCB.

AN ON/OFF SWITCH INDICATOR IS INTEGRATED IN THE LCB. A SEPARATE ON/OFF SWITCH MAY BE REQUIRED PER LOCAL CODE.

THE SCANNER AND CONTROL ROOM SHOULD BE EQUIPPED WITH AT LEAST ONE EACH EMERGENCY POWER OFF BUTTON.

**CUSTOMER SUPPLIED**

DOOR (SAFETY) SWITCH REQUIRED ON ALL DOORS ACCESSING THE EXAMINATION ROOM IN ACCORDANCE WITH LOCAL CODES.

RADIATION WARNING LIGHTS REQUIRED ON ALL DOORS ACCESSING THE EXAMINATION ROOM IN ACCORDANCE WITH FDA CODES.

EMERGENCY POWER OFF BUTTON SHOULD BE INSTALLED IN BOTH THE SCANNER AND CONTROL ROOM.

**POWER DISTRIBUTION**

TO ENSURE TROUBLE-FREE OPERATION, WE RECOMMEND THAT THE MAIN POWER LINE RUN DIRECTLY FROM THE HOUSE TRANSFORMER TO THE ON-SITE POWER DISTRIBUTOR.

THE MAIN POWER LINE SHOULD BE ROUTED DIRECTLY FROM THE ON-SITE POWER DISTRIBUTOR TO THE SYMBIA SYSTEM MAIN POWER PANEL.

**POWER QUALITY**

POOR POWER WILL ALTER EQUIPMENT PERFORMANCE

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

**NETWORK COMMUNICATION**

SIEMENS IS DEDICATED TO PROVIDING A CYBER SECURE SOLUTION TO OUR CUSTOMERS IN ORDER TO PROTECT HEALTH INFORMATION AND ENABLE UPTIME FOR SYSTEMS. AS A RESULT, ANY SIEMENS MI SPECT AND SPECT/CT COMPUTERS (IE: E-SOFT WORKSTATION, SYMBIA.NET 1ST USER, SYMBIA.NET SERVER, MWP, SYMBIA ACQUISITION WORKPLACE, ETC.) RUNNING E-SOFT OR MI APPLICATIONS AND CONNECTED AS NETWORK NODES WILL NEED THEIR USER NAME AND PASSWORD TO BE UPDATED TO MATCH THE LATEST SOFTWARE RELEASE USER NAME AND PASSWORD. THE UPDATE TO EXISTING SYSTEMS NODES TO BE DONE PRIOR TO THE NEW SYSTEM INSTALLATION. IF THE USER NAME AND PASSWORD OF THE CONNECTED NETWORK NODES ARE NOT UPDATED, THE SYSTEMS WILL BECOME LOCKED OUT.

**FLAG NOTES**

▶ MOUNT 5KVA 480/280V TRANSFORMER ABOVE CEILING.

DRAWING CROSS-REFERENCE TABLE*	
SIEMENS DRAWING#	DRAWING LOCATION (THIS SET)
E-101	E5.01
E-102	E5.02

\*WHERE THE SIEMENS INSTALLATION DRAWINGS MAKE REFERENCE TO OTHER SIEMENS DRAWINGS USE THIS CROSS-REFERENCE TABLE TO LOCATE THE SHEET WITHIN THIS SET OF DRAWINGS. A COMPLETE SET OF SIEMENS DRAWINGS ARE ALSO AVAILABLE FOR REFERENCE IN A STAND-ALONE SET.

**SIEMENS REFERENCE DRAWING**

NOTE: THIS DRAWING IS BASED ON DRAWINGS AND A DESIGN PREPARED BY SIEMENS. ALL WORK INDICATED TO BE BY CONTRACTOR IS PART OF THIS CONTRACT. COORDINATE WITH THE GC TO CONFIRM TRADE RESPONSIBILITY.

**City of Puyallup**  
 Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic



**City of Puyallup**  
Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

PANEL SCHEDULE													
PANEL: <b>4E3PCTA</b>		LOCATION:		VOLTS: 480 Y/ 277 P 3				W: 4		MOUNT: <input checked="" type="checkbox"/> SURFACE <input type="checkbox"/> FLUSH			
AMP: 800 MLO <input type="checkbox"/> MCB <input checked="" type="checkbox"/>		AIC RATING: 10,000				NEUTRAL: 100%				FED FROM:			
TYPE: EXISTING <input checked="" type="checkbox"/> NEW <input type="checkbox"/>		STYLE:											
CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	F	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION	
X-RAY CT SCAN 1 ROOM 361	MISC	15.00	125	3	1	A	2	3	110	5.00	MISC	X-RAY DIGITAL RAD RM M384	
X-RAY CT SCAN 1 ROOM 361	MISC	15.00	-	-	3	B	4	-	-	5.00	MISC	X-RAY DIGITAL RAD RM M384	
X-RAY CT SCAN 1 ROOM 361	MISC	15.00	-	-	5	C	6	-	-	5.00	MISC	X-RAY DIGITAL RAD RM M384	
X-RAY INTERVENTIONAL RAD 1 RM M336	MISC	5.00	110	3	7	A	8	3	125	-	SPARE		
X-RAY INTERVENTIONAL RAD 1 RM M336	MISC	5.00	-	-	9	B	10	-	-	-	SPARE		
X-RAY INTERVENTIONAL RAD 1 RM M336	MISC	5.00	-	-	11	C	12	-	-	-	SPARE		
X-RAY CATH 1 RM M333	MISC	4.67	100	3	13	A	14	3	30	-	MISC	TVSS	
X-RAY CATH 1 RM M333	MISC	4.67	-	-	15	B	16	-	-	-	MISC	TVSS	
X-RAY CATH 1 RM M333	MISC	4.67	-	-	17	C	18	-	-	-	MISC	TVSS	
X-RAY INTERVENTIONAL RAD 2 RM M337	MISC	4.67	100	3	19	A	20	1	20	-	SPARE		
X-RAY INTERVENTIONAL RAD 2 RM M337	MISC	4.67	-	-	21	B	22	1	20	-	SPARE		
X-RAY INTERVENTIONAL RAD 2 RM M337	MISC	4.67	-	-	23	C	24	1	20	-	SPARE		
X-RAY CATH 2 RM M332	MISC	4.17	80	3	25	A	26	3	80	2.42	MISC	NUC MEDICINE CT SCAN - ROOM 341	
X-RAY CATH 2 RM M332	MISC	4.17	-	-	27	B	28	-	-	2.42	MISC		
X-RAY CATH 2 RM M332	MISC	4.17	-	-	29	C	30	-	-	2.42	MISC		
X-RAY CATH 2 RM M332	MISC	4.17	-	-	31	A	32	3	225	47.17	MISC	CT SCAN #2 - ROOM M362	
SPACE					33	B	34	-	-	47.17	MISC		
SPACE					35	C	36	-	-	47.17	MISC		
SPACE					37	A	38	-	-	-	SPACE		
SPACE					39	B	40	-	-	-	SPACE		
SPACE					41	C	42	-	-	-	SPACE		

LOAD DESCRIPTION	LOAD TYPE	CONNECTED	CALCULATED DEMAND
LIGHTING	LTG	0.00 KVA	0.00 KVA (125%)
HOSPITAL LIGHTING	HLTG	0.00 KVA	0.00 KVA ( 40%<50KVA, 20% REST)
HOSPITAL RECEIPT	HREC	0.00 KVA	0.00 KVA ( 40%<50KVA, 20% REST)
LARGEST MOTOR		0.00 KVA	0.00 KVA (125%)
REMAINING MOTORS	MTR	0.00 KVA	0.00 KVA (100%)
GEN PURPOSE RECPT	REC	0.00 KVA	0.00 KVA ( 50% > 10KVA)
COMPUTER RECPT	COMP	0.00 KVA	0.00 KVA (100%)
EQUIP / OTHER CONTINUOUS	MISC	264.25 KVA	264.25 KVA (100%)
HEATING	HTG	0.00 KVA	0.00 KVA (100%)
ELEVATOR	ELEV	0.00 KVA	0.00 KVA @ 100%
KITCHEN EQPT	KIT	0.00 KVA	0.00 KVA @ 65%
<b>TOTALS</b>		264.25 KVA	264.25 KVA
		317.84 AMPS	317.84 AMPS
<b>FEEDER / OCP BASED CAPACITY:</b>		665.11 KVA	800.0A <= FEEDER OR OCP CAPACITY*

CONNECTED PHASE LOADING	
PHASE A:	88.08 KVA
PHASE B:	88.08 KVA
PHASE C:	88.08 KVA
<b>Total Connected Load =</b>	264.25 <= includes double lug loads
<b>Load Checker Total =</b>	264.25 <= includes double lug loads

CAPACITY	
USED	AVAIL
264.25	665.108
317.84	800.0A

**NOTES:**

- 1 IMAGING LOAD IS 50% OF MOMENTARY LOAD
- 2 CIRCUITS GROUPS WITH SHARED NEUTRALS SHALL BE PROVIDED WITH MULTI-POLE BREAKERS OR WITH MULTIPLE SINGLE POLE BREAKERS AND HANDLE TIES PER NEC 210.4(B). FIELD VERIFY HANDLE-TIE LOCATIONS.
- 3 PROVIDE NEW BREAKER AS INDICATED.
- 4 IMAGING LOAD IS 25% OF MOMENTARY LOAD
- 5 IMAGING LOAD IS 10% OF MOMENTARY LOAD

