

# DRAWING LIST

## GENERAL

COVER SHEET

CIVIL NOT APPLICABLE TO PHASE 2

## ARCHITECTURAL

A100.0 ARCHITECTURAL DEMOLITION AND NEW WORK BASEMENT LEVEL NORTH BUILDING PARTIAL FLOOR PLAN

## FIRE PROTECTION

FP001 FIRE PROTECTION LEGENDS AND GENERAL NOTES  
FP100.0 FIRE PROTECTION NORTH BUILDING GENERATOR ROOM BASEMENT PLANS

## MECHANICAL

M001 MECHANICAL LEGENDS AND GENERAL NOTES  
M100.0 MECHANICAL BASEMENT LEVEL NORTH BUILDING EXISTING/DEMOLITION PARTIAL FLOOR PLAN  
M100.1 MECHANICAL BASEMENT LEVEL NORTH BUILDING PARTIAL FLOOR PLAN  
M200.0 MECHANICAL FUEL OIL DETAILS  
M200.1 MECHANICAL GENERATOR EXHAUST DETAILS  
M300.0 MECHANICAL FUEL OIL SYSTEM ONE-LINE AND SCHEDULES  
M400.0 MECHANICAL GENERATOR ROOM CONTROLS AND SCHEDULE

## ELECTRICAL

E001 ELECTRICAL LEGENDS AND GENERAL NOTES  
E100.0 ELECTRICAL BASEMENT LEVEL EXISTING/DEMOLITION OVERALL FLOOR PLAN  
E100.1 ELECTRICAL BASEMENT LEVEL NEW WORK OVERALL FLOOR PLAN  
E100.2 ELECTRICAL BASEMENT LEVEL NORTH BUILDING PARTIAL FLOOR PLANS AND DETAILS  
E100.3 ELECTRICAL BASEMENT LEVEL EAST WING PARTIAL FLOOR PLANS AND DETAILS  
E100.4 ELECTRICAL BASEMENT LEVEL NORTH BUILDING PARTIAL FLOOR PLAN  
E101.0 ELECTRICAL GROUND FLOOR OVERALL PLAN  
E200.0 PRIMARY ELECTRICAL DISTRIBUTION ONE-LINE RISER DIAGRAM  
E200.1 EMERGENCY/ STANDBY GENERATOR DESIGN ONE-LINE DIAGRAM  
E201.0 NORMAL ELECTRICAL ONE-LINE RISER DIAGRAM - NORTH BUILDING  
E201.1 ESSENTIAL ELECTRICAL ONE-LINE RISER DIAGRAM - NORTH BUILDING  
E202.0 NORMAL AND ESSENTIAL ELECTRICAL ONE-LINE RISER DIAGRAM - EAST WING  
E300.0 ELECTRICAL SCHEDULES

# GRIFFIN HOSPITAL

130 DIVISION STREET  
DERBY, CONNECTICUT



# PHASE 2 - EMERGENCY GENERATOR AND DISTRIBUTION UPGRADES

MAY 10, 2024

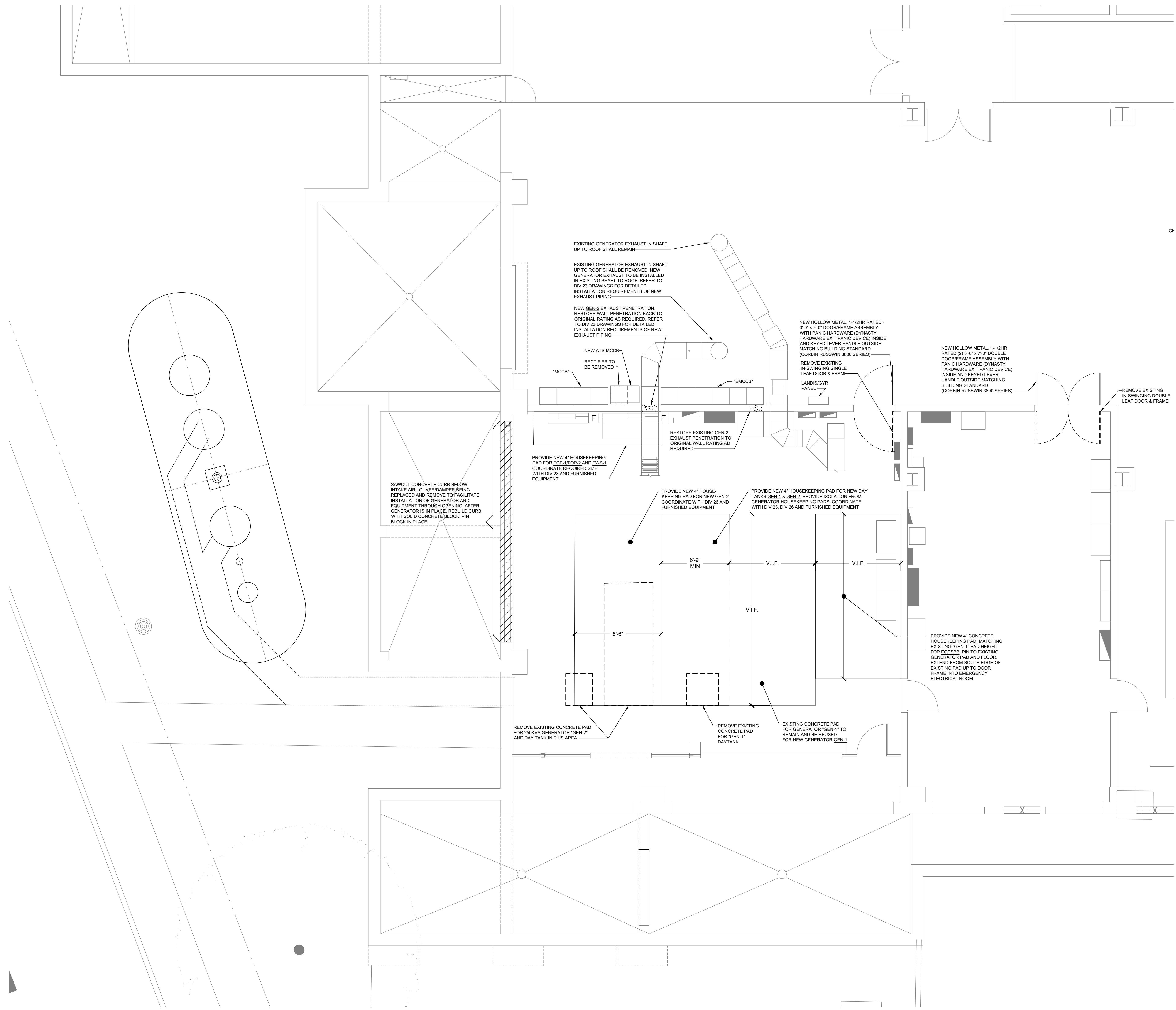
VANZELM PROJECT # 2021144.01



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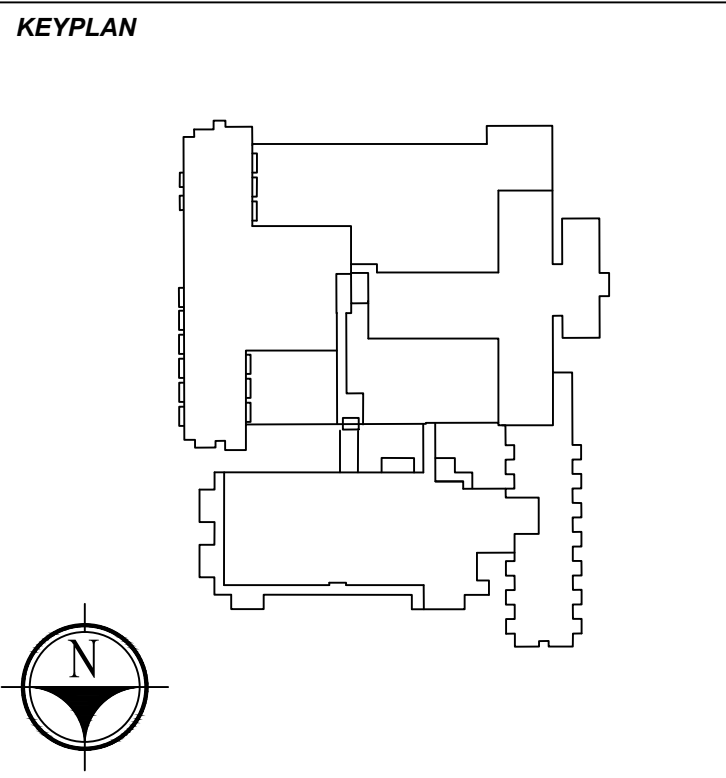
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1 NORTH BUILDING GENERATOR ROOM - DEMOLITION AND NEW WORK  
SCALE: 1/4" = 1'-0"



**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:  
**ARCHITECTURAL  
DEMOLITION AND NEW  
WORK BASEMENT LEVEL  
NORTH BUILDING PARTIAL  
FLOOR PLAN**

DATE: MAY 10, 2024  
DRAWN BY: EMG  
CHECKED BY: SEP  
SCALE: AS NOTED  
PROJ #: 2021144.01

DRAWING NUMBER:  
**A100.0**

## FIRE PROTECTION GENERAL NOTES

- THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING:
- A. THESE GENERAL NOTES ARE APPLICABLE TO ALL FIRE PROTECTION DRAWINGS.
  - B. DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL INTENT OF WORK. SEE DETAILS, RISERS, AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
  - C. THE DRAWINGS INDICATE A SUGGESTED SPRINKLER LAYOUT AND THAT EACH AREA IS COVERED BY SPRINKLER PROTECTION AS REQUIRED PER CODE. THE SPRINKLER QUANTITIES SHALL NOT BE COUNTED AS A TAKE OFF OR AS EXACT LOCATIONS. REFER TO NFPA STANDARDS FOR EXACT SPACING, DENSITY, AND LOCATION REQUIREMENTS.
  - D. SPRINKLERS IN FINISHED CEILING AREAS SHALL ALWAYS BE LOCATED IN THE CENTER OF CEILING TILES IN BOTH DIRECTIONS UNLESS INDICATED OTHERWISE.
  - E. REVIEW THE ARCHITECTURAL REFLECTED CEILING PLANS AS PART OF THIS CONTRACT FOR ADDITIONAL INFORMATION SUCH AS CEILING HEIGHTS, TYERS, SOFFITS AND OR OTHER DEVICE LOCATIONS.
  - F. REVIEW THE ELECTRICAL DIVISION DRAWINGS AND COORDINATE THE FIRE PROTECTION WORK WITH LOCATIONS OF LIGHTS, AND CEILING MOUNTED DEVICES WHICH MAY INTERFERE WITH SPRINKLER HEAD LOCATIONS OR SPRAY PATTERNS.
  - G. REVIEW THE HVAC DIVISION DRAWINGS AND COORDINATE THE FIRE PROTECTION WORK WITH LOCATIONS OF CEILING MOUNTED DEVICES SUCH AS DIFFUSERS, GRILLS, REGISTERS, LOCATIONS OF HEAT PRODUCING EQUIPMENT AND DUCTWORK REQUIRING SPRINKLER PROTECTION BELOW IT.
  - H. PROVIDE PIPE EXPANSION JOINTS AT ALL BUILDING EXPANSION JOINT LOCATIONS AND APPROVED SEISMIC EXPANSION LOOPS AT ALL BUILDING SEISMIC JOINT LOCATIONS AS REQUIRED PER NFPA STANDARDS AND BUILDING CODES. REVIEW ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXACT LOCATIONS OF EXPANSION AND SEISMIC JOINTS.
  - I. REFER TO SITE PLAN AND CIVIL ENGINEER'S DOCUMENTS FOR ADDITIONAL INFORMATION PERTAINING TO COORDINATION OF SITE UTILITIES, BOTH EXISTING AND NEW.
  - J. IN RENOVATION WORK, COORDINATE SYSTEMS SHUTDOWN WITH OWNER IN ORDER TO MAKE NEW PIPING CONNECTIONS. ALLOW MINIMUM OF TEN (10) DAYS ADVANCE NOTICE FOR OWNER APPROVAL TO PROCEED WITH CONTRACT WORK.

## FIRE PROTECTION DEMOLITION NOTES

- THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING:
- A. VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING SYSTEMS AND CONDITIONS IN AREAS OF RENOVATION.
  - B. ALL EXISTING PIPING AND EQUIPMENT SHOWN HAS BEEN TAKEN FROM THE BEST AVAILABLE EXISTING INFORMATION. THE DRAWINGS ARE DIAGRAMMATIC AND ALL PIPING AND DEVICES MAY NOT BE SHOWN. THE INTENT OF THE DOCUMENTS IS THAT SYSTEM EQUIPMENT AND PIPING IS TO BE REMOVED IN ALL RENOVATED AREAS AS NOTED AND MAY NOT ALL BE SHOWN.
  - C. REMOVE ALL FIRE PROTECTION PIPING SYSTEMS INCLUDING BUT NOT LIMITED TO SPRINKLER/STANDPIPE, SPRINKLERS HANGERS, VALVES, SWITCHES, AND DEVICES AS SHOWN OR NOTED ON THE DRAWINGS. COORDINATE ALL WIRING WORK RELATED TO DEVICES BEING REMOVED WITH ELECTRICAL CONTRACTOR.
  - D. ALL PIPING TO BE REMOVED SHALL BE REMOVED COMPLETELY AND CAPPED AS SHOWN WITHOUT LEAVING ANY DEAD ENDED PIPING OR ABANDONED PIPING. SECURE IN PLACE.
  - E. NO FIRE PROTECTION EQUIPMENT OR DEVICES THAT HAVE BEEN DISCONNECTED OR ABANDONED SHALL REMAIN.
  - F. IT IS THE INTENT OF THESE DOCUMENTS THAT ANY AND ALL DEVICES REMOVED SHALL NOT BE REUSED, BUT ONLY NEW SHALL BE INSTALLED.
  - G. ANY SYSTEM OR EQUIPMENT TO REMAIN ACTIVE DURING RENOVATION SHALL BE KEPT IN OPERATION BY PROVIDING TEMPORARY CONNECTIONS AS REQUIRED UNTIL NEW SYSTEMS ARE INSTALLED AND OPERATIONAL.
  - H. ALL SERVICE INTERRUPTIONS SHALL BE COORDINATED WITH THE OWNER PRIOR TO COMMENCEMENT OF ANY WORK.
  - I. THE FIRE MARSHAL AND/OR THE INSURANCE UNDERWRITER SHALL BE CONTACTED TO REVIEW AND APPROVE THE EXTENT OR PHASING OF THE FIRE PROTECTION DEMOLITION IN ORDER TO PROTECT THE OCCUPANTS AND PROPERTY. THESE DOCUMENTS DO NOT ADDRESS THE PHASING OF THE SYSTEM REMOVAL, ONLY THE EXTENT.
  - J. REVIEW THE ARCHITECTURAL DEMOLITION DRAWINGS AS PART OF THIS CONTRACT FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

## FIRE PROTECTION LEGEND

	FLOW DIRECTION
	FIRE LINE
	FIRE SERVICE BURIED
	WET SPRINKLER SYSTEM
	DRY PIPE SPRINKLER SYSTEM
	DRAIN PIPING
	FIRE DEPARTMENT CONNECTION
	FIRE PUMP TEST HEADER PIPING
	PREACTION SPRINKLER SYSTEM
	EXISTING PIPING OR EQUIPMENT
	REMOVE EXISTING PIPING OR EQUIPMENT
	PIPE DOWN
	PIPE UP
	PIPE DROP
	CAPPED PIPE

## LEGEND NOTE

THESE ARE THE GENERAL LEGENDS OF SYMBOLS AND ABBREVIATIONS, AND SHALL BE USED AS A DICTIONARY TO DEFINE ITEMS INDICATED ON DRAWINGS. NOT ALL SYMBOLS OR ABBREVIATIONS DEFINED ARE NECESSARILY USED ON THIS PROJECT.

## FIRE PROTECTION SYMBOLS

	CONCEALED SPRINKLER
	PENDENT SPRINKLER
	UPRIGHT SPRINKLER
	DRY PIPE SPRINKLER
	DRY SIDEWALL SPRINKLER
	WET SIDEWALL SPRINKLER
	EXISTING SPRINKLER TO REMAIN
	EXISTING UPRIGHT SPRINKLER TO REMAIN
	EXISTING SIDEWALL SPRINKLER TO REMAIN
	EXISTING SPRINKLER TO BE REMOVED
	EXISTING UPRIGHT SPRINKLER TO BE REMOVED
	EXISTING SIDEWALL SPRINKLER TO BE REMOVED
	ALARM CHECK VALVE RISER ASSEMBLY
	DRY PIPE VALVE RISER ASSEMBLY
	PREACTION VALVE RISER ASSEMBLY
	SPRINKLER FLOW SWITCH
	PRESSURE SWITCH
	LOW PRESSURE SWITCH
	SUPERVISORY SWITCH (TAMPER SWITCH)
	ANGLE HOSE VALVE WCAP & CHAIN
	PRESSURE REGULATING ANGLE HOSE VALVE
	PRESSURE RELIEF VALVE
	VALVE IN PIPE RISER
	OS&Y VALVE (SUPERVISED)
	GATE VALVE (SUPERVISED)
	BALL VALVE (SUPERVISED AND NON-SUPERVISED)
	BUTTERFLY VALVE (SUPERVISED)
	VALVE IN PIPE DROP
	CHECK VALVE
	BACKFLOW PREVENTER ASSEMBLY (DCVA) WITH SHUTOFF VALVES
	BACKFLOW PREVENTER ASSEMBLY (RPO) WITH SHUTOFF VALVES
	PRESSURE REGULATING VALVE (X = PSI SETTING)
	POST INDICATOR VALVE (SUPERVISED)
	POST MOUNTED FIRE DEPARTMENT CONNECTION (REFER TO SPECIFICATIONS FOR TYPE)
	WALL MOUNTED FIRE DEPARTMENT CONNECTION (REFER TO SPECIFICATIONS FOR TYPE)
	FIRE PUMP TEST HEADER (REFER TO SPECIFICATIONS FOR TYPE)
	PUMP
	PRESSURE GAUGE
	ELECTRIC ALARM BELL
	WATER MOTOR GONG
	THRUST BLOCK
	AUTOMATIC TRANSFER SWITCH
	FIRE PUMP CONTROLLER
	JOCKEY PUMP CONTROLLER
	PREACTION ALARM ASSEMBLY CABINET
	REMOTE ALARM PANEL
	CONNECT TO EXISTING
	CURB GATE VALVE & BOX
	FLOOR CONTROL VALVE ASSEMBLY
	FIRE VALVE CABINET
	SMOKE DETECTOR
	HEAT DETECTOR

## FIRE PROTECTION ABBREVIATIONS

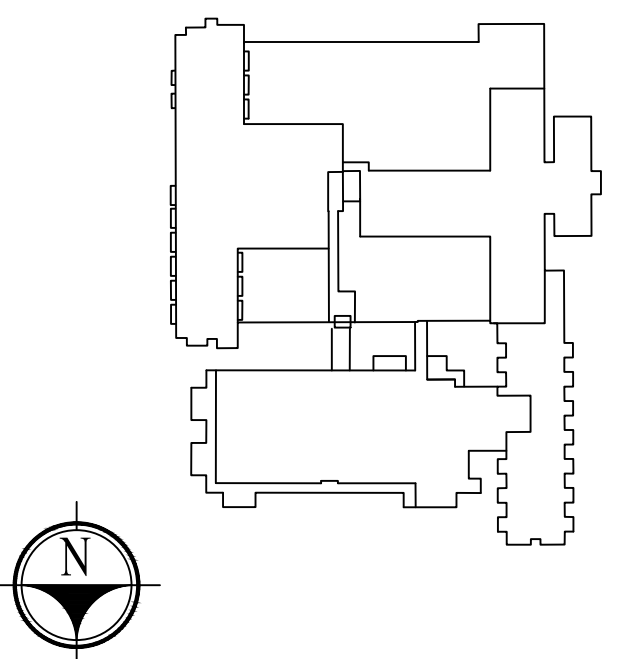
ACV	ALARM CHECK VALVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ATS	AUTOMATIC TRANSFER SWITCH
BFP	BACKFLOW PREVENTER
BOP	BOTTOM OF PIPE
CTE	CONNECT TO EXISTING
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DN	DOWN
DPV	DRY PIPE VALVE
EC	EXTENDED COVERAGE
EL	ELEVATION
ETR	EXISTING TO REMAIN
EX	EXISTING
FCVA	FLOOR CONTROL VALVE ASSEMBLY
FDC	FIRE DEPARTMENT CONNECTION
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
FPC	FIRE PUMP CONTROLLER
FPTH	FIRE PUMP TEST HEADER
FS	FLOW SWITCH
FSP	FIRE STANDPIPE
FVC	FIRE VALVE CABINET
G	CAGE GUARD
GPM	GALLONS PER MINUTE
HD	HEAT DETECTOR
HT	HIGH TEMPERATURE
IT	INTERMEDIATE TEMPERATURE
JP	JOCKEY PUMP
JPC	JOCKEY PUMP CONTROLLER
LPS	LOW PRESSURE SWITCH
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
PA	PREACTION
PAC	PREACTION ALARM VALVE CABINET
PIV	POST INDICATOR VALVE
PRV	PRESSURE REGULATING VALVE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
RCV	RISER CONTROL VALVE
RPD	REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY
RR	REMOVE & RELOCATE
SP	SPRINKLER
SS	SUPERVISORY SWITCH
TYP	TYPICAL
UG	UNDERGROUND
VIF	VERIFY IN FIELD



**GRIFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS		
REV. NO.	DATE	DESCRIPTION

**DRAWING TITLE:**  
FIRE PROTECTION  
LEGENDS AND  
GENERAL NOTES

DATE: MAY 10, 2024  
DRAWN BY: EMG  
CHECKED BY: SEP  
SCALE: NONE  
PROJ #: 2021144.01

**FP001**



GRIFFIN HEALTH

**GRIFFIN HOSPITAL- PHASE 2**

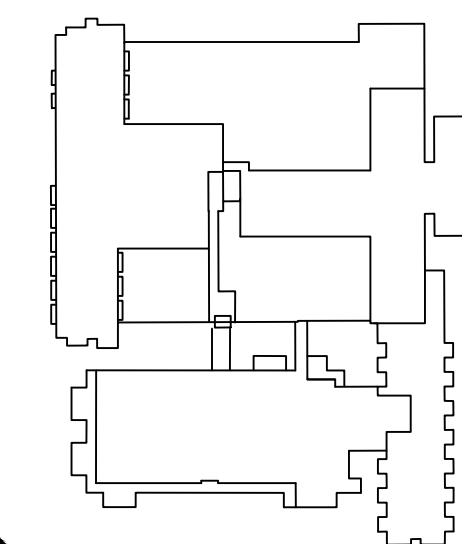
EMERGENCY GENERATOR and DISTRIBUTION

UPGRADES

130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:

**FIRE PROTECTION  
NORTH BUILDING  
GENERATOR ROOM  
BASEMENT PLANS**

DATE: MAY 10, 2024

DRAWN BY: RCP

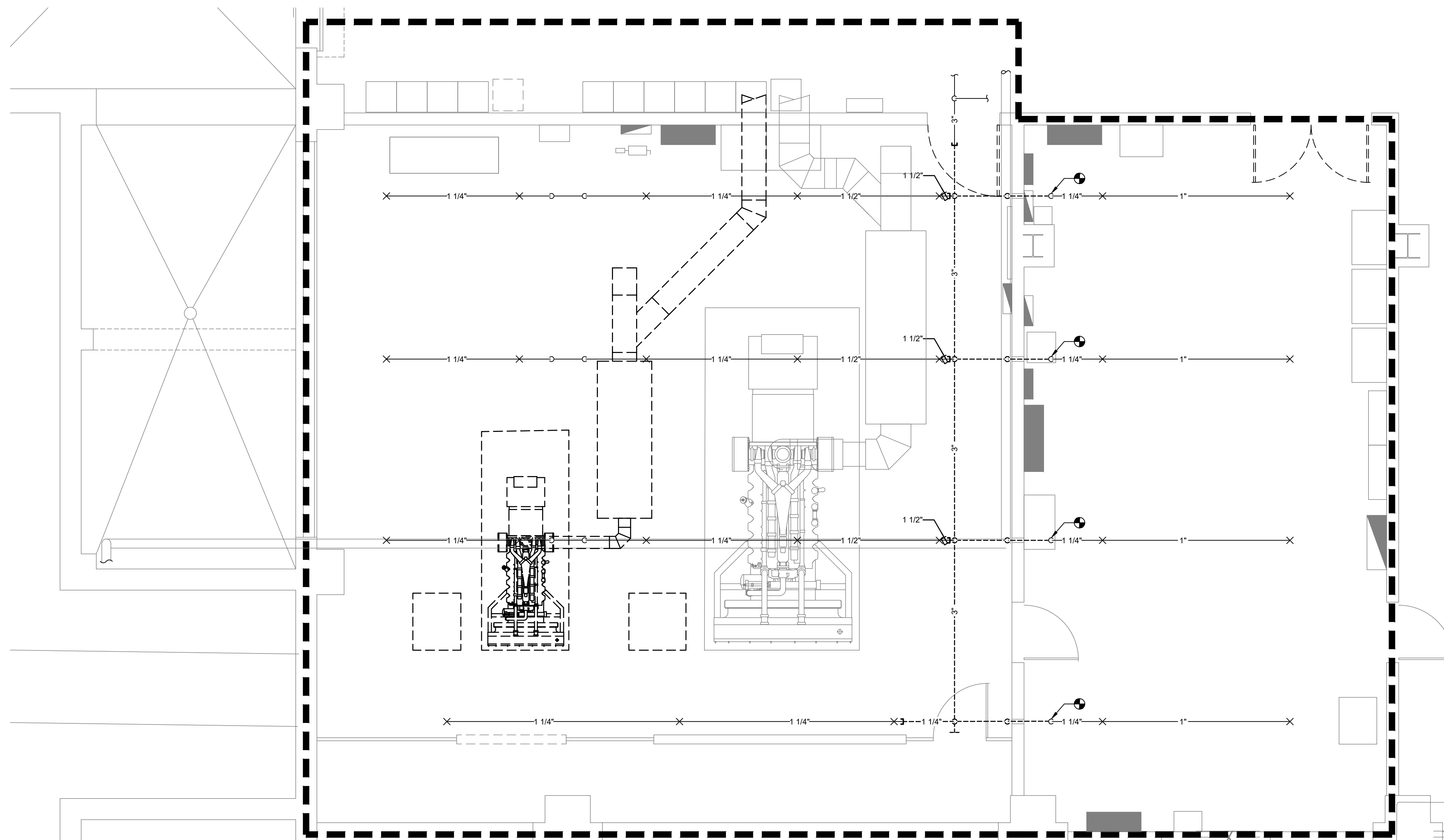
CHECKED BY: SEP

SCALE: AS NOTED

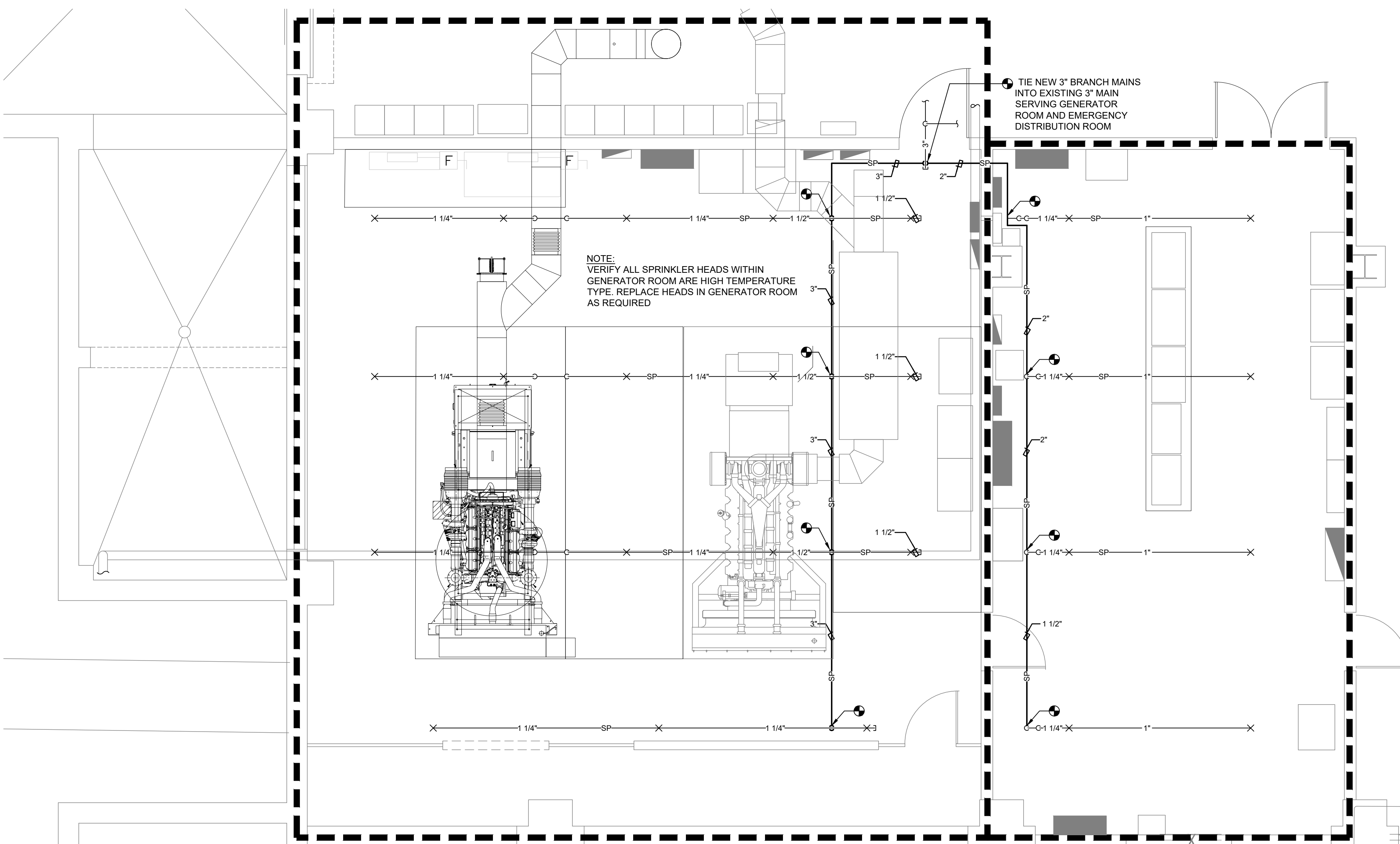
PROJ #: 2021144.01

DRAWING NUMBER:

**FP100.0**



1 FIRE PROTECTION NORTH WING GENERATOR ROOM BASEMENT DEMOLITION PLAN  
SCALE: 1/4" = 1'-0"



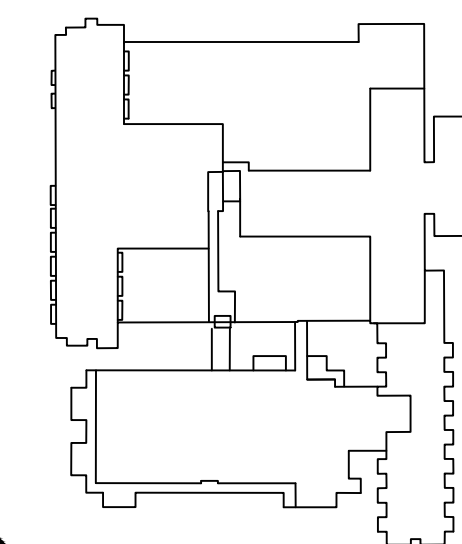
2 FIRE PROTECTION NORTH WING GENERATOR ROOM BASEMENT NEW WORK PLAN  
SCALE: 1/4" = 1'-0"



**GRIFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:

**MECHANICAL LEGENDS AND GENERAL NOTES**

DATE: MAY 10, 2024

DRAWING NUMBER:

DRAWN BY: JKC

**M001**

CHECKED BY: SEP

SCALE: NTS

PROJ #: 2021144.01

**MECHANICAL GENERAL NOTES**

- ALL MATERIALS, METHODS AND EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
- COORDINATE EXACT LOCATIONS, MOUNTING HEIGHTS, AND FINISHES WITH THE ARCHITECTURAL DRAWINGS.
- ALL EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS. IN THE INSTANCE WHERE EQUIPMENT MUST BE INSTALLED BEHIND A WALL OR ABOVE AN INACCESSIBLE CEILING, AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PROVIDED. REFER TO ARCHITECTURAL PLANS FOR ACCESS DOOR LOCATIONS IN WALLS, CEILINGS AND FLOORS.
- IN THE EVENT OF A CONFLICT BETWEEN DOCUMENTS, ARCHITECT SHALL BE NOTIFIED AND THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEMS SHALL BE CARRIED AS PART OF THE BID.
- THERMOSTAT AND SWITCH LOCATIONS SHALL BE GENERALLY AS SHOWN. ACTUAL LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATIONS.
- ALL FLOOR MOUNTED AIR HANDLING UNITS SHALL BE INSTALLED ON A 6" CONCRETE HOUSEKEEPING PAD AND ALL OTHER FLOOR MOUNTED EQUIPMENT SHALL BE INSTALLED ON A 4" CONCRETE HOUSEKEEPING PAD, UNLESS OTHERWISE NOTED.
- THESE PLANS ARE DIAGRAMMATIC IN NATURE. EVERY ELBOW, FITTING, ETC. ARE NOT SHOWN. PROVIDE SUCH COMPONENTS AS REQUIRED FOR COMPLETE INSTALLATION, PROPERLY COORDINATED WITH ALL TRADES.
- THE HVAC SYSTEMS FOR THIS BUILDING HAVE BEEN DESIGNED AND MODELED FOR LOW TRANSPORT ENERGY (LOW VELOCITY AND LOW PRESSURE DROP). WHEN OFFSETTING THE DUCTWORK AND PIPING IS REQUIRED, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE THE NUMBER OF FITTINGS AND TRANSITIONS AND TO PROVIDE FITTING TYPES WITH THE LEAST POSSIBLE PRESSURE DROP.
- ANY DUCTWORK AND PIPING NOT SERVING STAIRWELLS, SHAFTS, ELEVATOR MACHINE ROOMS OR EMERGENCY ELECTRICAL ROOMS SHALL NOT PENETRATE THOSE WALLS.
- DUCTWORK AND/OR PIPING SHALL NOT BE INSTALLED OVER ELECTRICAL PANELS.
- COORDINATE NEW DUCTWORK AND PIPING WITH OTHER TRADES. CONTRACTOR SHALL FIELD VERIFY AVAILABLE CEILING CLEARANCE PRIOR TO BID.
- PROVIDE VOLUME DAMPERS IN ALL SUPPLY, RETURN, OUTSIDE AIR AND EXHAUST BRANCH DUCTS NEAR THE MAIN DUCT TAKE-OFF AS REQUIRED TO PROPERLY BALANCE THE ENTIRE AIR SYSTEM. PROVIDE REMOTELY OPERATED (CABLE) DAMPERS WHEN DAMPERS ARE INACCESSIBLE. COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
- DUCT SIZING SHOWN INDICATES CLEAR INSIDE DIMENSIONS OF DUCT AND INSULATION.
- PROVIDE NEW DUCTWORK, DIFFUSERS AND GRILLES WHERE SHOWN, SEE SPECIFICATIONS. COORDINATE NEW DIFFUSER LOCATIONS WITH ARCHITECT'S REFLECTED CEILING PLAN.
- ALL FLEXIBLE DUCT SHALL BE A MAXIMUM OF 3 FEET LONG WITH NO BENDS GREATER THAN 45 DEGREES.
- SUPPORT ALL PIPING FROM STRUCTURE ABOVE. WHEN PIPE RUNS ARE PERPENDICULAR TO BEAMS, INSTALL PIPING TIGHT TO BOTTOM OF BEAM TO MAXIMIZE SPACE. WHEN PIPE RUNS ARE PARALLEL TO BEAMS, INSTALL PIPING TIGHT TO FLOOR SLAB. PROVIDE ALL NECESSARY TRANSITIONS AND FITTINGS.
- PROVIDE EXPANSION COMPENSATORS, LOOPS, ANCHORS AND GUIDES FOR ALL PIPING SYSTEMS OPERATING ABOVE AMBIENT CONDITIONS AND INSTALL AS DICTATED BY CODE AND INDUSTRY STANDARDS. EQUIPMENT AND INSTALLATION DETAILS SHALL BE SUBMITTED FOR APPROVAL. THE CONTRACTOR SHALL HIRE AN ENGINEER TO REVIEW DETAILS AND PREPARE COMPLETE DESIGN FOR EXPANSION COMPENSATION SYSTEMS.
- AIR VENTS SHALL BE PROVIDED AT ALL HIGH POINTS AND DRAINS SHALL BE PROVIDED AT ALL LOW POINTS FOR HYDRONIC SYSTEMS.
- ALL SUPPLY AND RETURN BRANCH PIPING SHALL BE MINIMUM 3/4" UNLESS OTHERWISE NOTED.
- PROVIDE BRANCH ISOLATION VALVES OFF OF ALL BUILDING PIPING MAINS ON EACH FLOOR.

**LEGEND NOTE**

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**MECHANICAL DEMOLITION NOTES**

- EXISTING MECHANICAL ITEMS THAT ARE BEING DISCONNECTED AND REMOVED SHALL BE DISPOSED OF PROPERLY.
- NOTIFY CONSTRUCTION MANAGER OF OPENINGS CAUSED BY REMOVAL OF EXISTING EQUIPMENT. ENSURE THE PATCHING IS COMPLETE.
- REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL RELATED DEMOLITION WORK.
- REMOVE AND PROPERLY DISPOSE OF EQUIPMENT INCLUDING ELECTRICAL CONNECTIONS BACK TO PANEL.

**MECHANICAL PIPING SYSTEMS LEGEND**

SYMBOL	DESCRIPTION
	AUTOMATIC CONTROL VALVE
	BALANCE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	ISOLATION VALVE
	MULTI-PURPOSE VALVE (BALANCE, CHECK, SHUT-OFF)
	OUTSIDE SCREW & YOKE GATE VALVE (OS&Y)
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	3-WAY CONTROL VALVE
	6-WAY CONTROL VALVE
	ELBOW, TURNED DOWN
	ELBOW, TURNED UP
	BRANCH OFF TOP OF MAIN
	BRANCH OFF BOTTOM OF MAIN
	PIPING TO BE REMOVED
	CONDENSATE DRAIN LINE
	CHILLED GLYCOL RETURN
	CHILLED GLYCOL SUPPLY
	CHILLED WATER RETURN
	CHILLED WATER SUPPLY
	CONDENSATE PUMP DISCHARGE
	CONDENSER GLYCOL RETURN
	CONDENSER GLYCOL SUPPLY
	CONDENSER WATER RETURN
	CONDENSER WATER SUPPLY
	DUAL TEMPERATURE WATER RETURN
	DUAL TEMPERATURE WATER SUPPLY
	FUEL OIL RETURN
	FUEL OIL SUPPLY
	HOT GLYCOL RETURN
	HOT GLYCOL SUPPLY
	HIGH PRESSURE CONDENSATE
	HIGH PRESSURE STEAM
	HEAT RECOVERY GLYCOL RETURN
	HEAT RECOVERY GLYCOL SUPPLY
	HEAT RECOVERY WATER RETURN
	HEAT RECOVERY WATER SUPPLY
	HOT WATER RETURN
	HOT WATER SUPPLY
	LOW PRESSURE CONDENSATE
	LOW PRESSURE STEAM
	MEDIUM TEMPERATURE CHILLED WATER RETURN
	MEDIUM TEMPERATURE CHILLED WATER SUPPLY
	MEDIUM PRESSURE CONDENSATE
	MEDIUM PRESSURE STEAM
	PRE-HEAT HOT WATER RETURN
	PRE-HEAT HOT WATER SUPPLY
	REFRIGERANT HOT GAS
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION
	PIPE GUIDE
	PIPE ANCHOR
	AIR VENT (MANUAL OR AUTOMATIC)
	FINNED TUBE RADIATION
	FLOAT & THERMOSTATIC TRAP ASSEMBLY
	INVERTED BUCKET TRAP ASSEMBLY
	PRESSURE GAUGE
	PUMP
	STRAINER
	THERMOMETER
	UNION
	DEMOLITION WORK: POINT OF REMOVAL
	NEW WORK: POINT OF ATTACHMENT

**MECHANICAL CONTROLS LEGEND**

SYMBOL	DESCRIPTION
	CONTROL POINT, ANALOG INPUT
	CONTROL POINT, ANALOG OUTPUT
	CONTROL POINT, DIGITAL INPUT
	CONTROL POINT, DIGITAL OUTPUT
	AIRCURITY SENSOR
	POSITIONING BLADE SWITCH
	ELECTRICAL CURRENT SWITCH
	CARBON MONOXIDE SENSOR
	CARBON DIOXIDE SENSOR
	DUCT HEAT DETECTOR
	DIFFERENTIAL PRESSURE SWITCH
	FIRE SMOKE DETECTOR
	END SWITCH
	FLOW METER
	FLOW SWITCH
	HUMIDISTAT
	HIGH TEMPERATURE THERMOSTAT
	KEY OPERATED SWITCH
	LEVEL SENSOR
	LOW TEMPERATURE THERMOSTAT (FREEZE)
	MOTOR OR ACTUATOR
	MOISTURE SENSOR
	OXYGEN SENSOR
	OVERRIDE BUTTON
	OCCUPANCY SENSOR
	PRESSURE SENSOR
	PUSH BUTTON
	PURGE PUSH BUTTON
	PRESSURE SWITCH
	RELATIVE HUMIDITY SENSOR
	RADIANT SLAB / SNOW MELT SENSOR
	WALL MOUNTED ROOM SENSOR (TEMP, RH, CO2, CO, ETC.) REFER TO ROOM BY ROOM CONTROL MATRIX FOR SPECIFIC ROOM SENSOR TYPE(S)
	TEMPERATURE SENSOR
	TIMER SWITCH
	WINDOW CONTACT SWITCH
	AIRFLOW CONTROLLER
	AUTOMATIC CONTROL VALVE, 2-WAY
	AUTOMATIC CONTROL VALVE, 3-WAY
	AUTOMATIC CONTROL VALVE, 6-WAY
	BUTTERFLY VALVE, MOTORIZED
	CHILLED BEAM, ACTIVE
	CHILLED BEAM, PASSIVE
	COIL, COOLING
	COIL, HEATING
	COIL, REHEAT
	DAMPER, GRAVITY
	DAMPER, MOTORIZED OPPOSED BLADE
	DAMPER, MOTORIZED PARALLEL BLADE
	FAN, SUPPLY, RETURN OR EXHAUST
	FILTER
	HUMIDIFIER
	LAB AIR CONTROL VALVE
	LAB AIR CONTROL VALVE, VENTURI
	PUMP
	RADIANT CEILING PANEL
	RADIANT FLOOR
	STARTER / DISCONNECT
	VARIABLE FREQUENCY DRIVE
	VARIABLE AIR VOLUME BOX
	VARIABLE AIR VOLUME BOX w/ INTEGRAL REHEAT COIL
	VISUAL INDICATOR

**MECHANICAL AIR SYSTEMS LEGEND**

SYMBOL	DESCRIPTION
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
	EXISTING DUCT (SINGLE LINE)
	EXISTING DUCT (DOUBLE LINE)
	NEW DUCT (SINGLE LINE)
	NEW DUCT (DOUBLE LINE)
	ACOUSTICALLY LINED DUCT (SINGLE LINE)
	ACOUSTICALLY LINED DUCT (DOUBLE LINE)
	FIRE WRAPPED DUCT (DOUBLE LINE)
	DUCT TO BE REMOVED (SINGLE LINE)
	DUCT TO BE REMOVED (DOUBLE LINE)
	FLUSH CAP, SINGLE LINE
	SUPPLY DIFFUSER
	RETURN GRILLE
	EXHAUST GRILLE
	SUPPLY AIR FLOW
	RETURN/EXHAUST AIR FLOW
	LOUVER DOOR (SIZE AS NOTED)
	UNDER CUT DOOR
	REHEAT COIL
	VAV BOX
	VAV BOX WITH INTEGRAL SOUND ATTENUATOR
	AIRFLOW CONTROLLER
	AIRFLOW CONTROLLER WITH INTEGRAL SHUTOFF DAMPER
	LABORATORY AIRFLOW CONTROL VALVE
	SOUND ATTENUATOR
	AUTOMATIC CONTROL DAMPER
	FIRE DAMPER
	GRAVITY DAMPER
	VOLUME DAMPER
	FIRE SMOKE DAMPER
	SMOKE DAMPER
	OPPOSED BLADE DAMPER
	PARALLEL BLADE DAMPER
	HUMIDIFIER
	DEMOLITION WORK: POINT OF REMOVAL
	NEW WORK: POINT OF ATTACHMENT

**MECHANICAL TAGS LEGEND**

SYMBOL	DESCRIPTION
	DIFFUSER TAG DIFFUSER TYPE, PER SCHEDULE RECTANGULAR NECK SIZE ROUND NECK SIZE CFM
	LINEAR DIFFUSER TAG DIFFUSER TYPE, PER SCHEDULE DIFFUSER LENGTH CFM
	DISPLACEMENT DIFFUSER TAG DIFFUSER TYPE, PER SCHEDULE DIFFUSER SIZE, WIDTH x LENGTH CFM
	VAV TAG INSTANCE, PER SCHEDULE TYPE, PER SCHEDULE CFM
	FAN COIL UNIT TAG INSTANCE, PER SCHEDULE TYPE, PER SCHEDULE CFM
	CABINET UNIT HEATER TAG INSTANCE, PER SCHEDULE TYPE, PER SCHEDULE
	RADIATION TAG RADIANT CEILING PANEL FIN TUBE RADIATION TYPE, PER SCHEDULE TYPE, PER SCHEDULE LENGTH ACTIVE LENGTH
	LAB AIR CONTROL VALVE TAG AIR CONTROL VALVE CFM
	DUCT TYPE SIZE TAGS 24x12 = RECTANGULAR DUCTWORK 24/12 = FLAT OVAL DUCTWORK 12"Ø = ROUND DUCTWORK NOTE: ALL DIMENSIONS ARE IN INCHES

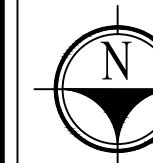
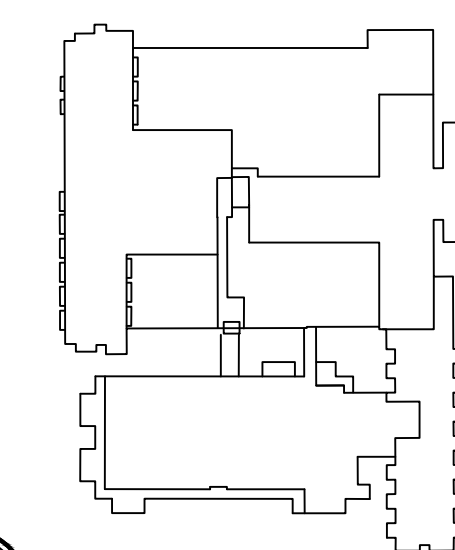
**MECHANICAL ABBREVIATIONS LEGEND**

AC	AIR CURTAIN
ACCU	AIR COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
ACV	AIRFLOW CONTROL VALVE
AFV	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
B	BOILER
BMS	BUILDING MANAGEMENT SYSTEM
CA	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CP	CONDENSATE PUMP
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
DN	DOWN
DOAS	DEDICATED OUTDOOR AIR SYSTEM
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EF	EXHAUST FAN
EMH	ELECTRICAL MANHOLE
ERV	ENERGY RECOVERY VENTILATOR
ET	EXPANSION TANK
FCU	FAN COIL UNIT
FTR	FINNED TUBE RADIATION
GEN	GENERATOR
GEX	GENERAL EXHAUST
GPM	GALLONS PER MINUTE
HRU	HEAT RECOVERY UNIT
HUM	HUMIDIFIER
HWC	HOT WATER COIL
HX	HEAT EXCHANGER
LEA	LABORATORY EXHAUST AIR
LSA	LABORATORY SUPPLY AIR
M	MANIFOLD FOR RADIANT FLOOR
NLEA	NON-LAB EXHAUST AIR
NLSA	NON-LAB SUPPLY AIR
OA	OUTSIDE AIR
P	PUMP
RA	RETURN AIR
RCP	RADIANT CEILING PANEL
RHC	REHEAT COIL
SA	SUPPLY AIR
SATT	SOUND ATTENUATOR
SF	SUPPLY FAN
SMH	STEAM MANHOLE
TYP	TYPICAL
LH	UNIT HEATER
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW



**PROJECT NAME:**  
**GRIFIN HOSPITAL- PHASE 2**  
**EMERGENCY GENERATOR and DISTRIBUTION**  
**UPGRADES**  
130 DIVISION STREET, DERBY, CT

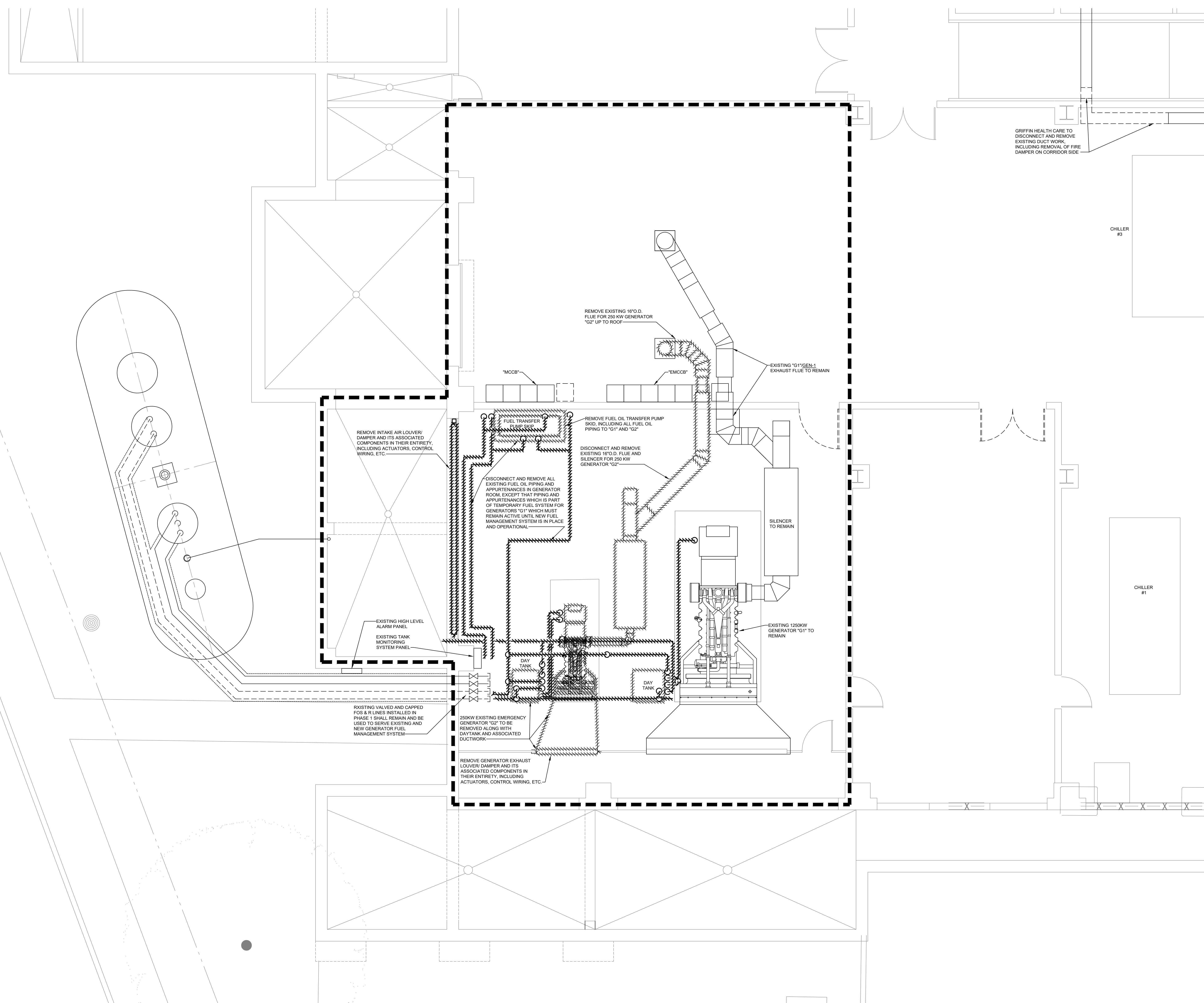
**KEYPLAN**



REVISIONS		
REV.	DATE	DESCRIPTION

**DRAWING TITLE:**  
**MECHANICAL BASEMENT**  
**LEVEL NORTH BUILDING**  
**EXISTING / DEMOLITION**  
**PARTIAL FLOOR PLAN**

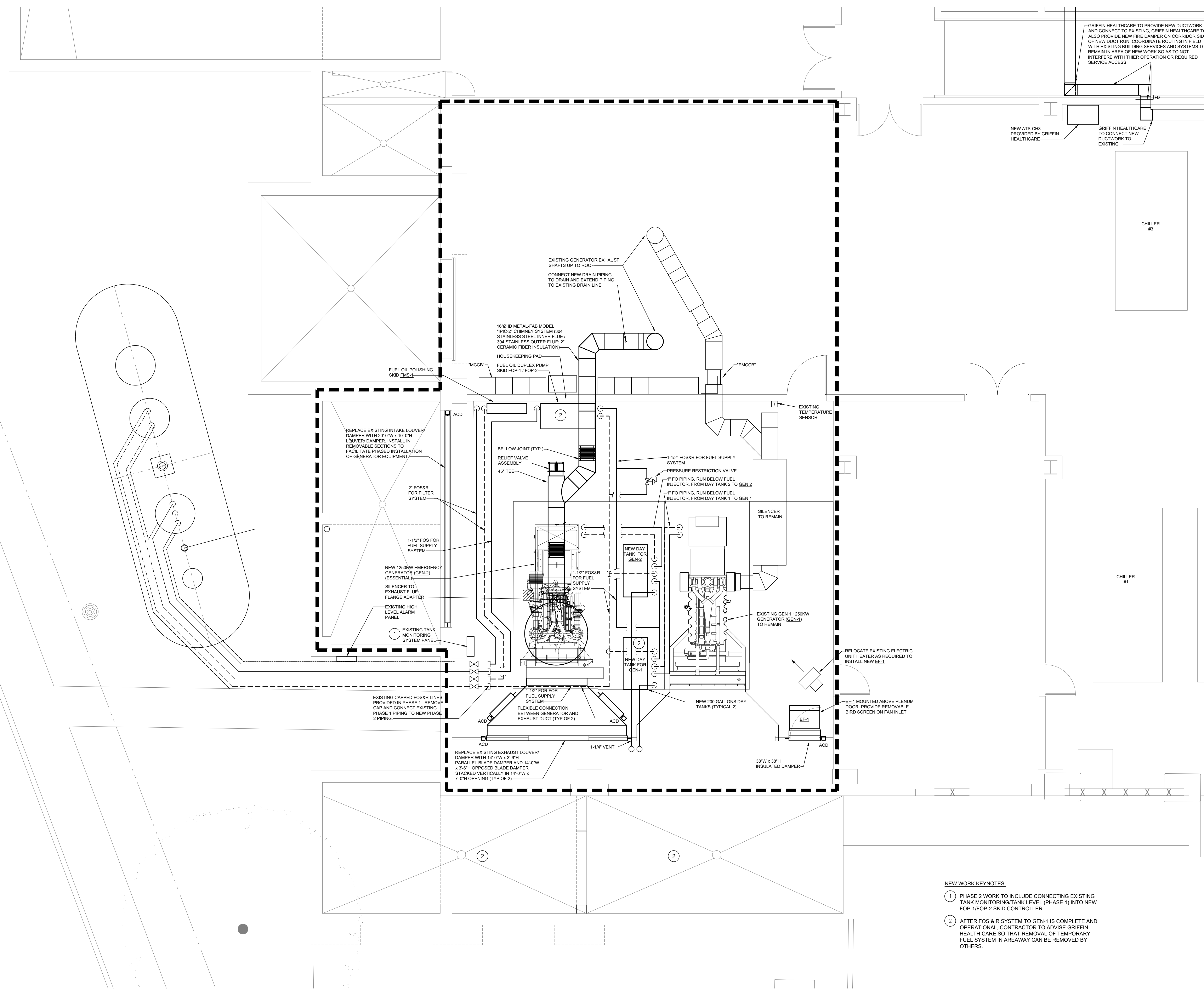
**DATE:** MAY 10, 2024  
**DRAWN BY:** JKC  
**CHECKED BY:** SEP  
**SCALE:** AS NOTED  
**PROJ #:** 2021144.01  
**DRAWING NUMBER:**  
**M100.0**



**1 NORTH BUILDING GENERATOR ROOM - DEMOLITION WORK**  
SCALE: 1/4" = 1'-0"

File Name: M100-FLBA.dwg  
 File Path: U:\2021\2021144 (1) BIM\CAD\Phase 2\Mechanical  
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1 NORTH BUILDING GENERATOR ROOM - NEW WORK  
 SCALE: 1/4" = 1'-0"

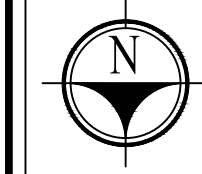
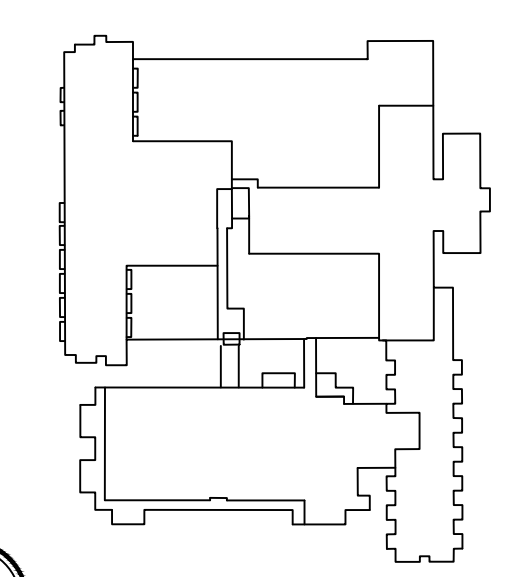
- NEW WORK KEYNOTES:
- PHASE 2 WORK TO INCLUDE CONNECTING EXISTING TANK MONITORING/TANK LEVEL (PHASE 1) INTO NEW FOP-1/FOP-2 SKID CONTROLLER
  - AFTER FOS & R SYSTEM TO GEN-1 IS COMPLETE AND OPERATIONAL, CONTRACTOR TO ADVISE GRIFFIN HEALTH CARE SO THAT REMOVAL OF TEMPORARY FUEL SYSTEM IN AREAWAY CAN BE REMOVED BY OTHERS.



**GRIFFIN HOSPITAL- PHASE 2**  
 EMERGENCY GENERATOR and DISTRIBUTION  
 UPGRADES  
 130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS		
REV.	DATE	DESCRIPTION