PANEL SCHEDULE													
PANEL: <b>2C3PCTF</b>		LOCATION:		VOLTS: 208 Y/ 120 P 3				W: 4		MOUNT: <input type="checkbox"/> SURFACE <input checked="" type="checkbox"/> FLUSH			
AMP: 400 MLO <input checked="" type="checkbox"/> MCB <input type="checkbox"/>		AIC RATING: 22,000				NEUTRAL: 100%				FED FROM: WEST RISER ECB #3A			
TYPE: EXISTING <input checked="" type="checkbox"/> NEW <input type="checkbox"/>		STYLE:											
CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	F	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION	
EQUIP M335.3 PHYS WORK RM PRINTER	MISC	1.00	20	1	1	A	2	1	20	1.20	LTG	LIGHTING LEVEL 3 RADIOLOGY	
REC M335.3 PHYS WORK RM	REC	1.08	20	1	3	B	4	1	20	1.20	LTG	LIGHTING LEVEL 3 RADIOLOGY CONTROL	
EQUIP M335.3 PHYS WORK RM PRINTER	MISC	1.00	20	1	5	C	6	1	20	1.20	LTG	LIGHTING LEVEL 3 RADIOLOGY	
EQUIP M332.3 STOR BLANKET WARMER	MISC	1.00	20	1	7	A	8	1	20	1.20	LTG	LIGHTING LEVEL 3 PAC	
EQUIP M336.1	MISC	1.00	20	1	9	B	10	1	20	1.20	LTG	LIGHTING LEVEL 3 PAC	
REC M336.1 CONTROL	REC	1.08	20	1	11	C	12	1	20	1.20	LTG	LIGHTING LEVEL 3 ECHO	
EQUIP M343.1 COMP/DATA COPIER	MISC	1.00	20	1	13	A	14	1	20	1.20	LTG	LIGHTING LEVEL 3 CT SCAN 1 RM M361	
REC M361 CONTROL	REC	0.72	20	1	15	B	16	1	20	1.00	MISC	EQUIP M333 CATH 1 BOOM	
EQUIP M343.1 COMP/DATA PRINTER	MISC	1.00	20	1	17	C	18	1	20	1.00	MISC	EQUIP M333 CATH 1 BOOM	
EQUIP M343.1 COMP/DATA COPY/FAX	MISC	1.00	20	1	19	A	20	1	20	1.00	MISC	EQUIP M333 CATH 2 BOOM	
REC M343.1 COMP/DATA	REC	1.08	20	1	21	B	22	1	20	1.00	MISC	EQUIP M333 CATH 2 BOOM	
LIGHTING LEVEL 3 CATH 1 RM M333.1	LTG	1.20	20	1	23	C	24	1	20	1.00	MISC	EQUIP M332 CATH 2 FLOOR AND CRASH CART	
LIGHTING LEVEL 3 CATH 1 RM M333.1	LTG	1.20	20	1	25	A	26	1	20	1.08	REC	REC M332 CATH 2 FLOOR & WALL	
LIGHTING LEVEL 3 CATH 2 RM M333.1	LTG	1.20	20	1	27	B	28	1	20	1.08	REC	REC M338.1 HOLDING	
LIGHTING LEVEL 3 CATH 2 RM M333.1	LTG	1.20	20	1	29	C	30	1	20	1.00	MISC	EQUIP DDC/BMS PWR SUPPLY W ELEC RM	
RM M336 TOMBSTONE	MISC	1.00	20	1	31	A	32	1	20	1.00	MISC	EQUIP LEVEL 4 CONTROLLER	
RM M336 TOMBSTONE	MISC	1.00	20	1	33	B	34	1	20	1.00	MISC	EQUIP DDC/BMS PWR SUPPLY W ELEC RM	
AUTO DOOR RM 343 NUC MED	MISC	1.20	20	1	35	C	36	1	20	-	SPARE		
SHUNT TRIP	MISC	0.10	20	1	37	A	38	1	20	-	SPARE		
SPARE					39	B	40	1	20	1.00	MISC	EQUIP M332 CATH 2 LASER	
SPARE					41	C	42	1	20	1.00	MISC	EQUIP M332 CATH 2 LASER	

LOAD DESCRIPTION	LOAD TYPE	CONNECTED	CALCULATED DEMAND
LIGHTING	LTG	13.20 KVA	16.50 KVA (125%)
HOSPITAL LIGHTING	HLTG	0.00 KVA	0.00 KVA ( 40%<50KVA, 20% REST)
HOSPITAL RECEIPT	HREC	0.00 KVA	0.00 KVA ( 40%<50KVA, 20% REST)
LARGEST MOTOR		0.00 KVA	0.00 KVA (125%)
REMAINING MOTORS	MTR	0.00 KVA	0.00 KVA (100%)
GEN PURPOSE RECPT	REC	6.12 KVA	6.12 KVA ( 50% > 10KVA)
COMPUTER RECPT	COMP	0.00 KVA	0.00 KVA (100%)
EQUIP / OTHER CONTINUOUS	MISC	20.30 KVA	20.30 KVA (100%)
HEATING	HTG	0.00 KVA	0.00 KVA (100%)
ELEVATOR	ELEV	0.00 KVA	0.00 KVA @ 100%
KITCHEN EQPT	KIT	0.00 KVA	0.00 KVA @ 65%
<b>TOTALS</b>		39.62 KVA	42.92 KVA
		109.97 AMPS	119.13 AMPS
<b>FEEDER / OCP BASED CAPACITY:</b>		144.11 KVA	400.0A <= FEEDER OR OCP CAPACITY*

CONNECTED PHASE LOADING	
PHASE A:	12.98 KVA
PHASE B:	13.56 KVA
PHASE C:	13.08 KVA
<b>Total Connected Load =</b>	39.62 <= includes double lug loads
<b>Load Checker Total =</b>	39.62 <= includes double lug loads

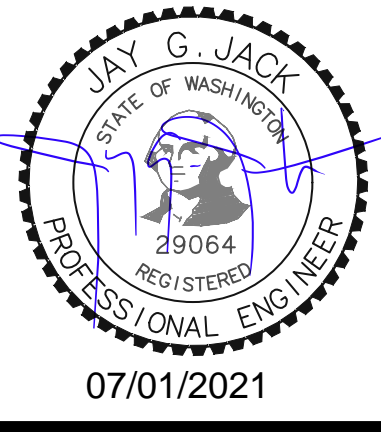
  

CAPACITY	
USED	AVAIL
42.92	144.107
119.1A	400.0A

**NOTES:**

- 1 CIRCUITS GROUPS WITH SHARED NEUTRALS SHALL BE PROVIDED WITH MULTI-POLE BREAKERS OR WITH MULTIPLE SINGLE POLE BREAKERS AND HANDLE TIES PER NEC 210.4(B). FIELD VERIFY HANDLE-TIE LOCATIONS.

**RECORD DRAWINGS:**  
NOTE: THIS RECORD DRAWING HAS BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE DESIGN PROFESSIONAL CANNOT BE ASSURED OF ITS ACCURACY, AND THIS CANNOT BE RESPONSIBLE FOR THE ACCURACY OF THIS RECORD DRAWING OR FOR ANY ERROR OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO IT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.



07/01/2021



ISSUE DATE: 07.02.21

REVISIONS:



**City of Puyallup**  
**Development & Permitting Services**  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

**MULTICARE - GOOD SAMARITAN HOSPITAL**  
**LOAD SUMMARY - EMERGENCY POWER**

**LOAD SUMMARY: EQUIP DIST. SWBD 4EAPCTA**

Meter Point#	ATS	Location	Panel Fed	Voltage	Amp Rating	Metering Date*	Metered Demand Amps	Metered Demand kW	PF Adjustment	Metered kVA	Seasonal Adjustment Factor (SAF)	NEC Demand Factor	kVA Demand	New Load Added After Metering Date	Total Demand Load	Demand Amps	Notes:
	N/A	Daily Tower	4EAPCTB	480V	800A						1.00	1.25	0KVA		.0KVA	0A	
	N/A	Daily Tower	Z1 RISER	480V	1000A						1.00	1.25	0KVA	155.5KVA	155.5KVA	187A	NEW IMAGING LOAD. SEE 4E3PCTA PANEL, PLUS ADD 10% OF NEW 140KVA UNIT (1ST FLOOR)
	N/A	Daily Tower	4E8PCTB	480V	800A						1.00	1.25	0KVA		.0KVA	0A	
MP6	N/A	Daily Tower	2EAPCTA	480V	175A	8/12/18	25.50A			21.2KVA	1.00	1.25	26.5KVA		26.5KVA	32A	
	N/A	Daily Tower	2EAPCTB	480V	175A						1.00	1.25	0KVA		.0KVA	0A	
	N/A	Daily Tower	2EAPCTA	480V	175A						1.00	1.25	0KVA		.0KVA	0A	
	N/A	Daily Tower	2EAPCTC	480V	175A						1.00	1.25	0KVA		.0KVA	0A	
MP5		EQUIP DIST. SWBD 4EAPCTA	4EAPCTA	480V	4000A	6/4/18		384.0KW	0.90	426.7KVA	1.00	1.25	533.3KVA	155.5KVA	688.8KVA	829A	