DRAWING TITLE:  
**MECHANICAL BASEMENT  
 LEVEL NORTH BUILDING  
 PARTIAL FLOOR PLAN**

DATE: MAY 10, 2024	DRAWING NUMBER:
DRAWN BY: JKC	<b>M100.1</b>
CHECKED BY: SEP	
SCALE: AS NOTED	
PROJ #: 2021144.01	

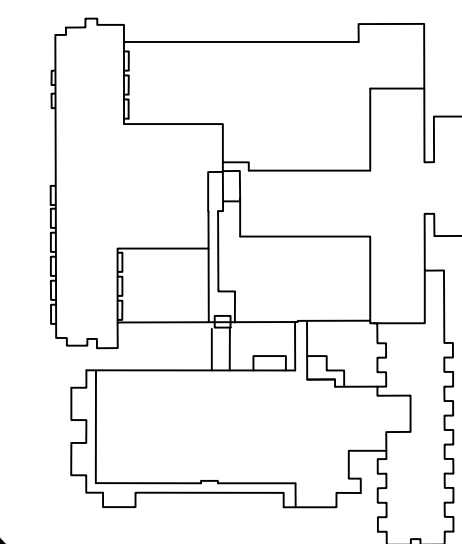


GRIFFIN HEALTH

**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:  
**MECHANICAL FUEL OIL  
DETAILS**

DATE: MAY 10, 2024

DRAWN BY: JKC

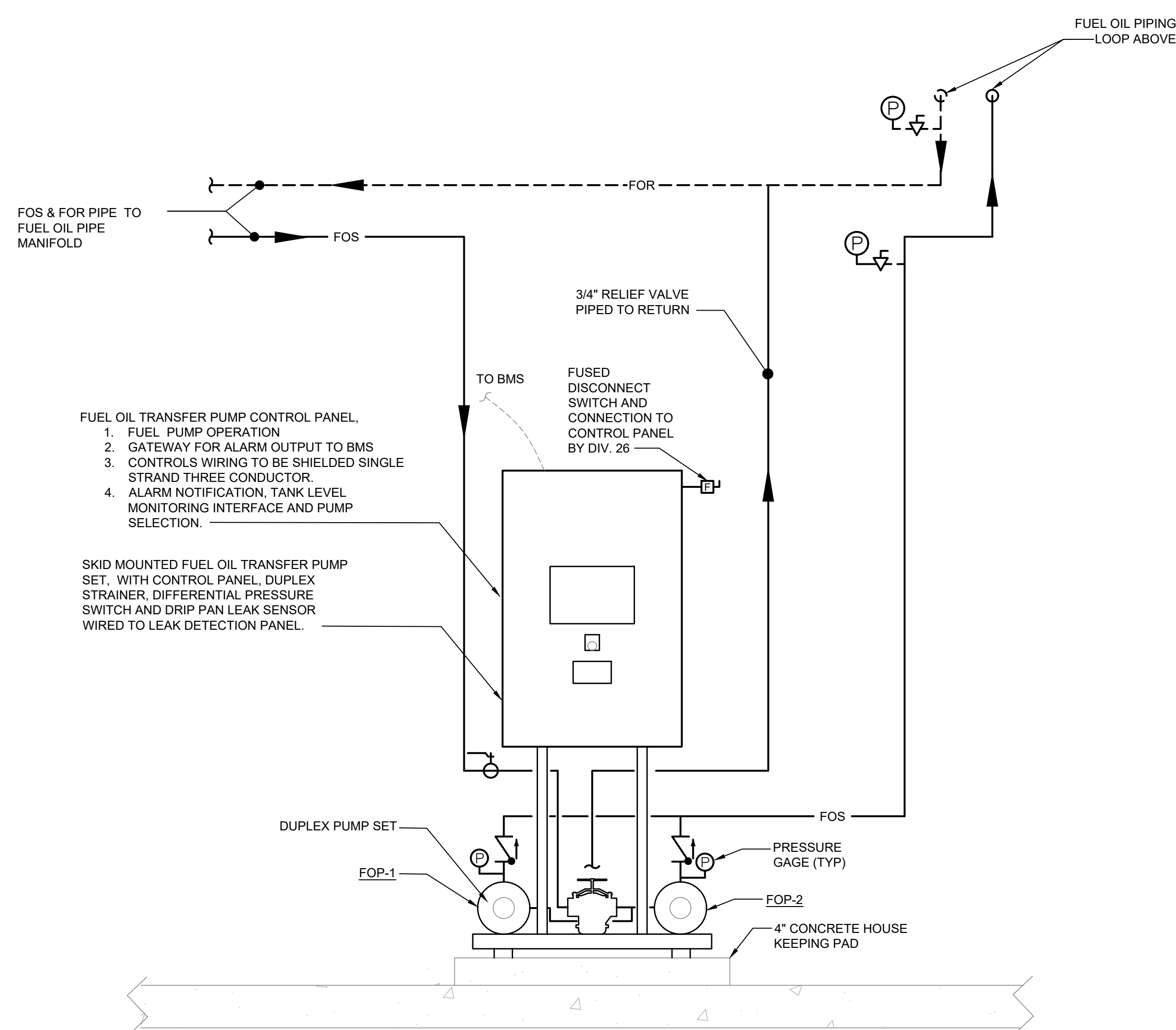
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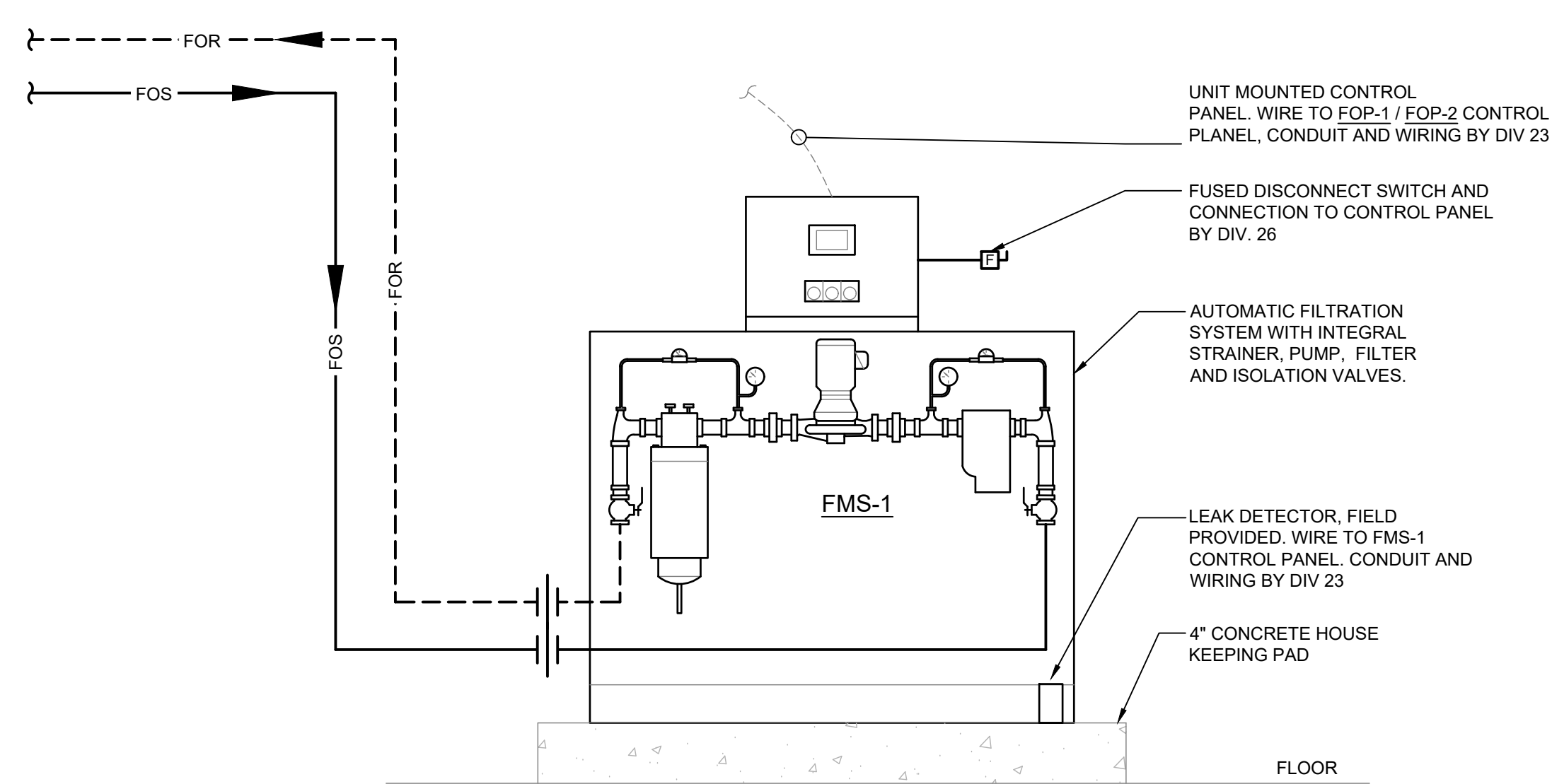
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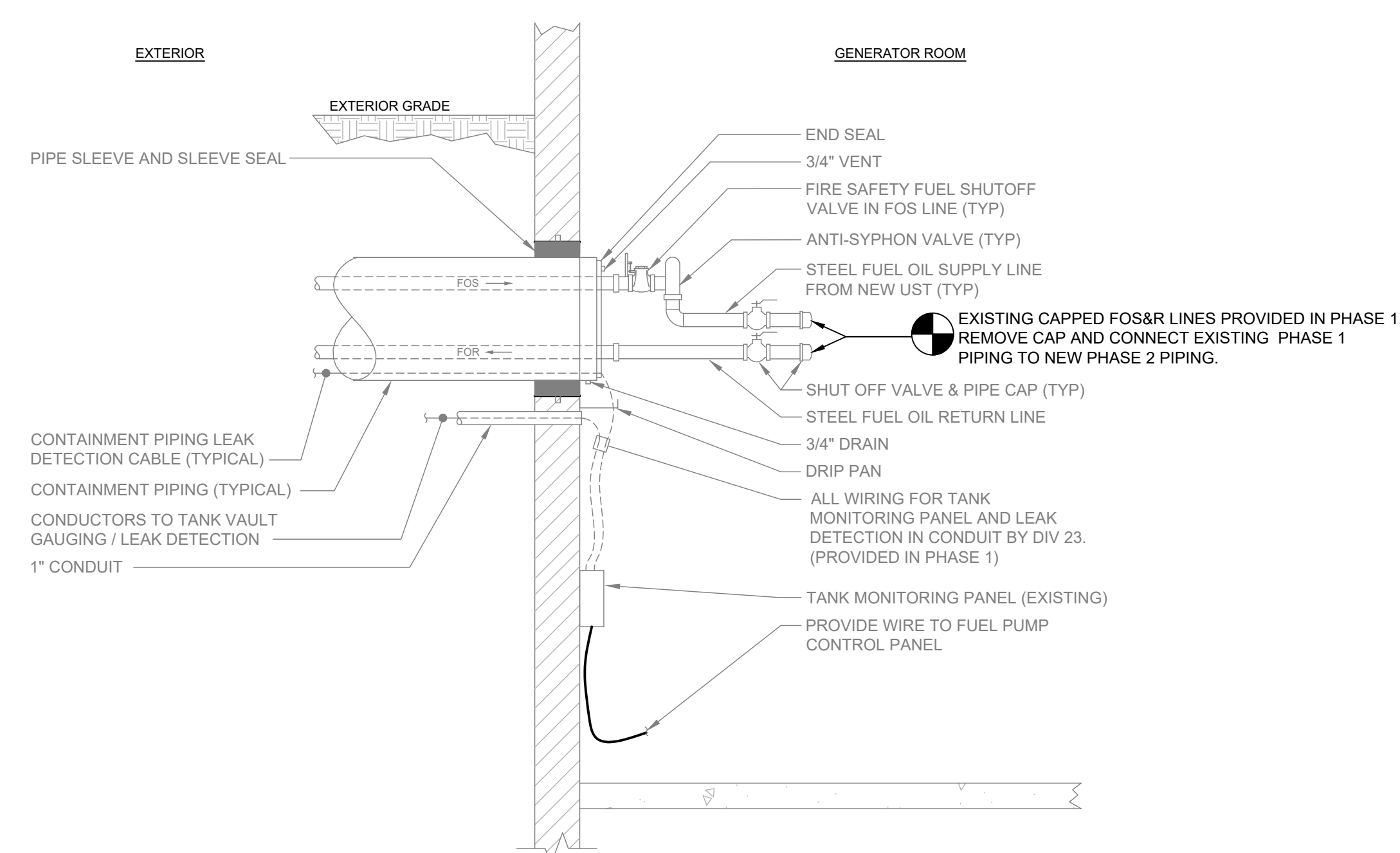
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**1 FUEL OIL TRANSFER PUMP DETAIL**  
NOT TO SCALE

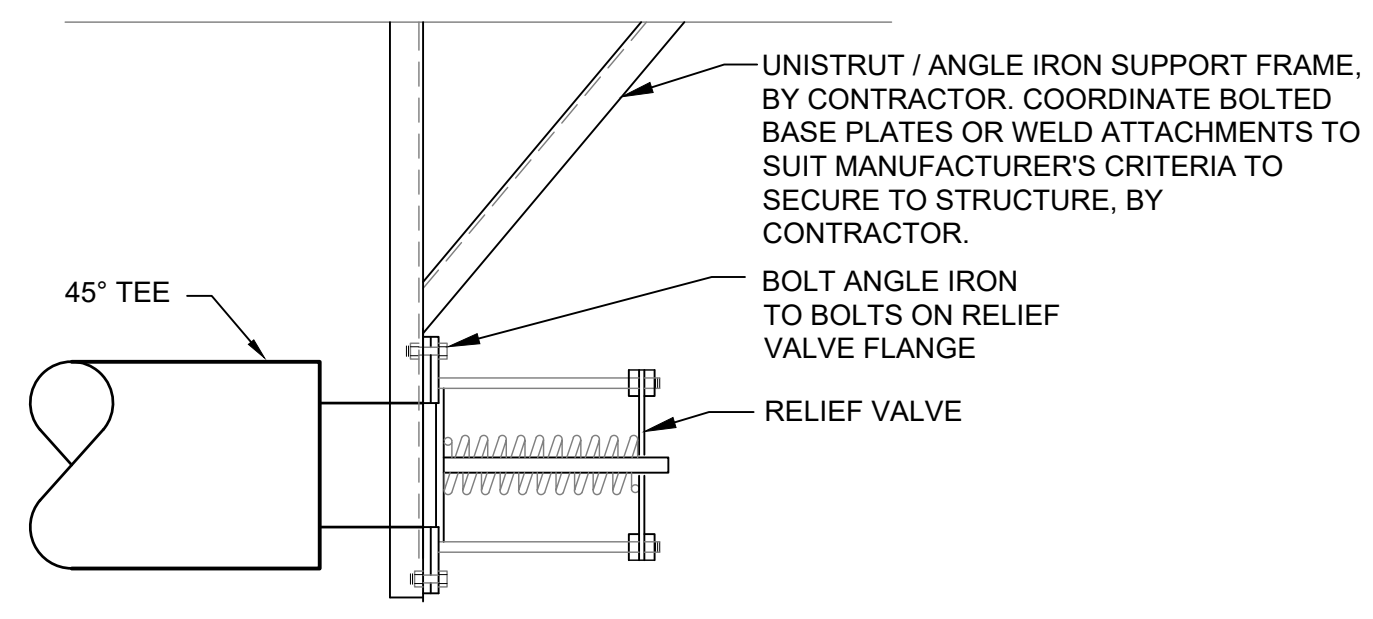
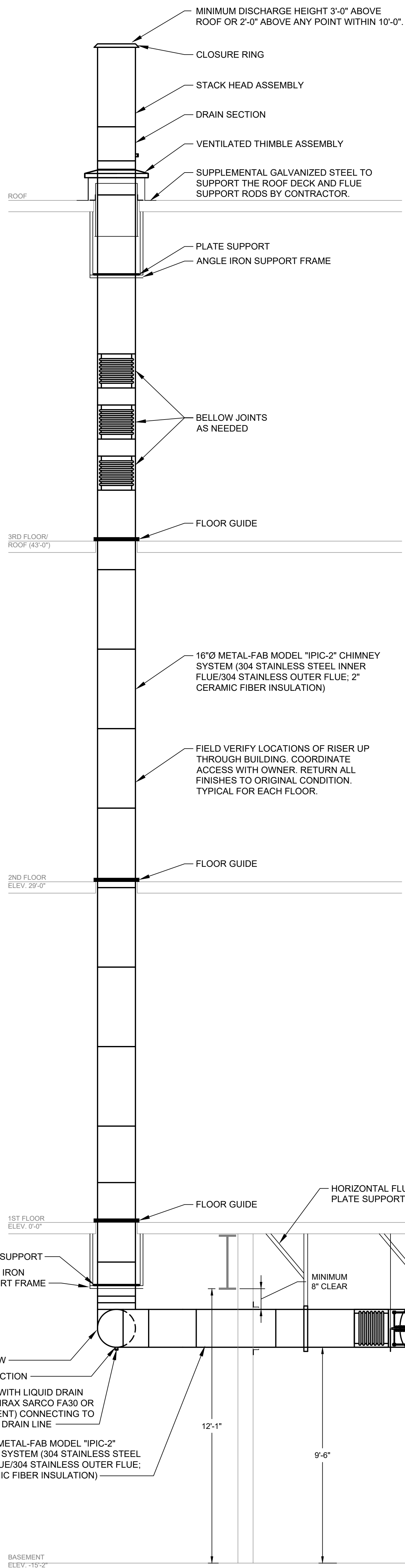


**3 FUEL OIL FILTER DETAIL**  
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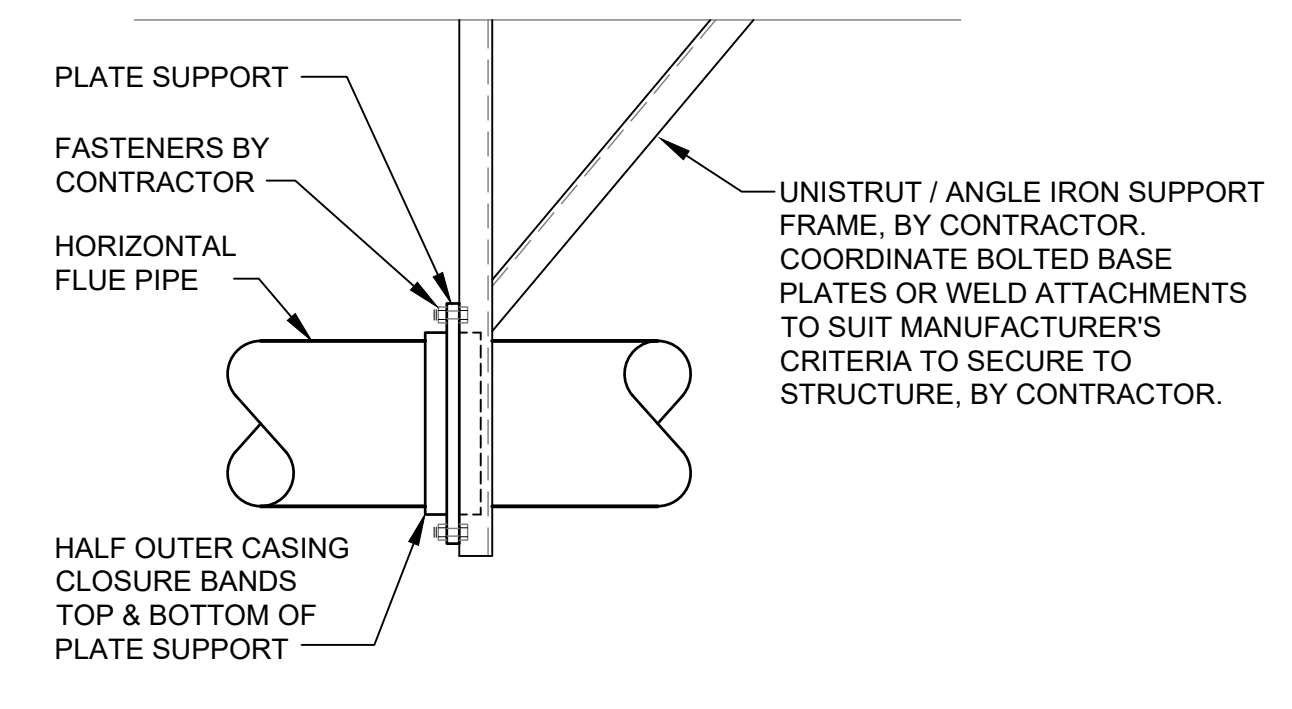


**4 FUEL OIL CONTAINMENT PIPING DETAIL**  
NOT TO SCALE

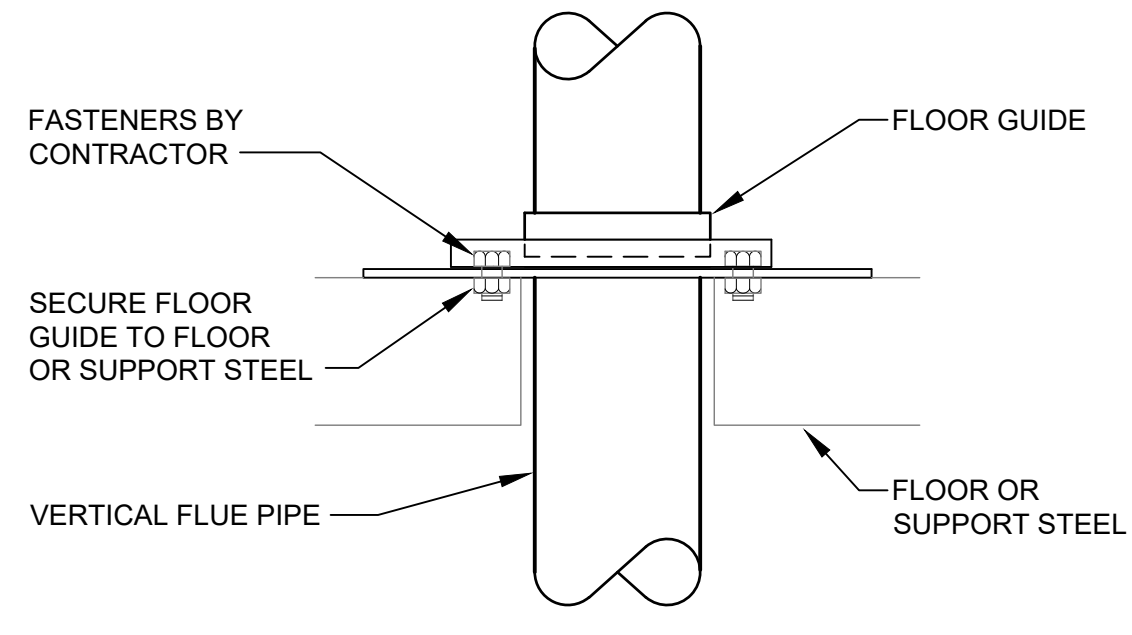




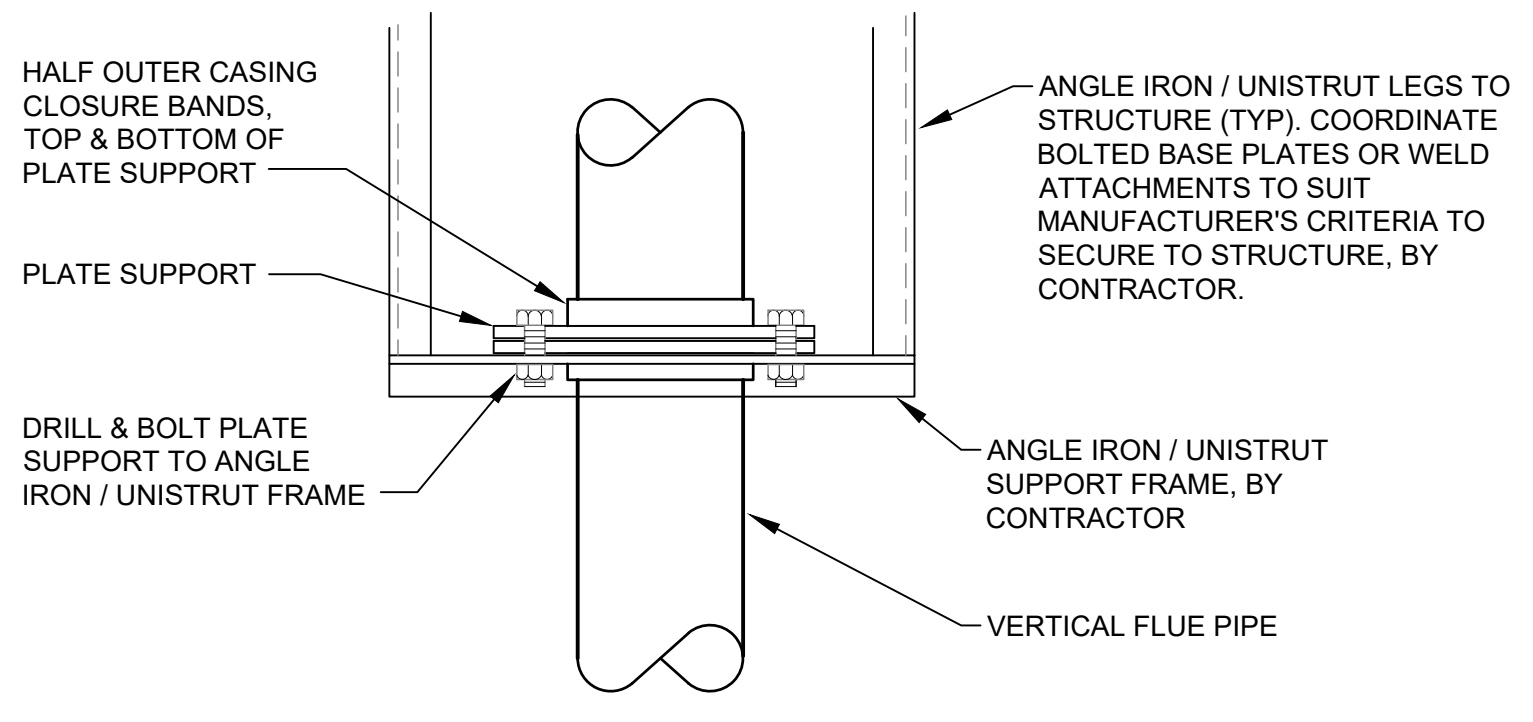
2 RELIEF VALVE BRACING DETAIL  
SCALE: NONE



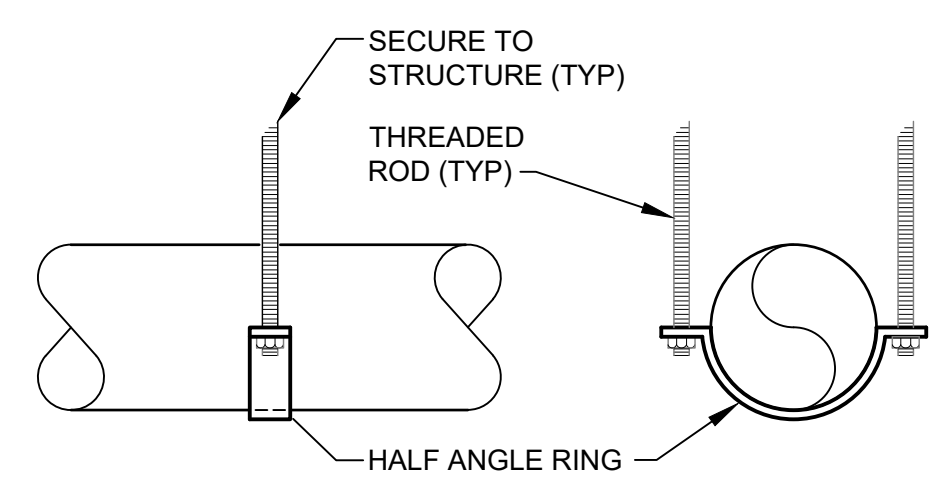
3 HORIZONTAL FLUE PLATE SUPPORT DETAIL  
SCALE: NONE



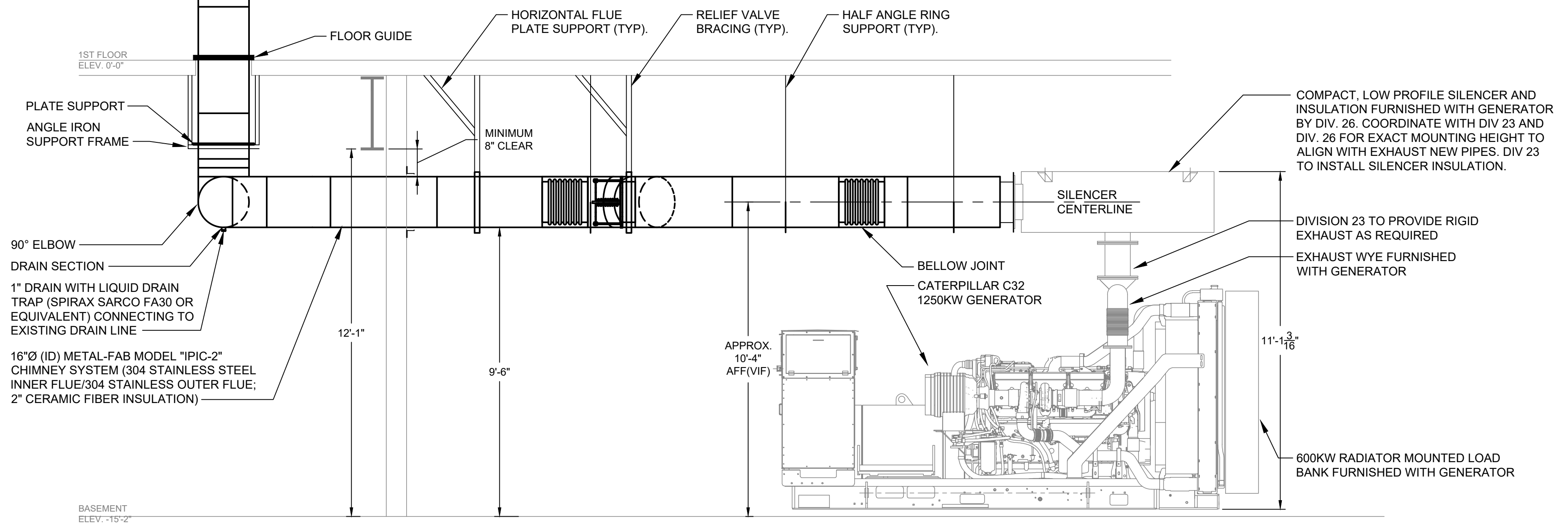
4 VERTICAL FLUE FLOOR GUIDE DETAIL  
SCALE: NONE



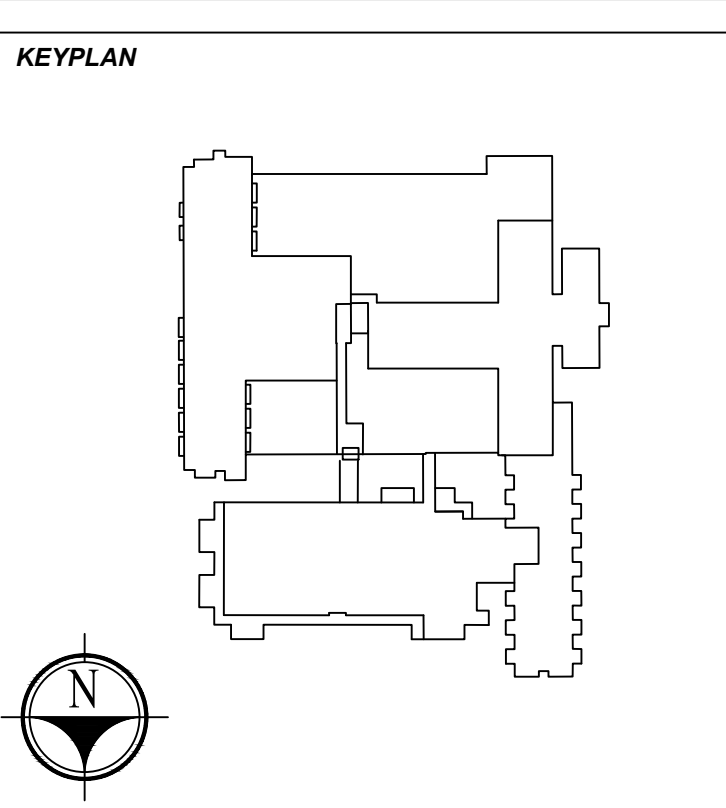
5 VERTICAL FLUE PLATE SUPPORT DETAIL  
SCALE: NONE



6 HALF ANGLE RING SUPPORT DETAIL  
SCALE: NONE



1 GEN-2 NEW EXHAUST STACK ELEVATION - SECTION VIEW  
SCALE: 3/8"=1'-0"



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:  
**MECHANICAL  
GENERATOR  
EXHAUST DETAILS**

DATE: MAY 10, 2024  
DRAWN BY: JKC  
CHECKED BY: SEP  
SCALE: NTS  
PROJ #: 2021144.01

DRAWING NUMBER:  
**M200.1**

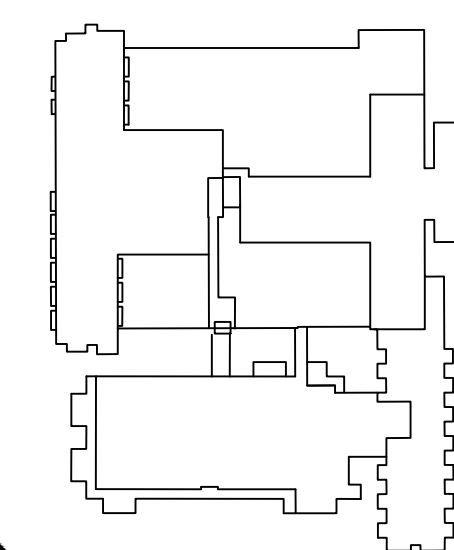


GRIFFIN HEALTH

**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:

**MECHANICAL  
FUEL OIL SYSTEM  
ONLINE AND SCHEDULES**

DATE: MAY 10, 2024

DRAWN BY: JKC

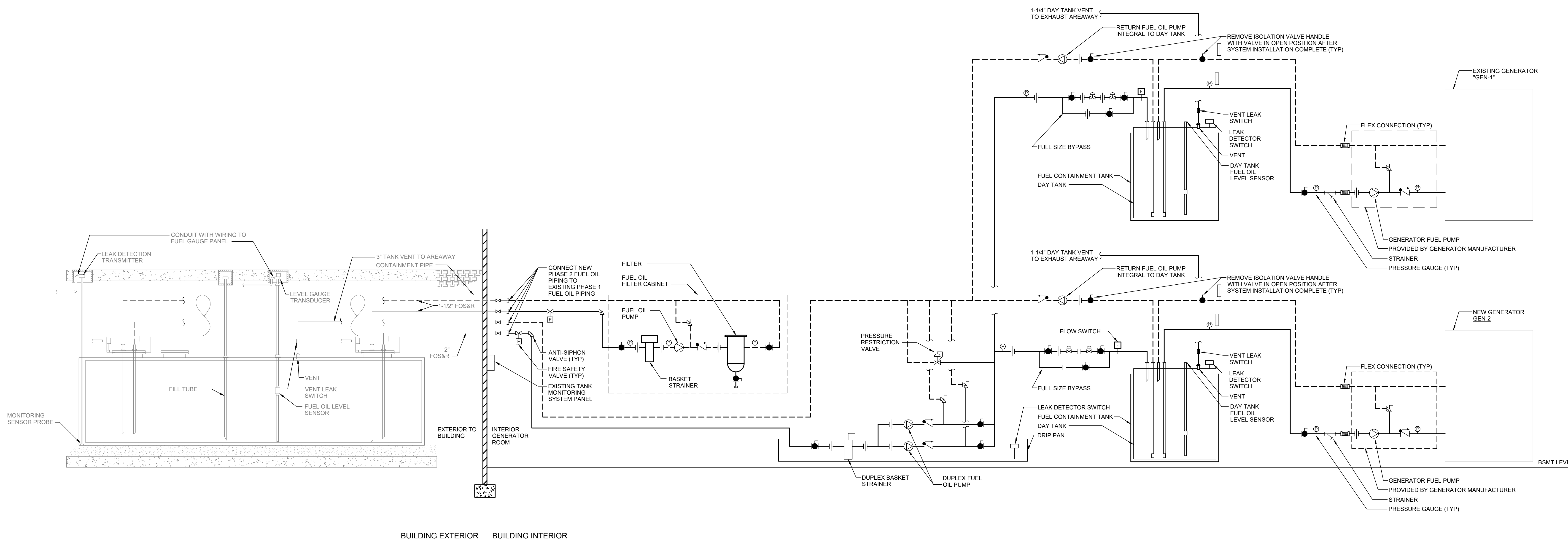
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PROJ #: 2021144.01

DRAWING NUMBER:

**M300.0**



**FUEL OIL PUMP SCHEDULE**

UNIT NO.	LOCATION	SERVING	MANUFACTURER	MODEL & SIZE	TYPE	GPH	HEAD PSI	FLUID	RPM	ELEC. DATA		REMARKS
										MOTOR HP	VOLTS PH	
POP-1 & 2	GENERATOR ROOM	GENERATORS	PREFERRED UTILITIES	ATPSF-201-460-1451-DL	DUPLX	375	50	#2 OIL	1140	1/2	460 3	CONFIGURE CONTROL PANEL AS CENTRAL FUEL SYSTEM CONTROLLER, INCLUDE BAS INTERFACE

NOTES:  
 1. PROVIDE MICROPROCESSOR BASED PUMP 'ATPSF' STYLE W/ BACNET BMS INTERFACE.  
 2. SKID MOUNTED PUMPS AND CONTROL PANEL, INCLUDING DUPLX FUEL OIL STRAINER AND INTEGRAL BASIN LEAK DETECTION AND ALARM.

**FUEL MAINTENANCE SYSTEM SCHEDULE**

UNIT NO.	SERVING	GPH	DISCHARGE PRESSURE (PSIG)	RPM	PUMP QUANTITY	HP	CONNECTION SIZE	DIMENSIONS LxHxW	SERVES	OPERATION	VOLTS	PHASE	REMARKS
FMS-1	FUEL OIL TANK	1200	25	1725	1	3/4	1"	48"x12"x48"	FUEL OIL TANK	26 HOURS EVERY 2 WEEKS	120	1	PREFERRED UTILITIES PF-505-ACS



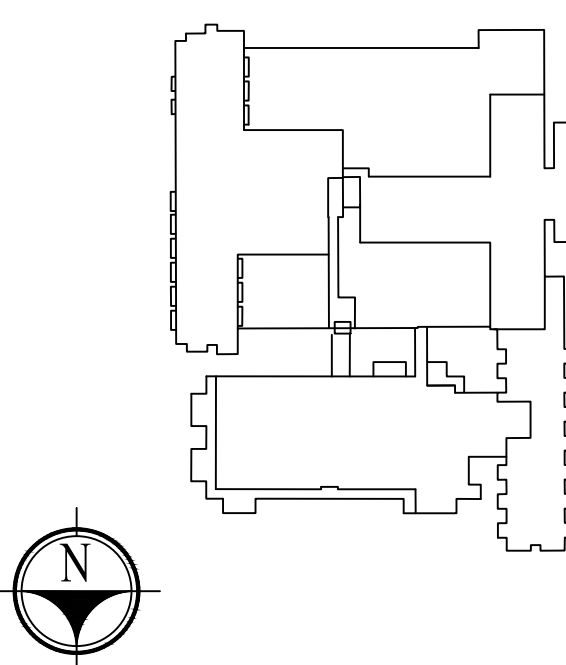
GRIFFIN HEALTH

**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES

130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:

**MECHANICAL  
GENERATOR ROOM  
CONTROLS AND  
SCHEDULE**

DATE: MAY 10, 2024

DRAWN BY: JKC

CHECKED BY: SEP

SCALE: NTS

PROJ #: 2021144.01

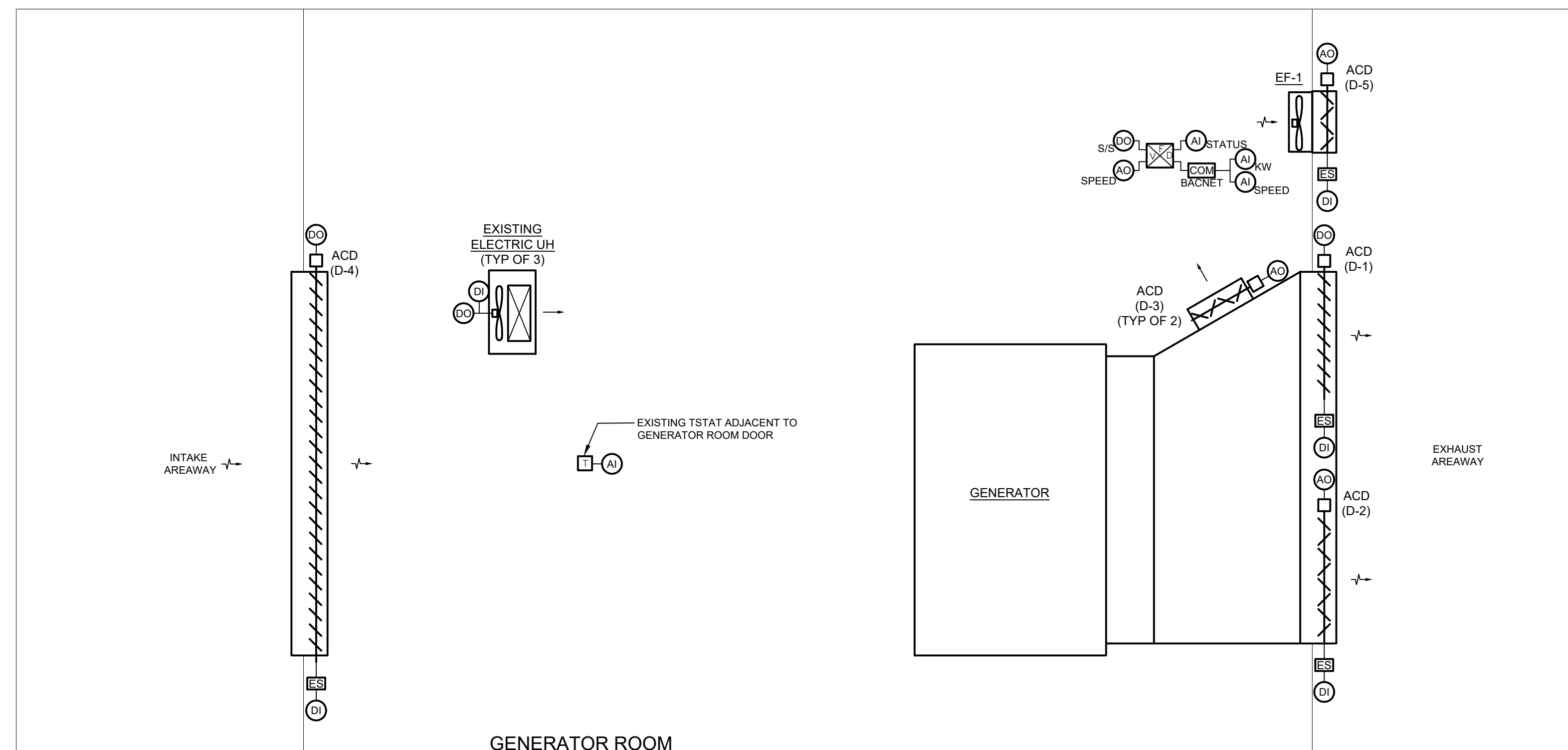
DRAWING NUMBER:

**M400.0**

SEQUENCE OF OPERATION, GENERATOR ROOM

1. EMERGENCY START SEQUENCE

- 1.1 WHEN BMS DETECTS ENGINE CRANKING CONTACT CLOSURE, COMBUSTION AND COOLING AIR INTAKE (D-4) AND ENGINE EXHAUST DAMPERS (D-1) WILL OPEN FULLY ON STORED ENERGY, WITHIN 20 SECONDS (DAMPERS HAVE NORMALLY OPEN ACTUATORS, AND ARE POWERED CLOSED).
- 1.2 INTAKE AND 2-POSITION ENGINE EXHAUST DAMPERS WILL BE AIRFOIL PARALLEL BLADE TYPE AND ENGINE BYPASS (D-3) AND MODULATING EXHAUST (D-2) ARE OPPOSED BLADE TYPE. ALL OUTDOOR / EXHAUST AIR DAMPERS WILL BE THERMALLY BROKEN, INSULATED DAMPERS.
- 1.3 IF ANY OF MAKEUP DAMPERS FAIL TO OPEN, REPORT AN ALARM.
- 1.4 BYPASS DAMPER (D-3) MODULATES OPEN AS EXHAUST DAMPER D-2 MODULATES CLOSED TO FORCE RE-CIRCULATION OF HOT EXHAUST AIR AND MAINTAIN 60°F ROOM TEMPERATURE WHEN ENGINE IS RUNNING.
2. UNIT HEATERS SHALL START WHENEVER ROOM AIR IS LESS THAN 45°F UNTIL ROOM TEMPERATURE REACHES 50°F, UNLESS GENERATOR IS ON.
3. GENERATOR INTAKE AND EXHAUST DAMPERS REMAIN OPEN WHENEVER OUTDOOR AIR TEMPERATURE IS ABOVE 60 DEGREES AND AFTER GENERATOR STOPS FOR AT LEAST 2 MINUTES, OR UNTIL ROOM TEMPERATURE DROPS TO THE HIGHER OF 60°F OR THE OUTDOOR TEMPERATURE.
4. IF OAT > 65°F, OA WILL OPEN AND REMAIN OPEN UNTIL ROOM TEMPERATURE DROPS TO OA TEMPERATURE.
5. IF GENERATOR IS OFF AND ROOM TEMPERATURE EXCEEDS 78°F, OA DAMPER OPENS, EXHAUST FAN DAMPER (D-5) OPENS, AND END SWITCH RUNS EXHAUST FAN EF-1 AT VARIABLE SPEED UNTIL ROOM IS COOLED TO HIGHER OF 75°F OR OUTDOOR TEMPERATURE. IF GENERATOR IS RUNNING, EXHAUST IS BY GENERATOR AND EF-1 REMAINS OFF.