**LOAD SUMMARY: EMERG DIST SWGR E1**

Meter Point#	ATS	Location	Panel Fed	Voltage	Amp Rating	Metering Date*	Metered Demand Amps	Metered Demand kW	PF Adjustment	Metered kVA	Seasonal Adjustment Factor (SAF)	NEC Demand Factor	kVA Demand	New Load Added After Metering Date	Total Demand Load	Demand Amps	Notes:
MP7	ATS-Y1	Daily Tower	4CAPCTA	480V	1200A	8/1/19		152.0KW	0.90	168.9KVA	1.00	1.25	211.1KVA	1.8KVA	212.9KVA	256A	NEW LOAD IS FROM 2C3PCTA
MP8	ATS-X	Daily Tower	4LAPCTA	480V	600A	6/6/18		42.0KW	0.90	46.7KVA	1.00	1.25	58.3KVA		58.3KVA	70A	
MP9	ATS-Z2	Daily Tower	4EAPCTA	480V	3000A	6/27/18		218.0KW	0.90	242.2KVA	1.00	1.25	302.8KVA		302.8KVA	364A	
	N/A	Daily Tower	SWGR E2	480V	2000A						1.00	1.25	0KVA		.0KVA	0A	
MP3		EMERG DIST SWGR E1	5HDSB	480V	4000A								572.2KVA	1.8KVA	574.0KVA	690A	

**LOAD SUMMARY: EMERG DIST SWGR E2**

Meter Point#	ATS	Location	Panel Fed	Voltage	Amp Rating	Metering Date*	Metered Demand Amps	Metered Demand kW	PF Adjustment	Metered kVA	Seasonal Adjustment Factor (SAF)	NEC Demand Factor	kVA Demand	New Load Added After Metering Date	Total Demand Load	Demand Amps	Notes:
	FIRE PUMP	Daily Tower	FIRE PUMPS	480V	1600A						1.00	1.25	79.8KVA		79.8KVA	96A	75HP Fire Pump
MP3	ATS-Y2	Daily Tower	4CAPCTB	480V	1200A	6/13/18		68.0KW	0.90	75.6KVA	1.00	1.25	94.4KVA		94.4KVA	114A	NEW LOAD IS FROM 2C1PCTF
MP5	ATS-Z1	Daily Tower	4EAPCTA	480V	2000A	6/4/18		384.0KW	0.90	426.7KVA	1.00	1.25	533.3KVA	155.5KVA	688.8KVA	829A	
MP10	ATS-ELEV	Daily Tower	4EAPCTD	480V	600A	6/8/18		125.0KW	0.90	138.9KVA	1.00	1.25	173.8KVA		173.8KVA	209A	
MP11	ATS-PKG	Daily Tower	PARKING	480V	400A	6/24/18	6.24A			5.2KVA	1.00	1.25	6.5KVA		6.5KVA	8A	
N/A		EMERG DIST SWGR E2	SWGR E2	480V	4000A						1.00	1.25	887.7KVA	155.5KVA	1,043.2KVA	1255A	

**LOAD SUMMARY: EMERG DIST MV SWGR PMVS-A/B**

Meter Point#	ATS	Location	Panel Fed	Voltage	Amp Rating	Metering Date*	Metered Demand Amps	Metered Demand kW	PF Adjustment	Metered kVA	Seasonal Adjustment Factor (SAF)	NEC Demand Factor	kVA Demand	New Load Added After Metering Date	Total Demand Load	Demand Amps	Notes:
	ATS-PS#12	Central Plant	PAD SW#12	12470V	600A												Optional Standby loads on Load Shed System
	N/A	Central Plant	SWGR E1	12470V	300A						1.00	1.25	572.2KVA	1.8KVA	574.0KVA	27A	
	N/A	Central Plant	SWGR E2	12470V	300A						1.00	1.25	887.7KVA	155.5KVA	1,043.2KVA	48A	
	N/A	Central Plant	4GEN-2CLUP	12470V	150A						1.00	1.25	2,500.0KVA		2,500.0KVA	116A	Metering not available. Load = Transf rating
MP11		EMERG DIST MV SWGR PMVS-A/B	PMVS-A/B	12470V	1200A	January, 2019*	36.72A			793.0KVA	1.00	1.25	3,959.9KVA	157.3KVA	4,117.2KVA	191A	System Capacity is 5,000KVA

RECORD DRAWINGS:  
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**JAY G. JACKSON**  
 STATE OF WASHINGTON  
 39064  
 REGISTERED PROFESSIONAL ENGINEER  
 07/01/2021

**SPECT/CT REPLACEMENT**  
 Multicare Good Samaritan Hospital  
 401 15th Ave. SE, Puyallup WA 98372



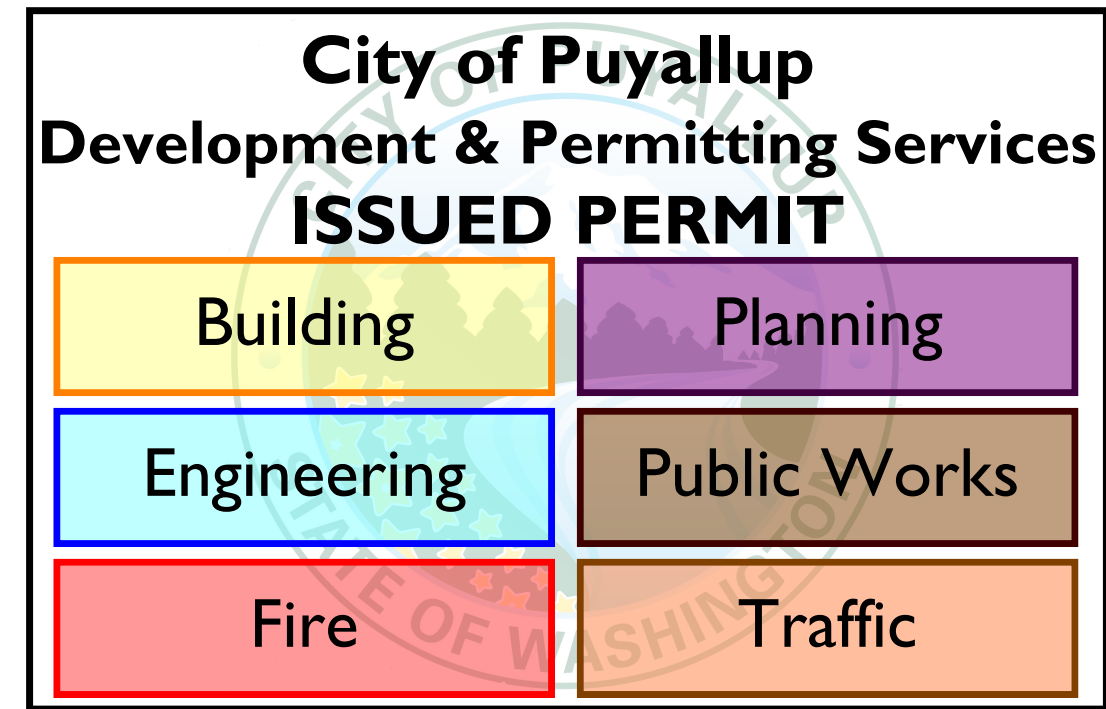
ISSUE DATE: 07.02.21  
 REVISIONS:

LOAD SUMMARY  
 EMERGENCY POWER

**E6.02**

**B-21-0829**





**MULTICARE GOOD SAMARITAN HOSPITAL  
LOAD SUMMARY - NORMAL POWER**

**PRIMARY FEEDER**

Meter Point#	ATS	Location	Panel Fed	Voltage	Amp Rating	Metering Date*	Metered Demand Amps	Metered Demand kW	PF Adjustment	Metered KVA	NEC Demand Factor	KVA Demand	New Load Added After Metering Date	Total Demand Load	Demand Amps	Notes:
N/A		TRANSF TNPCT1	4NAPCTA	12470V	200A						1.25	0KVA	1.8KVA	1,986.7KVA	92A	
MP-1		TRANSF TNPCT2	4NAPCTB	12470V	200A	6/6/18		445.0KW	0.90	494.4KVA	1.25	618.1KVA	155.5KVA	773.6KVA	36A	
	N/A	PRIMARY FEEDER	1HUSSA/B	12470V	200A									2,760.3KVA	128A	

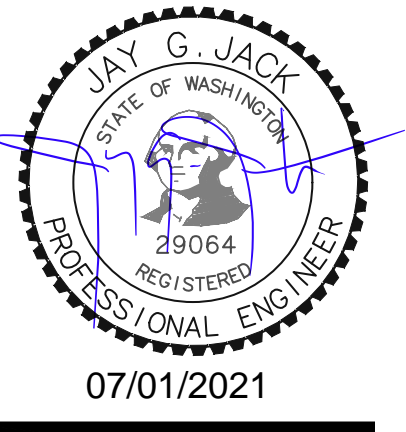
**NORMAL SWGR 4NAPCTA - DALLY TOWER**

Meter Point#	ATS	Location	Panel Fed	Voltage	Amp Rating	Metering Date*	Metered Demand Amps	Metered Demand kW	PF Adjustment	Metered KVA	NEC Demand Factor	KVA Demand	New Load Added After Metering Date	Total Demand Load	Demand Amps	Notes:
N/A	N/A	Dally Tower	CNTR RISER-2	480V	500A					.0KVA	1.25	0KVA		415.5KVA	500A	LOAD IS WORST CASE (MAXBUS CAPACITY)
N/A	N/A	Dally Tower	CNTR RISER-1	480V	1200A					.0KVA	1.25	0KVA		997.2KVA	1199A	LOAD IS WORST CASE (MAXBUS CAPACITY)
MP7	ATS-Y1	Dally Tower	SWBD 4CAPCTA	480V	1200A	6/1/18		152.0KW	0.90	168.9KVA	1.25	211.1KVA	1.8KVA	212.9KVA	256A	
MP8	ATS-X	Dally Tower	SWBD 4LAPCTA	480V	600A	6/6/18		42.0KW	0.90	46.7KVA	1.25	58.3KVA		58.3KVA	70A	
MP9	ATS-Z2	Dally Tower	SWBD 4EAPCTA	480V	3000A	6/27/18		218.0KW	0.90	242.2KVA	1.25	302.8KVA		302.8KVA	364A	
		NORMAL SWGR 4NAPCTA - DALLY TOWER	4NAPCTA	480V	4000A								1.8KVA	1,986.7KVA	2390A	