GENERATOR ROOM

1 GENERATOR ROOM CONTROL DIAGRAM  
SCALE: NOT TO SCALE

FAN SCHEDULE

UNIT NO.	LOCATION	SERVING	MANUFACTURER	MODEL & SIZE	CFM	T.S.P.	RPM	SPEED CONTROL	BHP	MHP	ELECTRICAL DATA				LWA	REMARKS
											VOLTS	PH	Hz	RPM		
EF-1	GENERATOR ROOM	GENERATOR ROOM	COOK	24EW620D17	5,000	0.5	1,345	VFD	0.85	2.0	460	3	60	1,725	84	-

### ONE-LINE

SYMBOL	DESCRIPTION
	POTHEAD
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	FUSE
	FUSE & SWITCH
	SWITCH
	CIRCUIT BREAKER
	DRAWOUT CIRCUIT BREAKER
	GROUND
	THERMAL OVERLOAD
	PROTECTIVE RELAY
	AMMETER
	AMMETER SWITCH
	VOLTMETER
	VOLTMETER SWITCH
	SURGE PROTECTION DEVICE
	UTILITY METER
	OWNERS POWER METER
	TRANSFORMER (WITH GROUNDING ON SECONDARY SIDE)
	LIGHTNING ARRESTOR
	GENERATOR
	DELTA
	WYE
	KEY INTERLOCK (NUMBER INDICATES MATCHED PAIRS)
	AUTOMATIC TRANSFER SWITCH (A.T.S.)
	BYPASS / ISOLATION AUTOMATIC TRANSFER SWITCH
	MAIN LUG ONLY PANELBOARD
	MAIN CIRCUIT BREAKER PANELBOARD
	MAIN FUSED SWITCH PANELBOARD
	ISOLATED POWER PANELBOARD
	CIRCUIT BREAKER WITH AMP FRAME OVER AMP TRIP
	FUSE DISCONNECT SWITCH, WITH SWITCH SIZE OVER FUSE SIZE
	POINT OF CONNECTION BETWEEN EXISTING AND NEW WORK
	POINT OF CONNECTION / WIRE TAP
	TRIP UNIT ADJUSTMENT FEATURE: L = LONG TIME, LSI = LONG / SHORT / INSTANTANEOUS LSGI = LONG / SHORT / INSTANTANEOUS / GROUND FAULT

### POWER DEVICES

SYMBOL	DESCRIPTION
	ELECTRICAL PANEL 480 / 277 VOLT
	ELECTRICAL PANEL 208 / 120 VOLT
	SPECIAL-PURPOSE ELECTRICAL PANEL OR EQUIPMENT CABINET
	ELECTRICAL POWER TRANSFORMER
	MAGNETIC STARTER
	FUSED DISCONNECT SWITCH
	COMBINATION MAGNETIC STARTER AND DISCONNECT SWITCH
	ELECTRIC MOTOR
	VARIABLE FREQUENCY DRIVE
	JUNCTION BOX
	HARD-WIRED EQUIPMENT CONNECTION
	RELAY
	PULL BOX, (FEEDERS)

### WIRING

SYMBOL	DESCRIPTION
	BRANCH CIRCUIT WIRING
	BRANCH CIRCUIT SWITCHED WIRING
	CONDUIT UP
	CONDUIT DOWN
	WIRE BREAK
	POINT OF CONNECTION / WIRE TAP
	HOME RUN 3/4\"/>
	OTHERWISE NOTED NOTE: HOME RUN SHALL BE FROM FIRST ELECTRICAL DEVICE BACKBOX IN CIRCUIT TO ELECTRICAL PANEL

### ABBREVIATIONS

SYMBOL	DESCRIPTION
A	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFI / AFCI	ARC FAULT INTERRUPTER
AHF	ACTIVE HARMONIC FILTER
AHU	AIR HANDLING UNIT
C	CONDUIT
CATV	CABLE TELEVISION
C/B	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CIR	CIRCUIT
CUH	CABINET UNIT HEATER
CT	CABLE TRAY
ER	EXISTING TO REMAIN
EF	EXHAUST FAN
ELTR	EXISTING LIGHTING TO REMAIN (WITHIN SPECIFIED AREA)
EM	EMERGENCY
EMT	ELECTRIC METALLIC TUBING
EPTR	EXISTING POWER TO REMAIN (WITHIN SPECIFIED AREA)
EWC	ELECTRIC WATER COOLER
EWK	ELECTRIC WATER HEATER
EXP	EXPLOSION PROOF (INTRINSICALLY SAFE)
F	FUSED
FA	FIRE ALARM
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METALLIC CONDUIT
FUT	FUTURE
G / GND	GROUND
GFI / GFCI	GROUND FAULT INTERRUPTER
IG	ISOLATED GROUND
LMFC	LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT
MAU	MAKE-UP AIR UNIT
MCA	MINIMUM CIRCUIT AMPACITY
MD	MOTORIZED DAMPER
NC	NORMALLY CLOSED
NF	NON-FUSED
NE	NEW LOCATION OF EXISTING RELOCATED
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NR	NEW TO REPLACE EXISTING
P	POLE (SPACE IN PANELBOARD)
PE	PRIMARY ELECTRIC SERVICE
PVC	POLYVINYL CHLORIDE CONDUIT
RE	REMOVE EXISTING
REF	REFRIGERATOR
RL	RELOCATE EXISTING
RMC	RIGID METALLIC CONDUIT
RR	REMOVE AND REPLACE ON NEW SURFACE
RTU	ROOFTOP UNIT
SD	SMOKE DAMPER
SE	SECONDARY ELECTRIC SERVICE
ST	SHUNT STRIP
S&P	SPACE AND PROVISION
T	TELEPHONE (VOICE)
TCP	TEMPERATURE CONTROL PANEL
TV	TELEVISION
TX	TRANSFORMER
TYP	TYPICAL
UNV	UNIVERSAL
VAC	VOLTS AC
W	WIRE OR WATTS
WA OR WAP	WIRELESS ACCESS POINT
WG	WIRE GUARD
WM	SURFACE MOUNTED RACEWAY
WP	WEATHERPROOF

### LEGEND NOTE

THESE LEGENDS AND ABBREVIATIONS DEFINE ITEMS INDICATED ON DRAWINGS. NOT ALL SYMBOLS OR ABBREVIATIONS DEFINED ARE NECESSARILY USED ON THIS PROJECT.

### GENERAL SITE ELECTRICAL NOTES

- A. PRIOR TO ANY EXCAVATION, CALL 811 "CALL BEFORE YOU DIG" TO NOTIFY AFFECTED UTILITIES.
- B. ALL TRENCHING AND BACKFILLING SHALL BE PROVIDED BY DIVISION 2.
- C. ALL CONCRETE PADS ARE PROVIDED BY DIVISION 3.
- D. CONTRACTOR SHALL VERIFY ALL EXISTING SERVICE LOCATIONS.
- E. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR UTILITY COMPANY CHARGES.
- F. COORDINATE ALL SITE WORK WITH OWNER AND UTILITY COMPANIES. REFER TO SITE MEP PLANS FOR ADDITIONAL INFORMATION, DETAILS, AND EXACT LOCATION OF EQUIPMENT.
- G. THE LOCATION AND QUANTITY OF EXISTING UNDERGROUND UTILITIES ARE SHOWN APPROXIMATELY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ENGINEER. DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH OCCUR DUE TO FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. PROTECT ALL EXISTING TO REMAIN UTILITIES FROM DAMAGE DURING NEW CONSTRUCTION.
- H. ANY EXISTING CONDUIT, WIRING, ETC. ROUTED IN AREAS THAT ARE DISTURBED BY CONSTRUCTION WORK OR LOCATED WHERE THE NEW CONSTRUCTION IS BEING ADDED SHALL BE RE-ROUTED AS REQUIRED TO ENSURE CONTINUITY OF EXISTING CIRCUITS.
- I. IF AREA IS BEING EXCAVATED, ABANDONED ELECTRICAL SHALL BE REMOVED. (REMOVE CONDUCTORS AND CONDUIT) IF NO SITE WORK IS BEING DONE IN THESE AREAS, REMOVE CONDUCTORS AND ABANDON CONDUIT IN PLACE AND CAP.
- J. EXISTING UTILITIES SHALL REMAIN TO SERVE EXISTING STRUCTURES UNTIL THEY ARE VACATED. PROVIDE TEMPORARY SERVICES AS REQUIRED. COORDINATE WITH UTILITIES AND OWNER.
- K. INSTALL ALL DUCTBANKS ON UNDISTURBED EARTH WHERE POSSIBLE. WHERE INSTALLED ON DISTURBED EARTH, PROVIDE COMPACTED GRAVEL FILL PER SPECIFICATION SECTION, "COMPACTED GRAVEL FILL".
- L. ALL ELECTRIC DUCTBANKS SHALL BE CONCRETE ENCASED SCHEDULE 40 PVC CONDUIT, UNLESS NOTED OTHERWISE.
- M. ALL CONDUITS SHALL BE INSTALLED WITH NYLON PULL LINES AND FOOTAGE TAPE BETWEEN EACH STRUCTURE FOR FUTURE WORK.
- N. MAINTAIN MINIMUM 30" FROM FINISHED GRADE TO TOP OF ALL DUCTBANKS AND CONDUIT RUNS UNLESS OTHERWISE NOTED.
- O. MAINTAIN MINIMUM OF 12" HORIZONTAL SEPARATION BETWEEN COMMUNICATION, PRIMARY ELECTRIC DUCTBANKS AND SECONDARY FEEDERS.
- P. MAINTAIN MINIMUM OF 60" HORIZONTAL SEPARATION BETWEEN WATER LINES AND EITHER COMMUNICATION, PRIMARY ELECTRIC DUCTBANKS OR SECONDARY FEEDERS.
- Q. MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL SEPARATION BETWEEN STEAM LINES AND EITHER COMMUNICATION OR PRIMARY ELECTRIC DUCTBANKS AND SECONDARY FEEDERS. WHERE DUCTBANKS CROSS STEAM LINES, MAINTAIN A MINIMUM VERTICAL SEPARATION OF 3 FEET AND PROVIDE A MINIMUM OF 8 INCH THICK RIGID FOAM BLUEBOARD TYPE INSULATION EXTENDING AT LEAST 4 FEET IN BOTH DIRECTIONS OF CROSSING.
- R. PROVIDE TWO (2) 45° ELBOWS IN LIEU OF 90° SWEEPS FOR HORIZONTAL DUCTBANK RUNS.
- S. CONDUIT PENETRATIONS INTO VAULTS OR MANHOLES SHALL NOT ENTER AT AN ANGLE. ALL CONDUIT PENETRATIONS SHALL BE PERPENDICULAR TO THE INSIDE WALL SURFACE UNLESS OTHERWISE SPECIFIED.
- T. SEAL ALL TELECOMMUNICATION CONDUITS WITH CABLES AT THE LAST STRUCTURE PRIOR TO CONDUITS ENTERING A BUILDING AND WHERE CONDUITS ENTER A BUILDING WITH TYCO ELECTRONICS "JACKMOON" OR EQUAL QUADPLEX DUCT SEALING PLUGS. SEAL ALL SPARE TELECOMMUNICATION CONDUITS WITH BLANK DUCT PLUGS EQUAL TO TYCO ELECTRONICS "JACKMOON" OR EQUAL.
- U. SEAL ALL POWER CONDUITS WITH CABLES AT THE LAST STRUCTURE PRIOR TO CONDUITS ENTERING A BUILDING AND WHERE CONDUITS ENTER A BUILDING WITH TYCO SEALING BUSHINGS PER SPECIFICATIONS AND DETAILS. SEAL ALL SPARE POWER CONDUITS WITH BLANK DUCT PLUGS EQUAL TO TYCO ELECTRONICS "JACKMOON" OR EQUAL.
- V. WHERE PVC CONDUIT, WHETHER DIRECT BURIED OR IN DUCTBANK, TERMINATES WITHIN A BUILDING OR UTILITY STRUCTURE, THE PVC CONDUIT SHALL TRANSITION TO RIGID METAL CONDUIT AT LEAST 10 FEET PRIOR TO ENTERING BUILDING OR UTILITY STRUCTURE.
- W. BOND ALL METALLIC EQUIPMENT IN MANHOLE TO THE MANHOLE GROUND RING, THIS INCLUDES, BUT IS NOT LIMITED TO: COVER FRAME ASSEMBLY, RIGID METAL CONDUITS, CABLE SHIELDS, AND GROUND CONDUCTORS. PULLING EYES SHALL BE USED IN MANHOLES/HANDHOLES.

### GENERAL ELECTRICAL DEMOLITION NOTES

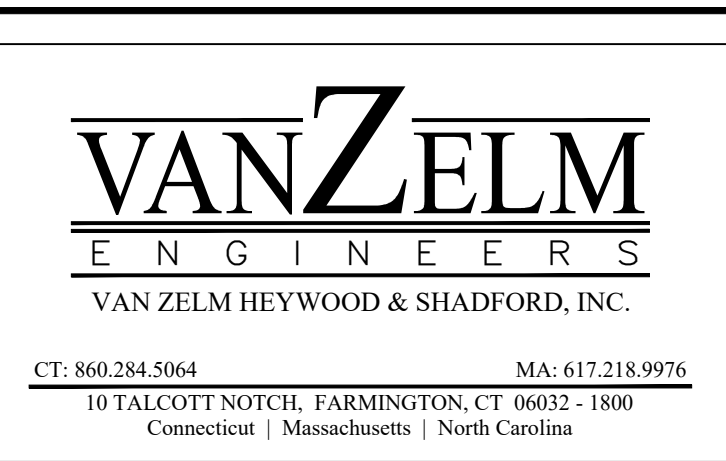
- A. REMOVE EXISTING ELECTRICAL EQUIPMENT WITHIN DESIGNATED AREA AS NOTED, INCLUDING ASSOCIATED WIRING BACK TO SOURCE OR TO LAST ACTIVE DEVICE, CONDUIT, ETC. IN PREPARATION FOR NEW WORK. THIS WORK INCLUDES COMPLETE DEMOLITION OF ITEMS INDICATED ON DEMOLITION PLANS.
- B. REMOVE ANY EXISTING LOW VOLTAGE SYSTEMS AND EQUIPMENT WITHIN DESIGNATED AREA AS NOTED, INCLUDING OUTLETS, ETC. AND ASSOCIATED WIRING BACK TO SOURCE OR TO LAST ACTIVE DEVICE.
- C. REMOVE EXISTING FIRE ALARM SYSTEM DEVICE IN AREA DESIGNATED AS NOTED, INCLUDING BUT NOT LIMITED TO, FIRE ALARM DEVICES, WIRING, CONDUIT, BOXES, PANELS, ETC. COORDINATE REMOVAL WORK WITH INSTALLATION OF NEW FIRE ALARM SYSTEM DEVICES SUCH THAT AN OPERATIONAL FIRE ALARM SYSTEM IS MAINTAINED THROUGHOUT PERIODS OF BUILDING OCCUPATION. COORDINATE ANY SERVICE SHUT-DOWN WITH LOCAL FIRE OFFICIAL AND OWNER. PROVIDE FIRE WATCH AS REQUIRED.
- D. DISCONNECT AND REMOVE EXISTING WIRING, CONDUIT, BOXES, ETC. SERVING ALL EQUIPMENT BEING REMOVED BY MECHANICAL AND OTHER TRADES. REFER TO PLUMBING AND MECHANICAL AND DRAWINGS FOR COORDINATION OF REQUIRED WORK. REMOVALS SHALL BE BACK TO SOURCE PANEL COMPLETE.
- E. EXISTING ELECTRICAL ITEMS THAT ARE BEING DISCONNECTED AND REMOVED AND NOT BEING REUSED SHALL BE DISPOSED OF PROPERLY.
- F. ALL ABANDONED ELECTRICAL WIRING AND DEVICES SHALL BE REMOVED.
- G. IF CONTINUITY OF WIRING TO EXISTING ELECTRICAL ITEMS IS INTERRUPTED BY REMOVAL OF DEVICES, CONTRACTOR SHALL INSTALL ALL NECESSARY WIRING AND RACEWAY TO ENSURE THE CONTINUITY OF CIRCUITRY IN OTHER AREAS.
- H. WIRING FOR ITEMS BEING REMOVED SHALL BE REMOVED BACK TO POWER SOURCE OR LAST DEVICE TO REMAIN ACTIVE UNLESS NOTED OTHERWISE.
- I. NOTIFY CONSTRUCTION MANAGER OR GENERAL CONTRACTOR OF OPENINGS CAUSED BY REMOVAL OF EXISTING EQUIPMENT NOT BEING REPLACED. ENSURE THE PATCHING IS COMPLETE.
- J. INSTALL BLANK COVER PLATES ON RECESSED OUTLET BOXES ABANDONED UNDER THIS CONTRACT IN WALLS THAT ARE TO REMAIN.
- K. THE BUILDING WILL BE OCCUPIED DURING DEMOLITION. COORDINATE PHASING OF DEMOLITION WORK WITH CONSTRUCTION MANAGER OR GENERAL CONTRACTOR. EXISTING PANELS MAY NEED TEMPORARY RE-FEED. ENSURE CONTINUITY OF SERVICES.

### GENERAL ELECTRICAL NOTES

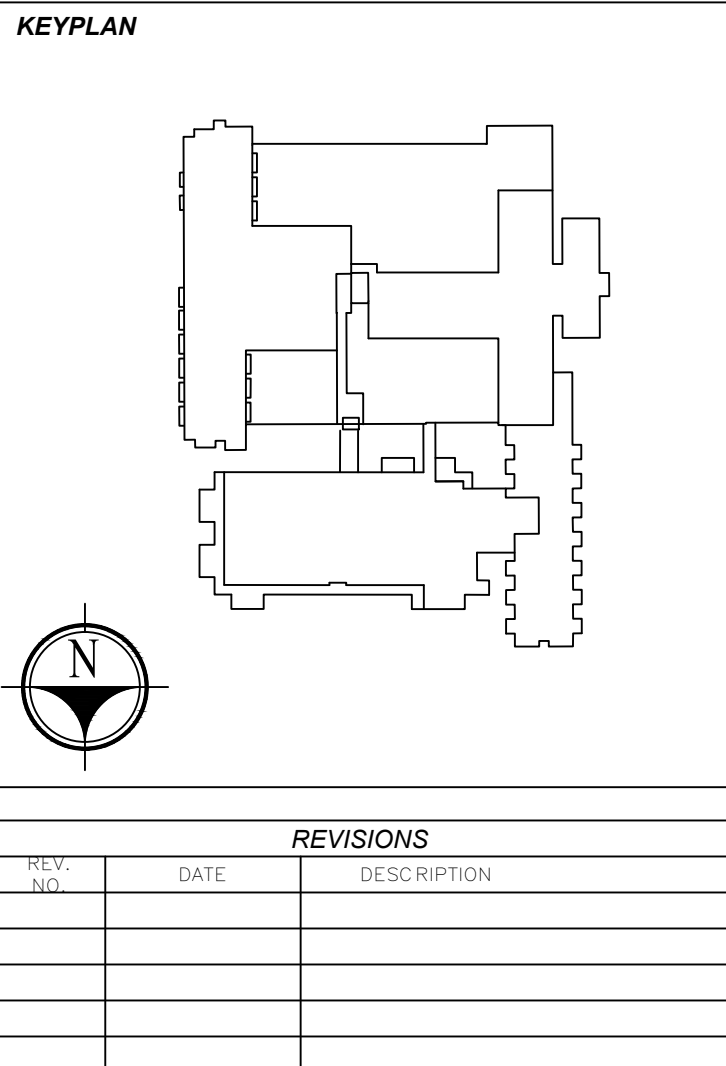
- A. ALL HOMERUNS/CIRCUITS TO BE #212, #12G, 3/4" TO A 20A-1P CIRCUIT BREAKER IN DESIGNATED PANEL, UNLESS NOTED OTHERWISE. NUMBERS SHOWN AT EACH DEVICE/HOMERUN REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD.
- B. WIRE AND RACEWAY SIZES INDICATED ON HOMERUNS/CIRCUITS SHALL BE CONTINUOUS FOR ENTIRE LENGTH, UNLESS NOTED OTHERWISE.
- C. ALL WIRING (CONDUITS, ETC.) TO BE CONCEALED. NO SURFACE WIRING SHALL BE INSTALLED IN FINISHED AREAS. THIS CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CHANNELING AND PATCHING REQUIRED OF EXISTING WALL AND FLOORS TO ACCOMMODATE NEW WIRING.
- D. ALL WIRING ABOVE CEILING THAT IS NOT IN CONDUIT AND IS LOCATED IN A PLENUM SPACE SHALL BE PLENUM RATED. REFER TO MECHANICAL PLANS FOR PLENUM AREA.
- E. ELECTRICAL CONDUITS, WIRING, BOXES, ETC. SHALL NOT PENETRATE STAIR ENCLOSURE, UNLESS THEY ARE FEEDING DEVICES LOCATED WITHIN THE STAIR ENCLOSURE.
- F. PROVIDE ELECTRICAL OUTLET PLATE GASKET SEALS AT RECEPTACLES, SWITCHES AND OTHER ELECTRICAL BOXES ON EXTERIOR WALLS AND INTERIOR WALLS BETWEEN CONDITIONED AND NON-CONDITIONED SPACES.
- G. ALL INDIVIDUAL OR GENERAL PURPOSE BRANCH 120 VOLT CIRCUITS OVER 100'-0" IN CONDUCTOR LENGTH SHALL BE INCREASED ONE WIRE SIZE (i.e. FROM #12AWG TO #10AWG) AND CIRCUITS OVER 170'-0" IN CONDUCTOR LENGTH SHALL BE INCREASED TWO WIRE SIZES (i.e. FROM #12AWG TO #8AWG) UNLESS NOTED OTHERWISE.
- H. ALL INDIVIDUAL OR GENERAL PURPOSE BRANCH 277 VOLT CIRCUITS OVER 230'-0" IN CONDUCTOR LENGTH SHALL BE INCREASED ONE WIRE (i.e. FROM #12AWG TO #10AWG) AND CIRCUITS OVER 380'-0" IN CONDUCTOR LENGTH SHALL BE INCREASED TWO WIRE SIZES (i.e. FROM #12AWG TO #8AWG) UNLESS NOTED OTHERWISE.
- I. PROVIDE UNIVERSAL BLANK PLUGS ON ALL SPARE CONDUIT EQUAL TO CARLON 'MAEPG' SERIES.
- J. SEAL ALL CONDUITS AT THE LAST STRUCTURE PRIOR TO CONDUITS ENTERING A BUILDING AND WHERE CONDUITS ENTER A BUILDING WITH CARLON 'MAT' OR 'MAG' SERIES DUCT PLUG FOR CONDUITS WITH WIRES AND CARLON 'WAE' SERIES FOR SPARE CONDUITS OR EQUAL. ALL SPARE CONDUITS SHALL HAVE NYLON PULL STRING AND FOOTAGE TAPE.
- K. RACEWAY AND WIRING INDICATED ON DRAWINGS ARE RECOMMENDATIONS FOR SPECIFIC ROUTES OR SPECIAL CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL ROUTING.
- L. ALTHOUGH ALL FEEDER AND BRANCH CIRCUIT WIRE AND CONDUIT IS NOT SPECIFICALLY SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE FEEDER AND BRANCH CIRCUIT WIRING SYSTEM BE INSTALLED.

### GENERAL POWER NOTES

- A. COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, SWITCHES, FIRE ALARM DEVICES, ETC. WITH ELECTRICAL PLANS, ELEVATIONS AND DETAILS PRIOR TO START OF WORK. REQUEST CLARIFICATIONS FROM ENGINEER PRIOR TO INSTALLATION.
- B. ANY RECEPTACLE LOCATED WITHIN 6'-0" OF A WATER SOURCE SHALL BE A GFI RECEPTACLE OR PROTECTED BY A GFI CIRCUIT BREAKER.
- C. UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE FOR ELECTRICAL REQUIREMENTS OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION, ETC.) EQUIPMENT. REFER TO DRAWINGS FOR EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
- D. DO NOT INSTALL OUTLETS BACK TO BACK. PROVIDE MINIMUM 24 INCH HORIZONTAL SPACING IN FIRE RATED WALLS. MOUNT LOW VOLTAGE AND POWER OUTLETS IN DIFFERENT STUD WALL CAVITIES.
- E. WHEN THE COMBINING OF CIRCUITS OR HOMERUNS IS PERMITTED ELSEWHERE IN THE CONTRACT DOCUMENTS, RACEWAYS SHALL BE LIMITED TO SIX CURRENT CARRYING CONDUCTORS (THREE PHASE AND THREE NEUTRALS) AND GROUNDING CONDUCTOR UNLESS OTHERWISE INDICATED. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH SINGLE PHASE CIRCUIT UNLESS AN OVERSIZED NEUTRAL IS SPECIFICALLY INDICATED. CONDUCTORS MUST BE DERATED PER THE NATIONAL ELECTRICAL CODE WHEN MORE THAN THREE CURRENT CARRYING CONDUCTORS ARE RUN IN THE SAME RACEWAY.
- F. PROVIDE NYLON PULL STRING IN ALL EMPTY CONDUIT SYSTEMS FOR USE IN INSTALLING SYSTEM WIRING.
- G. COORDINATE EXACT LOCATION OF JUNCTION BOX FOR EQUIPMENT WHICH IS FURNISHED BY OWNER OR OTHERS WITH EQUIPMENT SUPPLIER PRIOR TO CONSTRUCTION. PROVIDE WIRING FROM JUNCTION BOX TO EQUIPMENT CONNECTION AS REQUIRED.
- H. WIRING INDICATED BY CIRCUIT NUMBER SYMBOL SHALL INCLUDE A NEUTRAL WHEN THE LOAD SERVED HAS PROVISIONS FOR, OR REQUIRES A NEUTRAL. TYPICALLY ALL FEEDERS AND BRANCH CIRCUITS WILL REQUIRE A NEUTRAL, EXCEPT MOST MOTOR CIRCUITS.



**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT



#### REVISIONS

REV.	DATE	DESCRIPTION

**DRAWING TITLE:**  
ELECTRICAL LEGENDS  
AND GENERAL NOTES

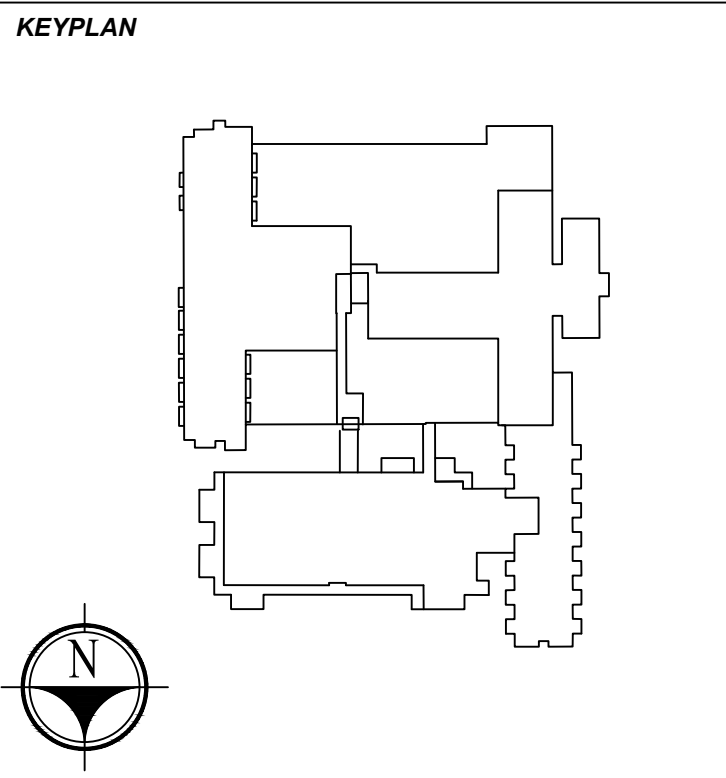
**DRAWING NUMBER:**  
**E001**

DATE: MAY 10, 2024  
DRAWN BY: EMG  
CHECKED BY: SEP  
SCALE: NONE  
PROJ #: 2021144.01

BLE AVENUE  
 DIVISION STREET  
 SEYMOUR  
 G.H. parking lot



**GRIFFIN HOSPITAL- PHASE 2**  
 EMERGENCY GENERATOR and DISTRIBUTION  
 UPGRADES  
 130 DIVISION STREET, DERBY, CT



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:  
**ELECTRICAL  
 BASEMENT LEVEL  
 EXISTING / DEMOLITION  
 OVERALL FLOOR PLAN**

DATE: MAY 10, 2024	DRAWING NUMBER:
DRAWN BY: EMG	<b>E100.0</b>
CHECKED BY: SEP	
SCALE: 1/16"=1'-0"	
PROJ #: 2021144.01	



GRIFFIN HEALTH

C.I.I. parking lot

MOUN

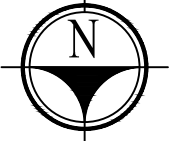
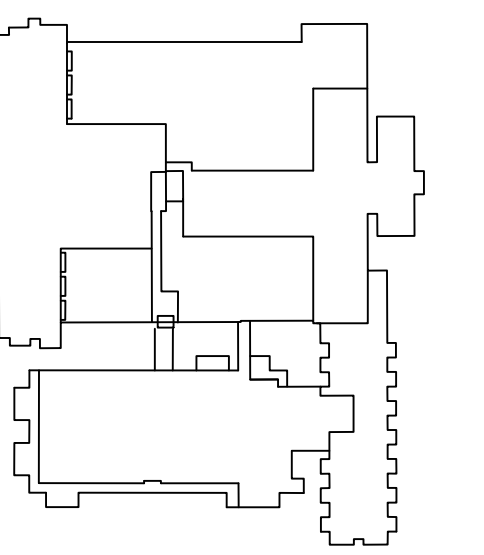
SEYMOUR

G.H. parking lot

**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

**DRAWING TITLE:**  
ELECTRICAL  
BASEMENT LEVEL  
NEW WORK OVERALL  
FLOOR PLAN

**DRAWING NUMBER:**  
**E100.1**

DATE: MAY 10, 2024  
DRAWN BY: EMG  
CHECKED BY: SEP  
SCALE: 1/16"=1'-0"  
PROJ #: 2021144.01

BLE AVENUE  
DIVISION STREET



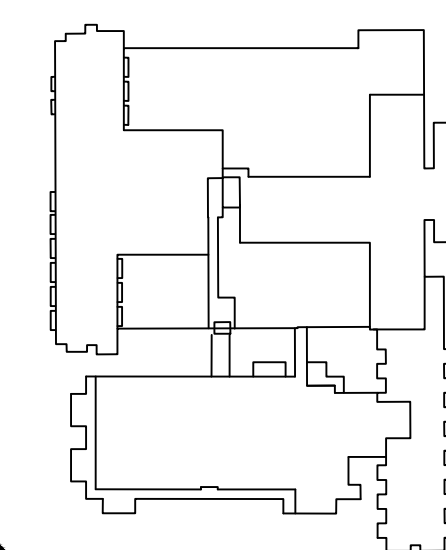
APPROXIMATE LOCATION OF  
PANEL "W151" ON GROUND  
FLOOR ABOVE. REFER TO  
DWG E101.0



**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

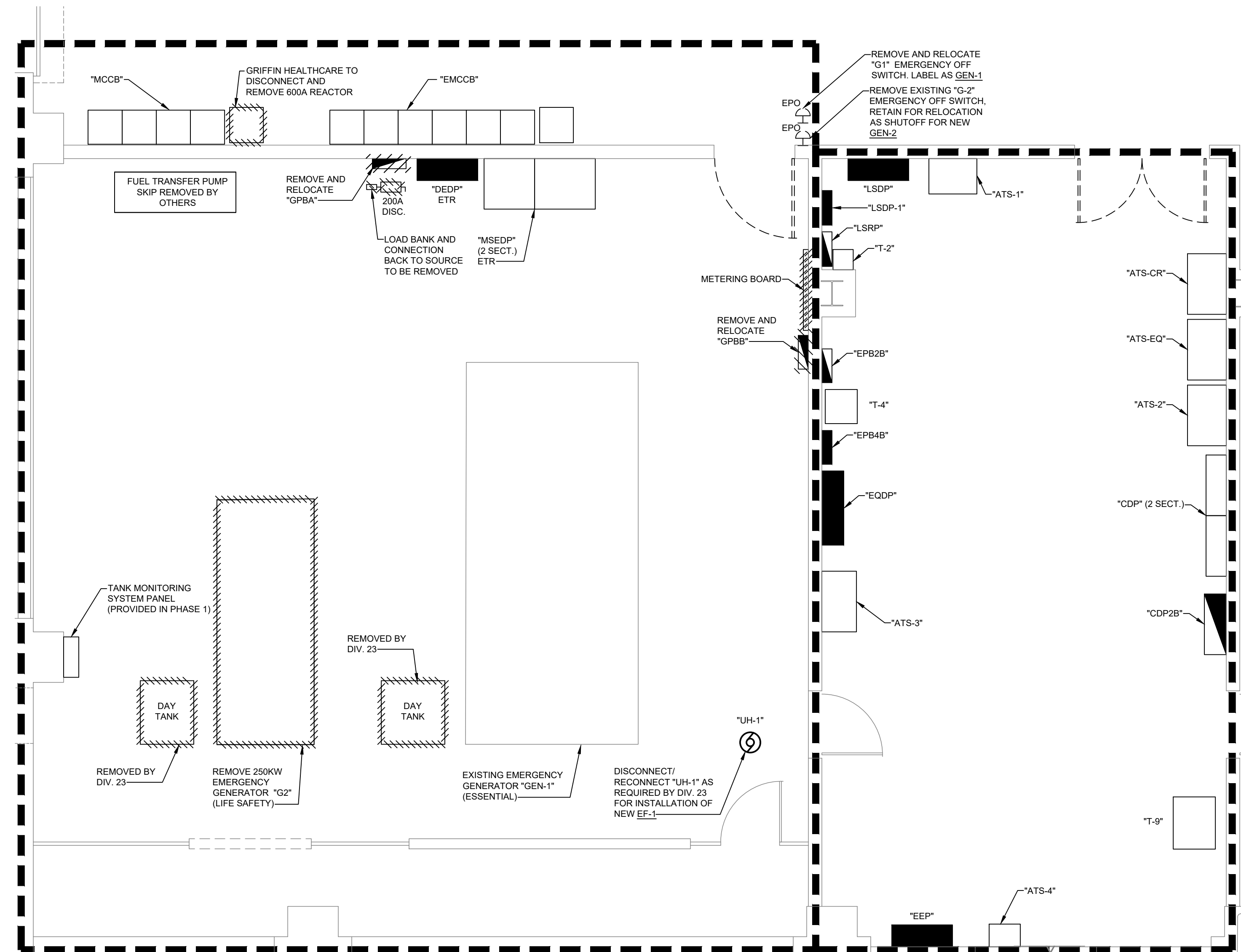
KEY PLAN



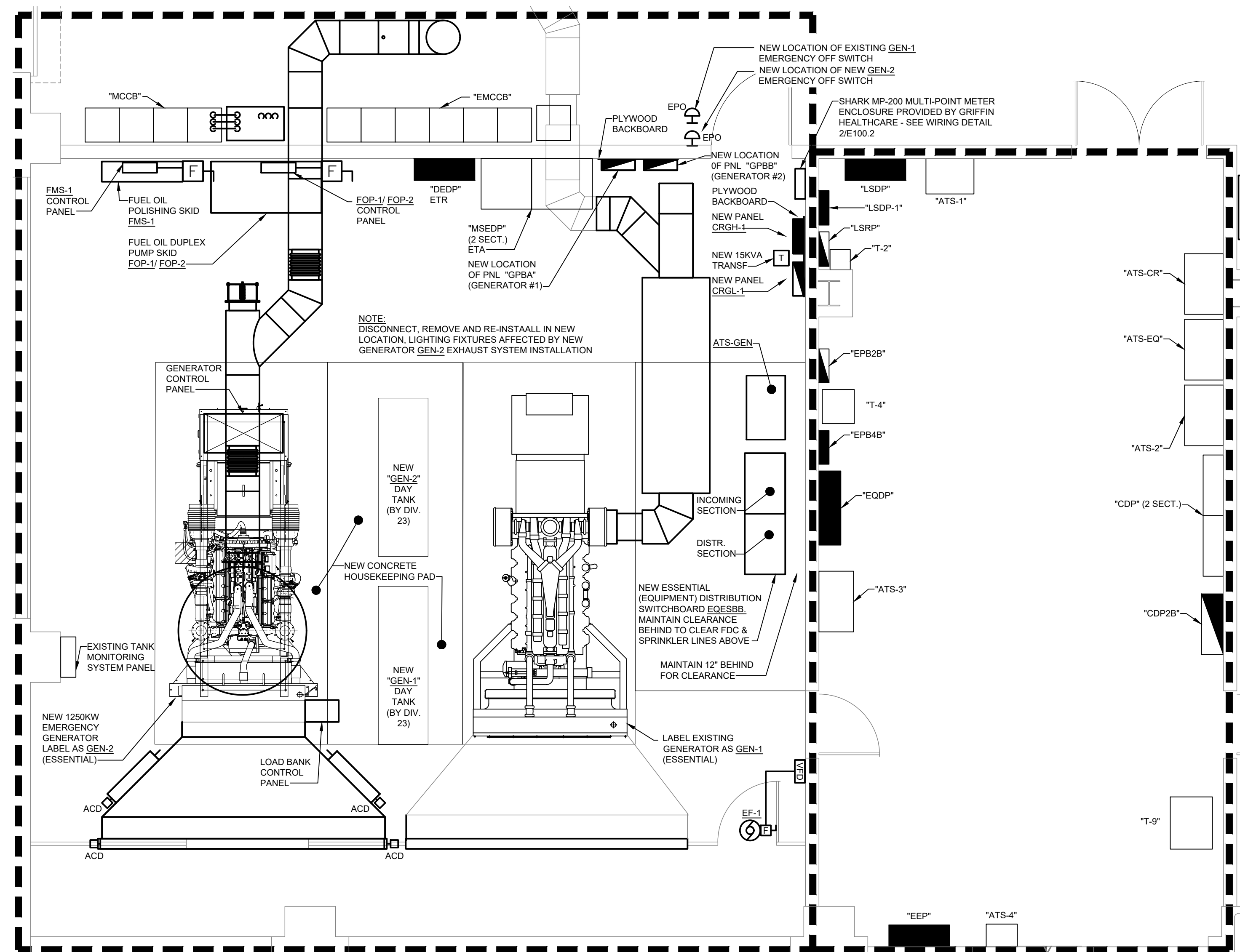
REVISIONS		
REV.	DATE	DESCRIPTION

DRAWING TITLE:  
**ELECTRICAL BASEMENT LEVEL  
NORTH BUILDING  
PARTIAL FLOOR PLANS  
AND DETAILS**

DATE: MAY 10, 2024  
DRAWN BY: EMG  
CHECKED BY: SEP  
SCALE: AS NOTED  
PROJ #: 2021144.01  
DRAWING NUMBER:  
**E100.2**