**NORMAL SWGR 4NAPCTB - DALLY TOWER**

Meter Point#	ATS	Location	Panel Fed	Voltage	Amp Rating	Metering Date*	Metered Demand Amps	Metered Demand kW	PF Adjustment	Metered KVA	NEC Demand Factor	KVA Demand	New Load Added After Metering Date	Total Demand Load	Demand Amps	Notes:
MP2	N/A	Dally Tower	E. NORMAL RSR	480V	500A	7/30/18	124.44A		0.90	103.5KVA	1.25	129.3KVA		129.3KVA	156A	
MP3	ATS-Y2	Dally Tower	SWBD 4CAPCTB	480V	1200A	6/13/18		68.0KW	0.90	75.6KVA	1.25	94.4KVA		94.4KVA	114A	
MP6	ATS-Z1	Dally Tower	SWGR 4EAPCTA	480V	2000A	6/4/18		384.0KW	0.90	426.7KVA	1.25	533.3KVA	155.5KVA	688.8KVA	829A	
N/A	N/A	Dally Tower	W. NORMAL RSR	480V	800A				0.90	.0KVA	1.25	0KVA		664.8KVA	800A	LOAD IS WORST CASE (MAXBUS CAPACITY)
MP11	ATS-PARK	Parking Garage	4LIPSJA	480V	400A	8/24/18		6.24A	0.90	5.2KVA	1.25	6.5KVA		6.5KVA	8A	
N/A	N/A	Dally Tower	4NAPCTD	480V	100A				0.90	.0KVA	1.25	0KVA		83.1KVA	100A	LOAD IS WORST CASE (MAXBUS CAPACITY)
MP10	ATS-ELEV	Dally Tower	SWBD 4EAPCTD	480V	600A	6/6/18		125.0KW	0.90	138.9KVA	1.25	173.6KVA		173.6KVA	209A	0
N/A	FPI/FP2	Dally Tower	FIRE PUMP 75HP	480V	1600A					.0KVA	1.25	79.8KVA		79.8KVA	96A	
MP1		NORMAL SWGR 4NAPCTB - DALLY TOWER	4NAPCTB	480V	4000A	6/6/18		445.0KW	0.90	494.4KVA	1.25	618.1KVA	155.5KVA	773.6KVA	930A	

\*METERING DATA INDICATED BY KW IS FROM OWNER'S SYSTEM-INTEGRATED POWER MONITORING SYSTEM. AMP READINGS ARE 30-DAY RECORDINGS. ALL ARE DEEMED VALID BY THE EOR.



ISSUE DATE: 07.02.2  
REVISIONS:

RECORD DRAWINGS:  
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LOAD SUMMARY -  
NORMAL POWER

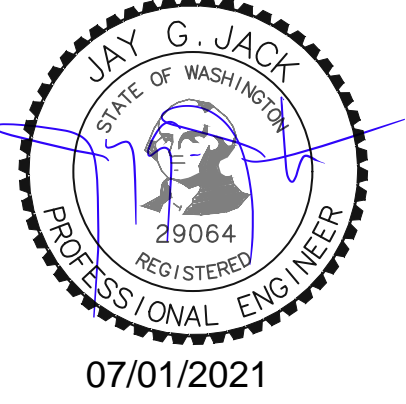
**E6.03**

**B-21-0829**



**City of Puyallup**  
**Development & Permitting Services**  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic



**SPECT/CT REPLACEMENT**  
 Multicare Good Samaritan Hospital  
 401 15th Ave. SE, Puyallup WA 98372



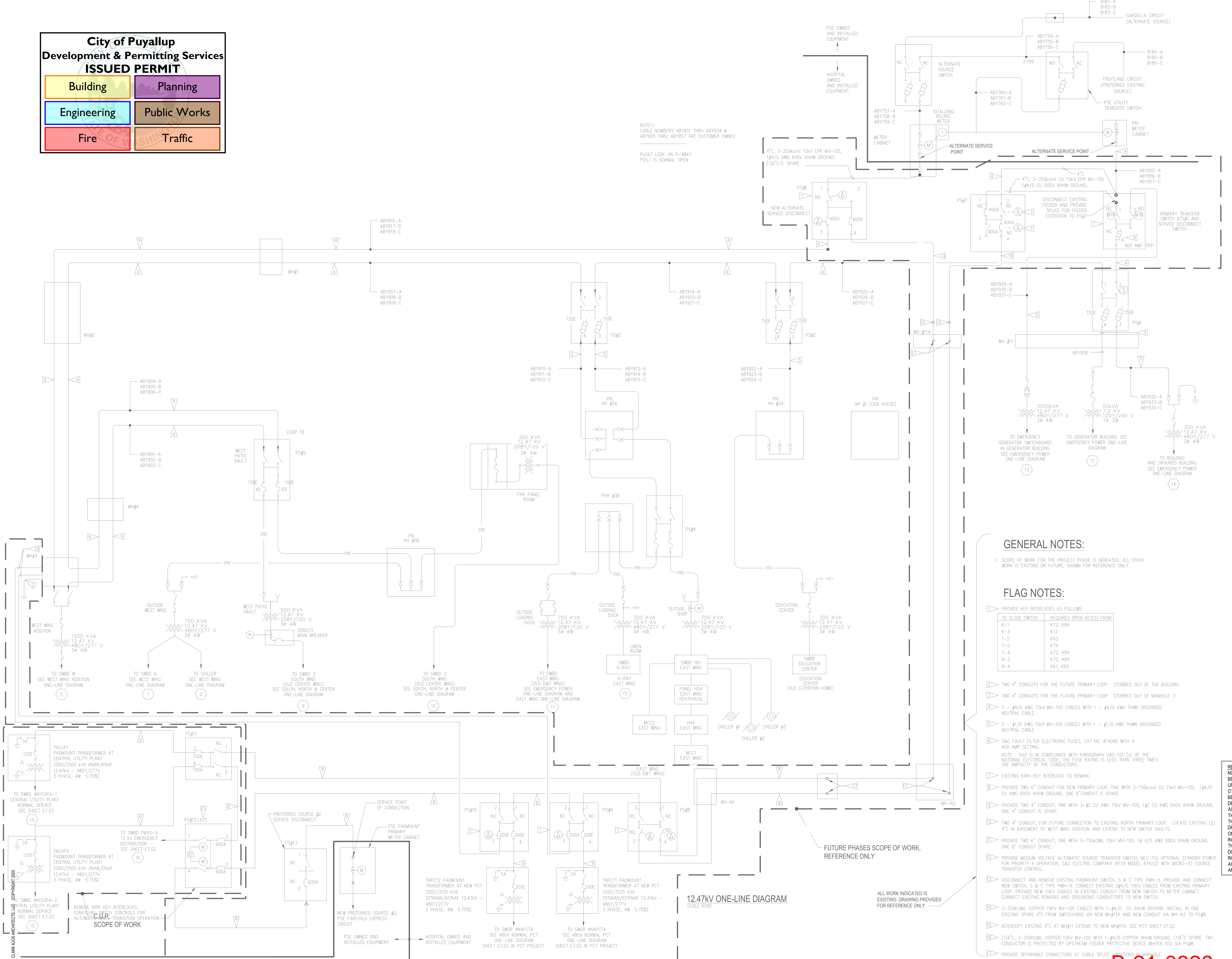
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ONE-LINE DIAGRAM

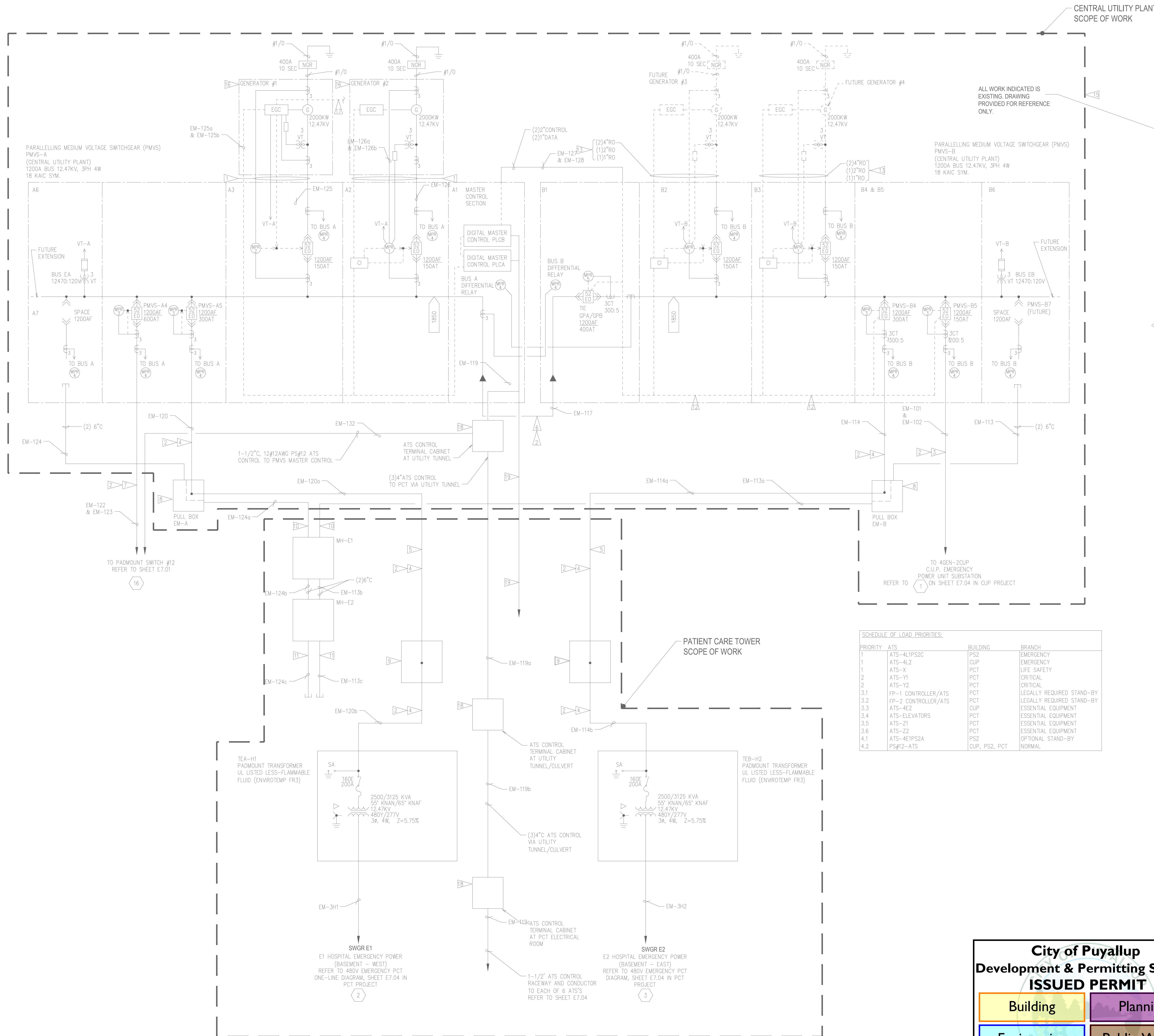
**E7.01**



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**B-21-0829**





- GENERAL NOTES**
- SCOPE OF WORK FOR THE PROJECT PHASE IS INDICATED. ALL OTHER IS EXISTING OR FUTURE, SHOWN FOR REFERENCE ONLY.
- FLAG NOTES**
- PROVIDE (1) 4"R, 3-#2 CU AWG 15KV MV-105, 1-#2 AWG CU 600V XHHW GROUND (POWER) (1) 4" RO SPARE, (1) 2" RO FOR CONTROL, (1) 1" RO FOR DATA ROUTED WITH GENERATOR POWER FEEDER.
  - PROVIDE SPARE RACEWAY SAME SIZE AS FOR FEEDER, ROUTED WITH THE FEEDER RACEWAY.
  - (1) 4"R, 3-#2 AWG 15KV CU MV-105, 1-#2 AWG, 600V CU XHHW GROUND.
  - (1) 6"R, 3-#4/0 AWG 15KV AL MV-105, 1#4/0 CU AWG, 600V AL XHHW GROUND.
  - FEEDER ROUTED FROM CUP SWITCHGEAR TO PATIENT CARE TOWER VIA UTILITY TUNNEL. PROVIDE PULL BOXES AND CONDUIT IN UTILITY TUNNEL FOR FEEDER TRANSITION FROM UNDERGROUND TO TUNNEL INSTALLATION.
  - SWITCHGEAR TIE FEEDER, (1) 6"R, 3#350cmil 15kv AL MV-105, 1#350cmil 600V AL XHHW GROUND, (1) 6" RO (SPARE).
  - EMERGENCY TO NORMAL FEEDER FOR OPTIONAL SERVICE TO SOUTH 12.47KV NORMAL POWER SYSTEM, (1) 6"R, 3#750cmil AL 15KV MV-105, 1#4/0 AWG CU 600V XHHW GROUND.
  - PROVIDE PULL BOX 72"H x 80"W x 18"D NEMA 3 WITH HINGED COVERS FOR FEEDER IN UTILITY TUNNEL AT CENTRAL PLANT. PROVIDE BARRIERS IN PULLBOX TO SEPARATE THE CIRCUITS.
  - PROVIDE PULL BOX FOR 12470 VOLT EMERGENCY FEEDERS TO PCT TRANSFORMERS. PULLBOX LOCATED IN UTILITY TUNNEL AT TUNNEL/CULVERT SWITCH VAULT AREA. REFER TO SHEET E1.01. PROVIDE WATER TIGHT CONDUIT FITTINGS AND SEALS FOR CONDUIT PENETRATIONS INTO UTILITY TUNNEL.
  - (2) 6" C TO SITE VIA UTILITY TUNNEL FOR FUTURE PHASES 12.47KV EMERGENCY POWER SERVICE.
  - (2) 6" C RUN EAST TO NEAR MH-N3 FOR FUTURE SERVICE TO FUTURE PHASES 12.47KV EMERGENCY POWER SERVICE. REFER TO SHEET E1.02.
  - PROVIDE GENERATOR SWITCHGEAR SECTION WITH INTERCONNECTING WIRING, TERMINALS AND CONNECTIONS READY FOR FUTURE GENERATOR OPERATION.
  - CONDUITS TO 5 FEET OUTSIDE NORTH BUILDING FOUNDATION AND CAPPED FOR FUTURE USE.
  - PROVIDE KEY INTERLOCKS TO ALLOW ONLY THREE OUT OF FOUR MAIN AND TIE BREAKERS CLOSED AT ANY TIME. A CLOSED CIRCUIT BREAKER MUST BE OPENED TO TRANSFER A KEY TO ANOTHER OPEN CIRCUIT BREAKER.
  - THIS DRAWING AMENDS AND SUPERCEDES DRAWING ISSUED WITH SWITCHGEAR AND GENERATOR PRE-PURCHASE PACKAGE.
  - RELAYING AND GENERATOR CONTROLS VARY WITH GENERATOR MANUFACTURER, TWO ACCEPTABLE CONCEPTS ARE INDICATED IN A2 AND A3. IN A2 THE EGC HAS ALL THE FUNCTIONALITY OF MPR1, EXCEPT 87C. B2 AND B3 SHALL MATCH SELECTED CONCEPT.
  - PERMISSIVE PARALLELING EXTENDED TO EACH EGC.
  - PROVIDE TERMINAL CABINET 36"H x 48"W x 12"D NEMA 3 WITH HINGED COVER.
  - 1" ATS CONTROL RACEWAY AND CONDUCTOR VIA UTILITY TUNNEL/CULVERT TO EACH OF 2 FIRE PUMP ATS/CONTROLLERS. REFER TO SHEET E7.04.

**SCHEDULE OF LOAD PRIORITIES:**

PRIORITY	ATS	BUILDING	BRANCH
1	ATS-4L1PS2C	PS2	EMERGENCY
1	ATS-4L2	CUP	EMERGENCY
1	ATS-X	PCT	LIFE SAFETY
2	ATS-Y1	PCT	CRITICAL
2	ATS-Y2	PCT	CRITICAL
3.1	FP-1 CONTROLLER/ATS	PCT	LEGALLY REQUIRED STAND-BY
3.2	FP-2 CONTROLLER/ATS	PCT	LEGALLY REQUIRED STAND-BY
3.3	ATS-4E2	CUP	ESSENTIAL EQUIPMENT
3.4	ATS-ELEVATORS	PCT	ESSENTIAL EQUIPMENT
3.5	ATS-Z1	PCT	ESSENTIAL EQUIPMENT
3.6	ATS-Z2	PCT	ESSENTIAL EQUIPMENT
4.1	ATS-4E1PS2A	PS2	OPTIONAL STAND-BY
4.2	PS#12-ATS	CUP, PS2, PCT	NORMAL

**PRIMARY EMERGENCY ONE-LINE DIAGRAM**  
SCALE: NONE

**City of Puyallup**  
Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

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**SPECT/CT REPLACEMENT**  
Multicare Good Samaritan Hospital  
401 15th Ave. SE, Puyallup WA 98372



ISSUE DATE: 07.02.21  
REVISIONS:

CONSTRUCTION DOCUMENTS

480V NORMAL PCT ONE-LINE DIAGRAM

**E7.03**

B-21-0829

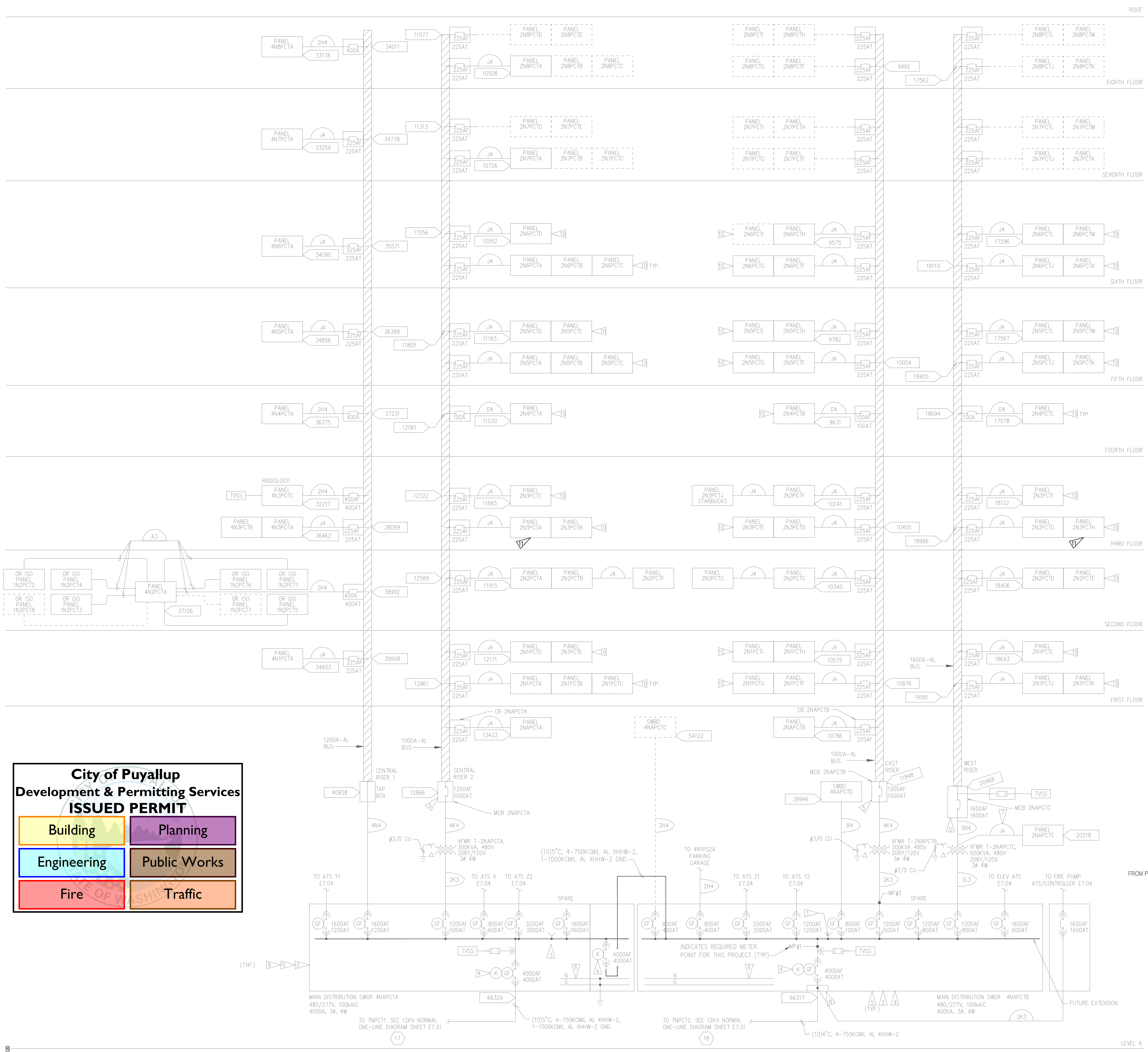
FEEDER SCHEDULE			
FEEDER NO.	ALUMINUM CONDUCTORS		AMPACITY
	CONDUIT	WIRE	
D3	1-1/2"	3 - #1/0, 1 #6 G.	120
D4	1 1/2"	4 - #1/0, 1 #6 G.	120
E3	1 1/2"	3 - #2/0, 1 #4 G.	135
F3	2"	3 - #3/0, 1 #4 G.	155
F4	2"	4 - #3/0, 1 #4 G.	155
G3	2"	3 - #4/0, 1 #4 G.	180
J4	3"	4-300kcmil, 1 #2 G.	230
J3	2-1/2"	3-300kcmil, 1 #2 G.	230
K4	3"	4-350kcmil, 1 #2 G.	250
K3	3"	3-350kcmil, 1 #2 G.	250
N3	3-1/2"	3-600kcmil, 1 #1 G.	340
2H4	(2) 3"	4-250kcmil, 1 #1 G. EA.	410
2K3	(2) 3"	3-350kcmil, 1 #1/0 G. EA.	500
2M4	(2) 3-1/2"	4-500kcmil, 1 #3/0 G. EA.	620
3L4	(3) 3-1/2"	4-400kcmil, 1 #3/0 G. EA.	810
3L3	(3) 3"	3-400kcmil, 1 #3/0 G. EA.	810
4K4	(4) 3"	4-350kcmil, 1 #4/0 G. EA.	1000
4N4	(4) 4"	4-600kcmil, 1 #350 G. EA.	1360
5N4	(5) 4"	4-600kcmil, 1 #400 G. EA.	1700
6N4	(6) 4"	4-600kcmil, 1 #600 G. EA.	2040
8P4	(8) 4"	4-750kcmil, 1 #750 G. EA.	3080

FEEDER SCHEDULE			
FEEDER NO.	COPPER CONDUCTORS		AMPACITY NOTE 2
	CONDUIT	WIRE	
A4	1 1/4"	4 - #4, 1#8 G.	85
A3	1"	3 - #4, 1#8 G.	85
B4	1 1/4"	4 - #2, 1 #6 G.	115
B3	1 1/4"	3 - #2, 1 #6 G.	115
C5	2"	3 - #1, 2#1/0 N, 1#6 G.	120
C4	1 1/2"	4 - #1, 1 #6 G.	130
C3	1 1/2"	3 - #1, 1 #6 G.	130

- SCHEDULE NOTES:
- CONDUIT SIZING BASED ON RIGID GALVANIZED STEEL OR PVC SCH. 40 CONDUIT AND WIRE TYPE THHN/THWN-2 OR XHHW WIRE, TAKING INTO ACCOUNT BOTH CONDUIT FILL AND JAMB RATIO. CONFIRM CONDUIT FILL AND JAMB RATIOS FOR FEEDER CONFIGURATIONS OTHER THAN THOSE SHOWN.
  - AMPACITIES LISTED ARE BASED ON THE FOLLOWING TAKEN FROM TABLE 310-16.
    - A. 75° RATING FOR 3W AND 4W FEEDERS.
    - B. 90° RATING FOR 5W FEEDERS DE-RATED TO 80% WHERE PREDOMINANTLY HARMONIC CURRENTS ARE PRESENT. NEUTRALS ≥ #1/0 ARE PARALLELED ON 5W FEEDERS.
  - INCREASE RACEWAY SIZE FOR OTHER TYPES OF RACEWAYS AND DIFFICULT OR LONG PULLS.
  - GROUND WIRE SIZE INCREASED FOR PARALLEL CONDUCTOR RUNS PER NEC TABLE 250-122.

- FLAG NOTES:
- NOT USED
  - PROVIDE METERING ON ALL CIRCUIT BREAKERS IN SWITCHGEAR
  - 1600A SPACE, QUANTITY 2
  - PROVIDE KEY INTERLOCK FOR MAIN AND THE CIRCUIT BREAKERS. KEY INTERLOCKS SHALL ALLOW ONLY TWO OF THREE BREAKERS CLOSED AT ANY TIME, AND SHALL PREVENT SIMULTANEOUS CLOSURE OF ALL THREE BREAKERS.
  - PROVIDE CIRCUIT BREAKER RATED FOR USE AT 100% OF THE BREAKER CONTINUOUS CURRENT RATING
  - PROVIDE WARNING SIGNS AT NEUTRAL AND GROUND BUS IN MAIN DISCONNECT SECTION TO READ, "NEUTRAL TO GROUND BOND OCCURS IN THE BREAKER COMPARTMENT IN DISTRIBUTION SWITCHGEAR 4NAPCTA"
  - INSTALL #1/0 GROUND IN LIEU OF #2 GROUND
  - PROVIDE SEPARATE SECTION FOR FIRE PUMP FEEDER TAP PER NFPA 70 695.3(A)(1)
  - POWER MONITORING METER EQUIPMENT WITH COMMUNICATION INTERFACE SHALL CONNECT TO CAMPUS ELECTRICAL POWER MONITORING AND CONTROL SYSTEM (PMCS). PROVIDE ALLOWANCE FOR CONNECTION AND INTERFACE PROGRAMMING TO CAMPUS PMCS FURNISHED UNDER THE PATIENT CARE TOWER PROJECT.
  - PROVIDE #10 GROUND BONDING JUMPER BETWEEN GROUND BUS OF NORMAL AND CRITICAL PANELBOARD SERVING THE SAME PATIENT AREA
  - PANEL IMPACTED BY THIS PROJECT.

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480V NORMAL PCT ONE-LINE DIAGRAM

**City of Puyallup  
Development & Permitting Services  
ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic



**City of Puyallup**  
**Development & Permitting Services**  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

**FLAG NOTES:**

- PROVIDE METERING ON ALL CIRCUIT BREAKERS IN SWITCHGEAR/SWITCHBOARD.
- PROVIDE 3/4" C, 3#10, 1#10G.
- PROVIDE 1-1/2" C TO PARALLELING MEDIUM VOLTAGE SWITCHGEAR IN CUP WITH ATS CONTROL WIRING.
- OVERCURRENT PROTECTIVE DEVICES IN THIS EQUIPMENT SHALL BE SELECTIVELY COORDINATED WITH UPSTREAM AND DOWNSTREAM OVERCURRENT PROTECTIVE DEVICES.
- PROVIDE WARNING SIGNS AT NEUTRAL AND GROUND BUS IN MAIN DISCONNECT SECTION TO READ, "NEUTRAL TO GROUND BOND OCCURS IN THE BREAKER COMPARTMENT IN DISTRIBUTION SWITCHGEAR E1".
- INSTALL #4/0 GROUND IN EACH CONDUIT IN LIEU OF #3/0 GROUND.
- INSTALL #1/0 GROUND IN EACH CONDUIT IN LIEU OF #1 GROUND.
- PROVIDE BUSSED GUTTER FOR FEEDER TERMINATIONS, UL LISTED AND NEMA 3R ENCLOSURE, COOPER B-LINE CATALOG NUMBER RT048HD0 OR APPROVED EQUAL.
- FIRE PUMP CONTROLLER WITH POWER TRANSFER SWITCH, PROVIDED BY MECHANICAL AND CONNECTED BY ELECTRICAL WIRE-DELTA TYPE STARTER. CONFIRM TYPE FROM APPROVED SHOP DRAWINGS.
- POWER MONITORING METER EQUIPMENT WITH COMMUNICATION INTERFACE SHALL CONNECT TO CAMPUS ELECTRICAL POWER MONITORING AND CONTROL SYSTEM (PMCS). PROVIDE ALLOWANCE FOR CONNECTION AND INTERFACE PROGRAMMING TO CAMPUS PMCS FURNISHED UNDER THE PATIENT CARE TOWER PROJECT.

▶ PANEL OR EQUIPMENT IMPACTED BY THIS PROJECT.

**FEEDER SCHEDULE**

FEEDER NO.	ALUMINUM CONDUCTORS		AMPACITY
	CONDUIT	WIRE	
D3	1-1/2"	3 - #1/0, 1 #6 G.	120
D4	1 1/2"	4 - #1/0, 1 #6 G.	120
E3	1 1/2"	3 - #2/0, 1 #4 G.	135
F3	2"	3 - #3/0, 1 #4 G.	155
F4	2"	4 - #3/0, 1 #4 G.	155
G3	2"	3 - #4/0, 1 #4 G.	180
J4	3"	4-300kcmil, 1 #2 G.	230
J3	2-1/2"	3-300kcmil, 1 #2 G.	230
K4	3"	4-350kcmil, 1 #2 G.	250
K3	3"	3-350kcmil, 1 #2 G.	250
N3	3-1/2"	3-600kcmil, 1 #1 G.	340
2H4	(2) 3"	4-250kcmil, 1 #1 G. EA.	410
2K3	(2) 3"	3-350kcmil, 1 #1/0 G. EA.	500
2M4	(2) 3-1/2"	4-500kcmil, 1 #3/0 G. EA.	620
3L4	(3) 3-1/2"	4-400kcmil, 1 #3/0 G. EA.	810
3L3	(3) 3"	3-400kcmil, 1 #3/0 G. EA.	810
4K4	(4) 3"	4-350kcmil, 1 #4/0 G. EA.	1000
4N4	(4) 4"	4-600kcmil, 1 #350 G. EA.	1360
5N4	(5) 4"	4-600kcmil, 1 #400 G. EA.	1700
6N4	(6) 4"	4-600kcmil, 1 #600 G. EA.	2040
8P4	(8) 4"	4-750kcmil, 1 #750 G. EA.	3080

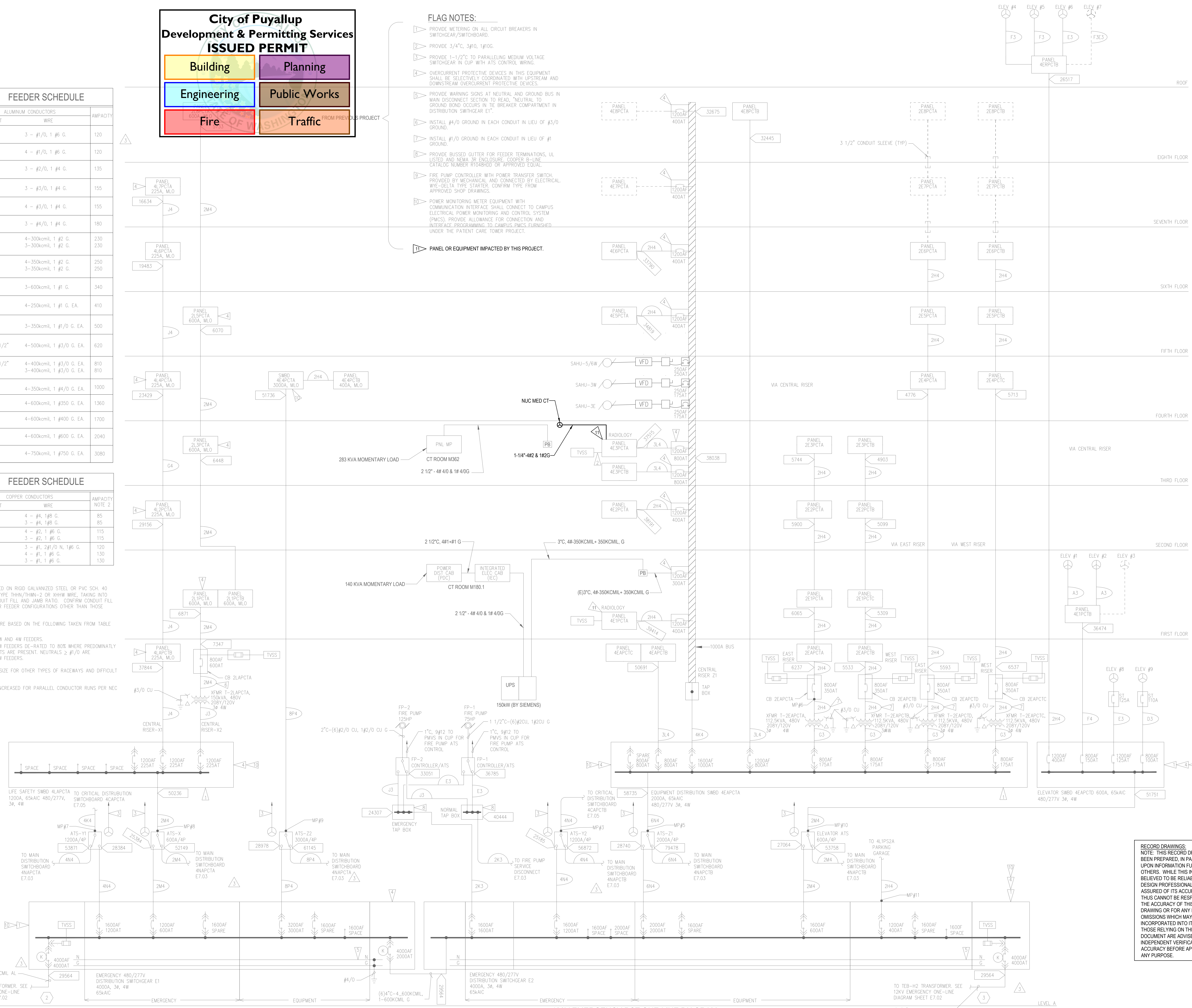
**FEEDER SCHEDULE**

FEEDER NO.	COPPER CONDUCTORS		AMPACITY NOTE 2
	CONDUIT	WIRE	
A4	1 1/4"	4 - #4, 1#8 G.	85
A3	1"	3 - #4, 1#8 G.	85
B4	1 1/4"	4 - #2, 1 #6 G.	115
B3	1 1/4"	3 - #2, 1 #6 G.	115
C5	2"	3 - #1, 2#1/0 N, 1#6 G.	120
C4	1 1/2"	4 - #1, 1 #6 G.	130
C3	1 1/2"	3 - #1, 1 #6 G.	130

**SCHEDULE NOTES:**

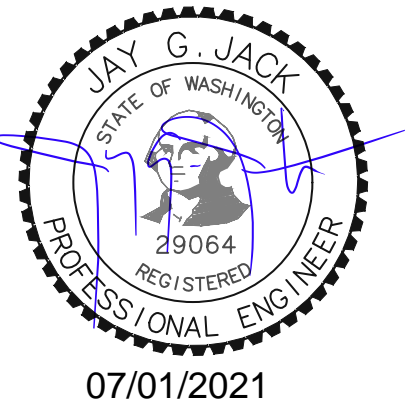
- CONDUIT SIZING BASED ON RIGID GALVANIZED STEEL OR PVC SCH. 40 CONDUIT AND WIRE TYPE THHN/THWN-2 OR XHHW WIRE, TAKING INTO ACCOUNT BOTH CONDUIT FILL AND JAMB RATIO. CONFIRM CONDUIT FILL AND JAMB RATIOS FOR FEEDER CONFIGURATIONS OTHER THAN THOSE SHOWN.
- AMPACITIES LISTED ARE BASED ON THE FOLLOWING TAKEN FROM TABLE 310-16:
  - 75° RATING FOR 3W AND 4W FEEDERS.
  - 90° RATING FOR 5W FEEDERS DE-RATED TO 80% WHERE PREDOMINANTLY HARMONIC CURRENTS ARE PRESENT. NEUTRALS ≥ #1/0 ARE PARALLELED ON 5W FEEDERS.
- INCREASE RACEWAY SIZE FOR OTHER TYPES OF RACEWAYS AND DIFFICULT OR LONG PULLS.
- GROUND WIRE SIZE INCREASED FOR PARALLEL CONDUCTOR RUNS PER NEC TABLE 250-122.

CLARK K J O S ARCHITECTS, L.L.C. COPYRIGHT 2020



480V EMERGENCY PCT ONE-LINE DIAGRAM

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 401 15th Ave. SE, Puyallup WA 98372



ISSUE DATE: 07.02.2  
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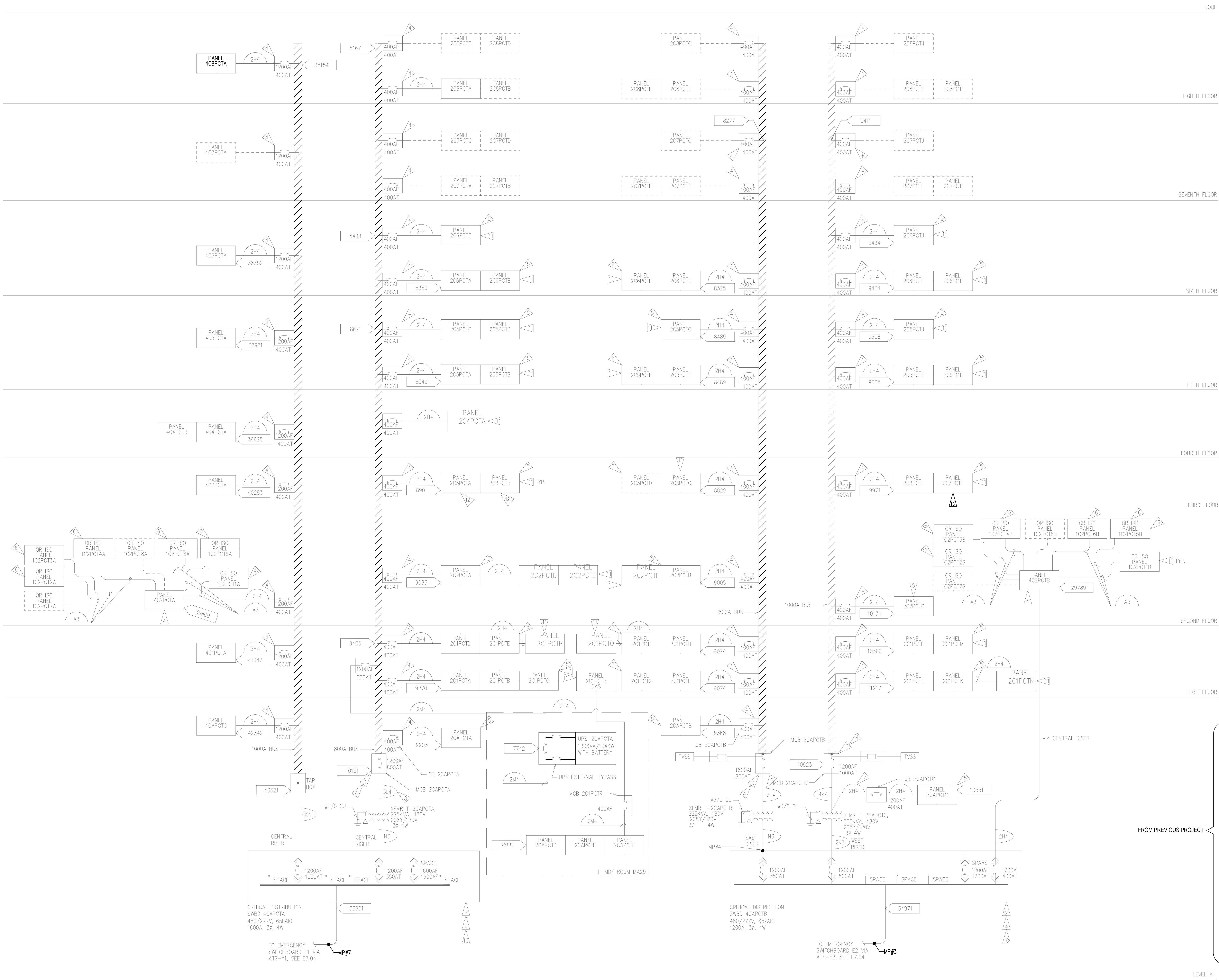
CONSTRUCTION DOCUMENTS

480V NORMAL PCT ONE-LINE DIAGRAM

**E7.04**

B-21-0829





480V CRITICAL ONE-LINE DIAGRAM  
SCALE: NONE

FEEDER NO.	ALUMINUM CONDUCTORS		AMPACITY
	CONDUIT	WIRE	
D3	1-1/2"	3 - #1/0, 1 #6 G.	120
D4	1 1/2"	4 - #1/0, 1 #6 G.	120
E3	1 1/2"	3 - #2/0, 1 #4 G.	135
F3	2"	3 - #3/0, 1 #4 G.	155
F4	2"	4 - #3/0, 1 #4 G.	155
G3	2"	3 - #4/0, 1 #4 G.	180
J4	3"	4-300kcmil, 1 #2 G.	230
J3	2-1/2"	3-300kcmil, 1 #2 G.	230
K4	3"	4-350kcmil, 1 #2 G.	250
K3	3"	3-350kcmil, 1 #2 G.	250
N3	3-1/2"	3-600kcmil, 1 #1 G.	340
2H4	(2) 3"	4-250kcmil, 1 #1 G. EA.	410
2K3	(2) 3"	3-350kcmil, 1 #1/0 G. EA.	500
2M4	(2) 3-1/2"	4-500kcmil, 1 #3/0 G. EA.	620
3L4	(3) 3-1/2"	4-400kcmil, 1 #3/0 G. EA.	810
3L3	(3) 3"	3-400kcmil, 1 #3/0 G. EA.	810
4K4	(4) 3"	4-350kcmil, 1 #4/0 G. EA.	1000
4N4	(4) 4"	4-600kcmil, 1 #350 G. EA.	1360
5N4	(5) 4"	4-600kcmil, 1 #400 G. EA.	1700
6N4	(6) 4"	4-600kcmil, 1 #600 G. EA.	2040
8P4	(8) 4"	4-750kcmil, 1 #750 G. EA.	3080

FEEDER NO.	COPPER CONDUCTORS		AMPACITY NOTE 2
	CONDUIT	WIRE	
A4	1 1/4"	4 - #4, 1#8 G.	85
A3	1"	3 - #4, 1#8 G.	85
B4	1 1/4"	4 - #2, 1 #6 G.	115
B3	1 1/4"	3 - #2, 1 #6 G.	115
C5	2"	3 - #1, 2#1/0 N, 1#6 G.	120
C4	1 1/2"	4 - #1, 1 #6 G.	130
C3	1 1/2"	3 - #1, 1 #6 G.	130

- SCHEDULE NOTES:**
- CONDUIT SIZING BASED ON RIGID GALVANIZED STEEL OR PVC SCH. 40 CONDUIT AND WIRE TYPE THHN/THWN-2 OR XHHW WIRE, TAKING INTO ACCOUNT BOTH CONDUIT FILL AND JAMB RATIO. CONFIRM CONDUIT FILL AND JAMB RATIOS FOR FEEDER CONFIGURATIONS OTHER THAN THOSE SHOWN.
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    - A. 75° RATING FOR 3W AND 4W FEEDERS.
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  - INCREASE RACEWAY SIZE FOR OTHER TYPES OF RACEWAYS AND DIFFICULT OR LONG PULLS.
  - GROUND WIRE SIZE INCREASED FOR PARALLEL CONDUCTOR RUNS PER NEC TABLE 250-122.

- FLAG NOTES:**
- NOT USED
  - PROVIDE METERING ON ALL CIRCUIT BREAKERS IN SWITCHGEAR
  - PROVIDE CIRCUIT BREAKER RATED FOR USE AT 100% OF THE BREAKER CONTINUOUS CURRENT RATING
  - OVERCURRENT PROTECTIVE DEVICES IN THIS EQUIPMENT SHALL BE SELECTIVELY COORDINATED WITH UPSTREAM AND DOWNSTREAM OVERCURRENT PROTECTIVE DEVICES
  - PROVIDE #10 GROUNDING BOND BETWEEN 120V CRITICAL PANEL AND NORMAL 120V PANEL IN SAME ELECTRICAL ROOM
  - PROVIDE #10 GROUNDING BOND BETWEEN 120V OR CRITICAL PANEL AND NORMAL 120V PANELS SERVING THE SAME OR
  - INSTALL #1/0 GROUND IN EACH CONDUIT IN LIEU OF #1 GROUND
  - INSTALL #4/0 GROUND IN EACH CONDUIT IN LIEU OF #3/0 GROUND
  - POWER MONITORING METER EQUIPMENT WITH COMMUNICATION INTERFACE SHALL CONNECT TO CAMPUS ELECTRICAL POWER MONITORING AND CONTROL SYSTEM (PMCS). PROVIDE ALLOWANCE FOR CONNECTION AND INTERFACE PROGRAMMING TO CAMPUS PMCS FURNISHED UNDER THE PATIENT CARE TOWER PROJECT.
  - PROVIDE #10 GROUND BONDING JUMPER BETWEEN GROUND BUS OF NORMAL AND CRITICAL PANELBOARD SERVING THE SAME PATIENT AREA
  - PANELS EQUIPMENT IMPACTED BY THIS PROJECT



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**City of Puyallup**  
Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

480V NORMAL PCT ONE-LINE DIAGRAM

**E7.05**

**B-21-0829**