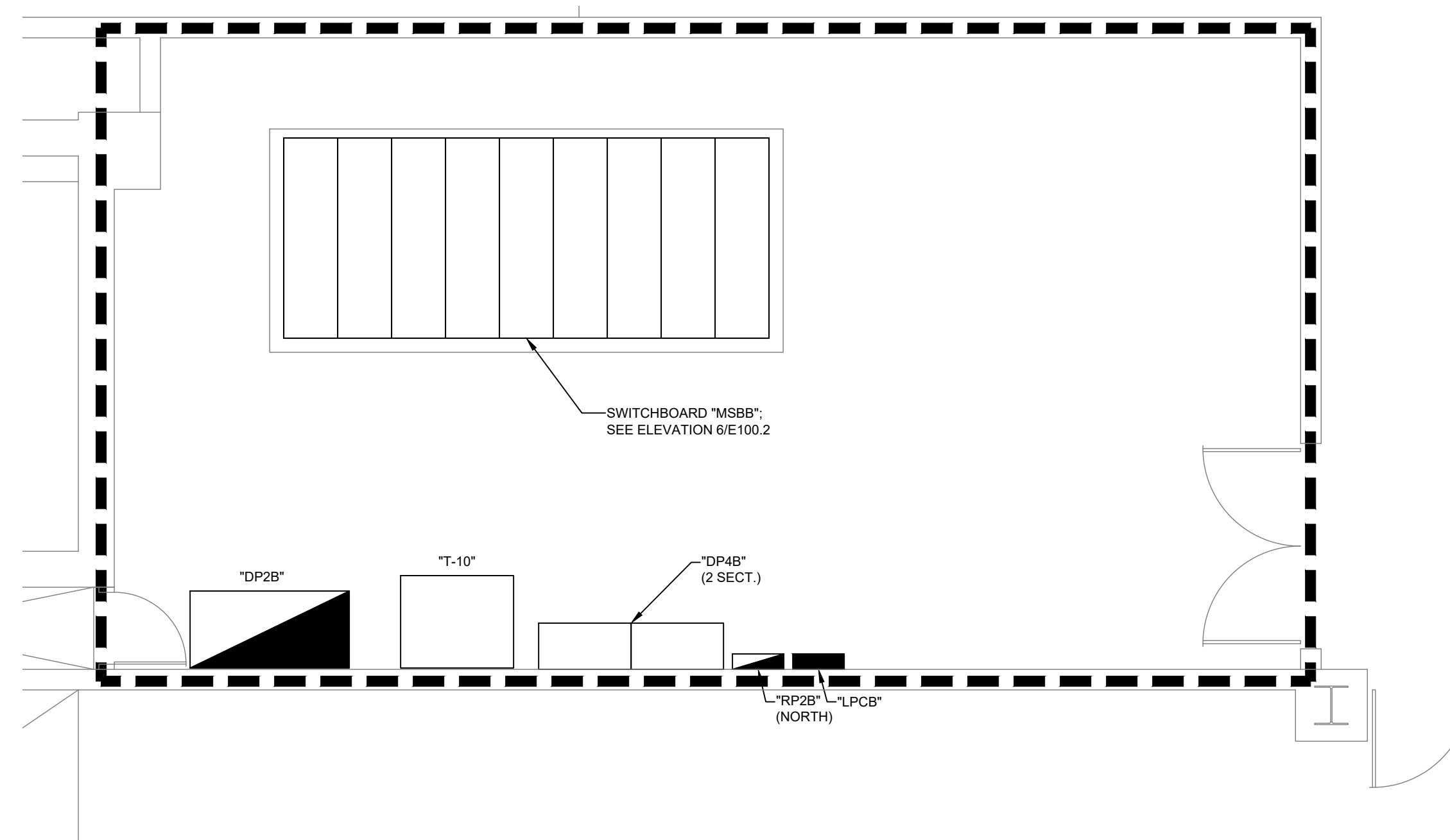


1 NORTH WING GENERATOR ROOM - DEMOLITION WORK  
SCALE: 1/4" = 1'-0"

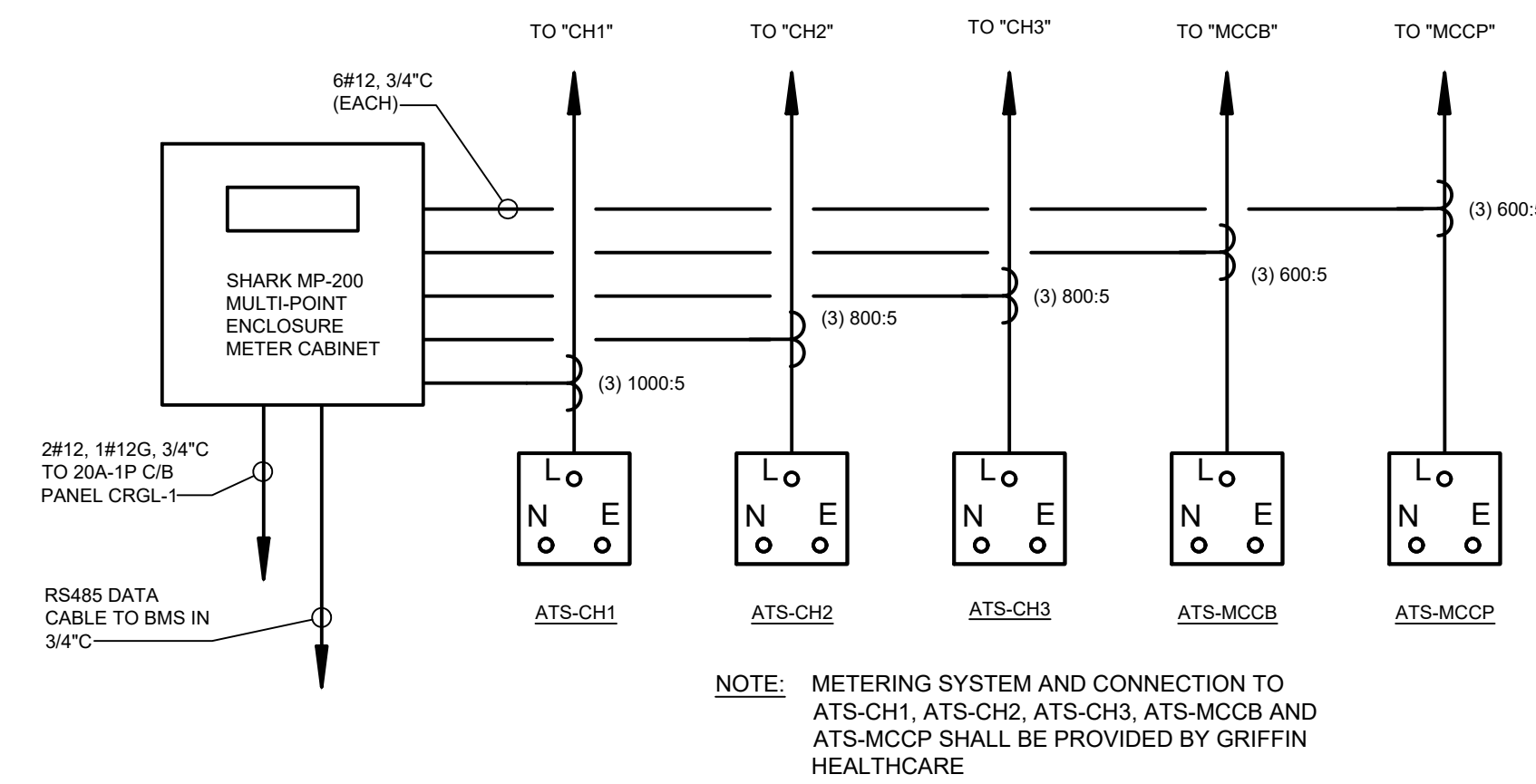


2 NORTH WING GENERATOR ROOM - NEW WORK  
SCALE: 1/4" = 1'-0"

- DETAIL 2/E100.2 NOTES
- ALL COMPONENTS OF EXISTING GENERATOR "G-1" WHICH ARE CURRENTLY WIRED TO PANEL "GPBB" SHALL HAVE CIRCUITING EXTENDED TO NEW LOCATION OF EXISTING PANEL "GPBA". REPLACE ALL EXISTING CIRCUIT BREAKERS MATCHING EXISTING IN RATING AND PROVIDE NEW AS REQUIRED.
  - ALL COMPONENTS OF NEW GENERATOR GEN-2 WHICH REQUIRE 120/208V POWER SHALL BE WIRED TO PANEL "GPBA" IN NEW LOCATION. REPLACE ALL EXISTING CIRCUIT BREAKERS MATCHING EXISTING IN RATING AND PROVIDE NEW AS REQUIRED.
  - GRIFFIN HEALTHCARE SHALL PURCHASE AND FURNISH ATS-GEN AND EQESBB TO PROJECT CONTRACTOR FOR INSTALLATION BY PROJECT CONTRACTOR.



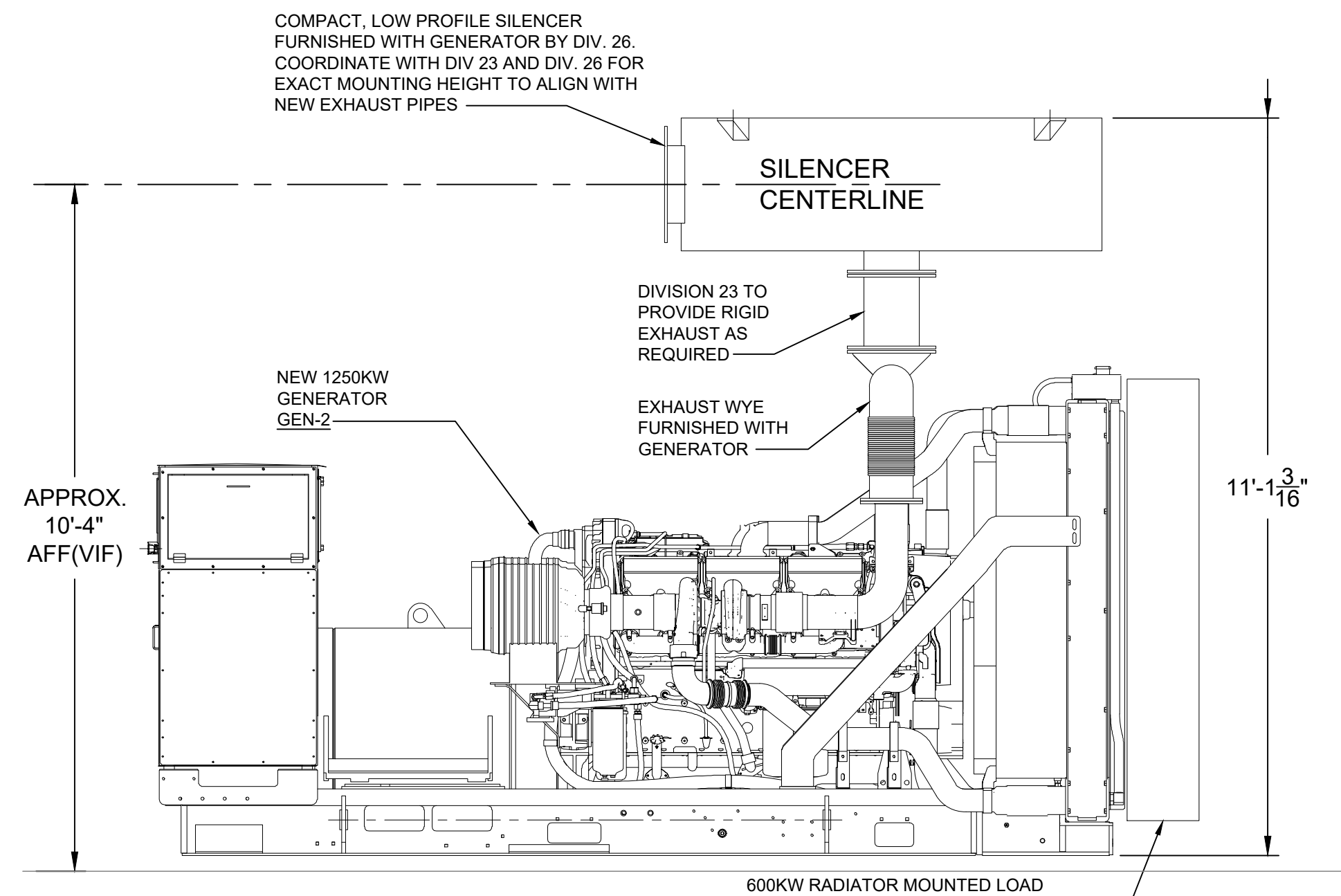
3 NORTH WING ELECTRICAL ROOM - NB028 (MSBB)  
SCALE: 1/4" = 1'-0"



4 SHARK-METER SCHEMATIC WIRING  
SCALE: NONE

	INCOMING METERING	PNL EEP VIA ATS-4 600 400	PNL DP2B VIA T-10 1200 900	BREAKER METERING	PNL CDP VIA ATS-2 800 800	PNL LSDP VIA ATS-1 300 150	INCOMING METERING
	FUSE TRUCK 4000A LIMITERS	PNL MCCP 600 400	PNL MCCB 600 400	TIE BREAKER "A-B" 3200 2400	PNL EQDP VIA ATS-3 1200 1200	PNL DP4B 400 400	TRANSFORMER BANK "A"
	TRANSFORMER BANK "B" 3200 2400						FUSE TRUCK 4000A LIMITERS
		CH-1-NA 1200 900			CHILLER NO. 3 800 800	PNL EQDPA VIA ATS-5 600 600	
			ATS-CR 400 250		ATS-EQ 200 200		

5 EXISTING MAIN SWITCHBOARD MSBB ELEVATION (REFER TO ONE-LINE DIAGRAM ON DWG E201.0)  
SCALE: NONE



6 NEW GENERATOR TYPICAL SIDE ELEVATION  
SCALE: NONE



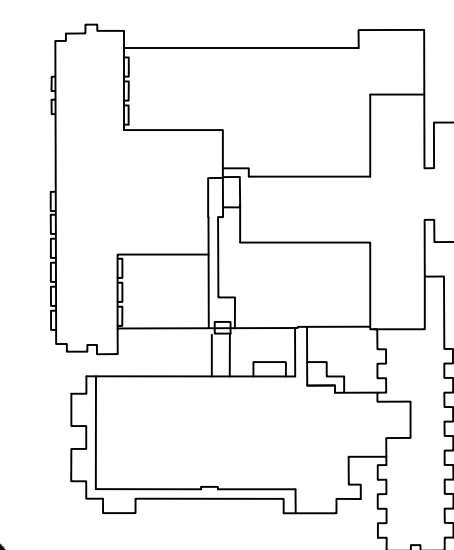
**GRIFFIN HEALTH**

**GRIFFIN HOSPITAL- PHASE 2**

EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS		
REV.	DATE	DESCRIPTION

**DRAWING TITLE:**  
ELECTRICAL BASEMENT  
LEVEL EAST WING  
PARTIAL FLOOR PLANS  
AND DETAILS

DATE: MAY 10, 2024

DRAWING NUMBER:

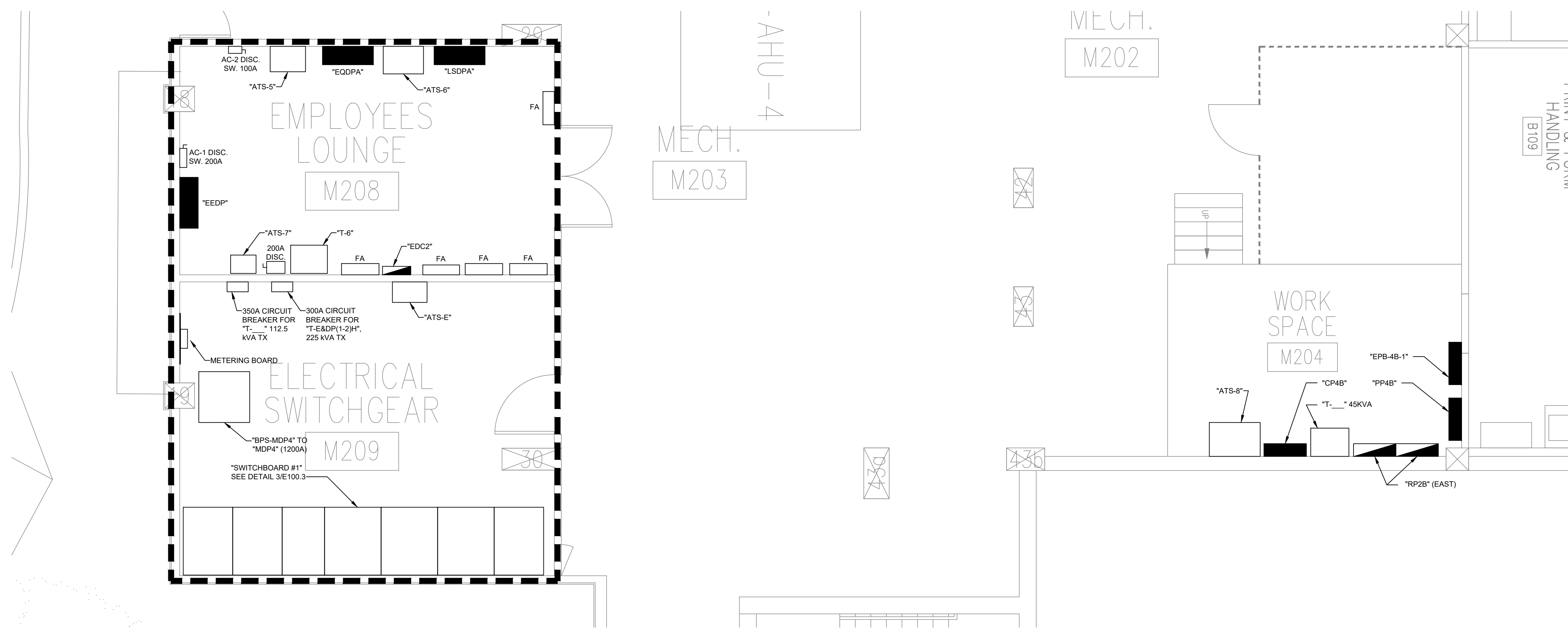
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**E100.3**

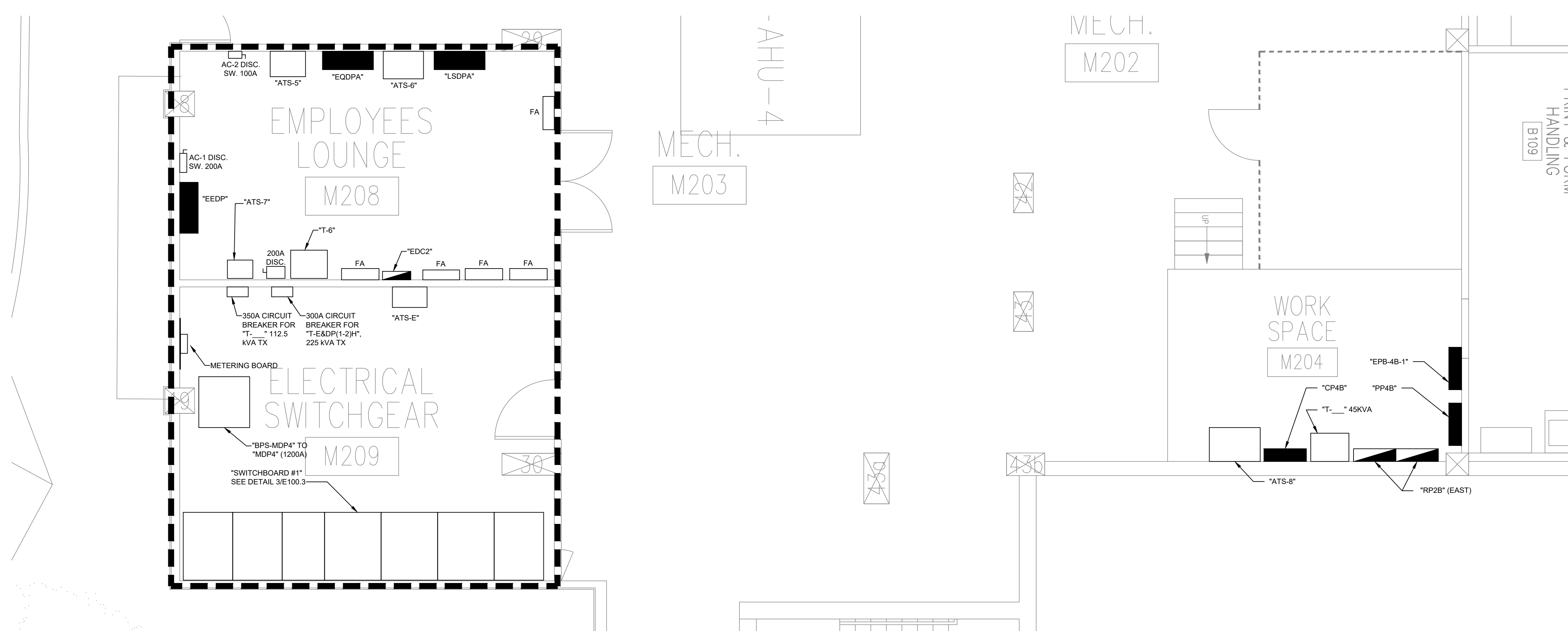
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SCALE: AS NOTED

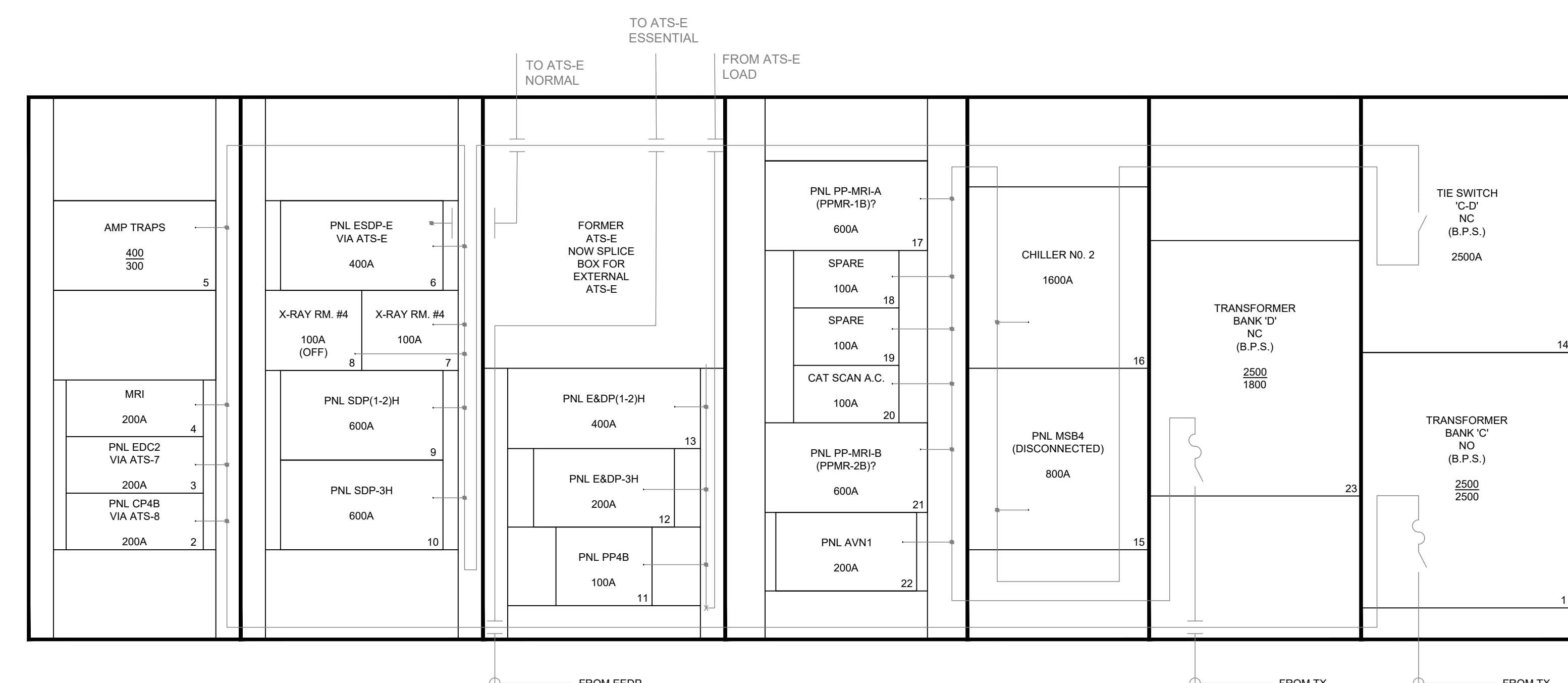
PROJ #: 2021144.01



1 EAST WING ELECTRICAL ROOM M209 - DEMOLITION WORK  
SCALE: 1/4" = 1'-0"



2 EAST WING ELECTRICAL ROOM - M209 NEW WORK  
SCALE: 1/4" = 1'-0"



3 EXISTING SWITCHBOARD NO. 1 ELEVATION (REFER TO ONE-LINE DIAGRAM ON DWG E202.0)  
SCALE: NONE





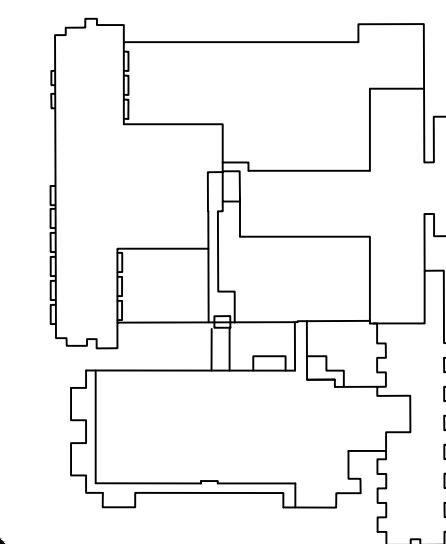
GRIFFIN HEALTH

**GRIFFIN HOSPITAL - PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES

130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

DRAWING TITLE:  
**ELECTRICAL BASEMENT LEVEL  
NORTH BUILDING  
PARTIAL FLOOR PLANS  
AND DETAILS**

DATE: MAY 10, 2024

DRAWN BY: EMG

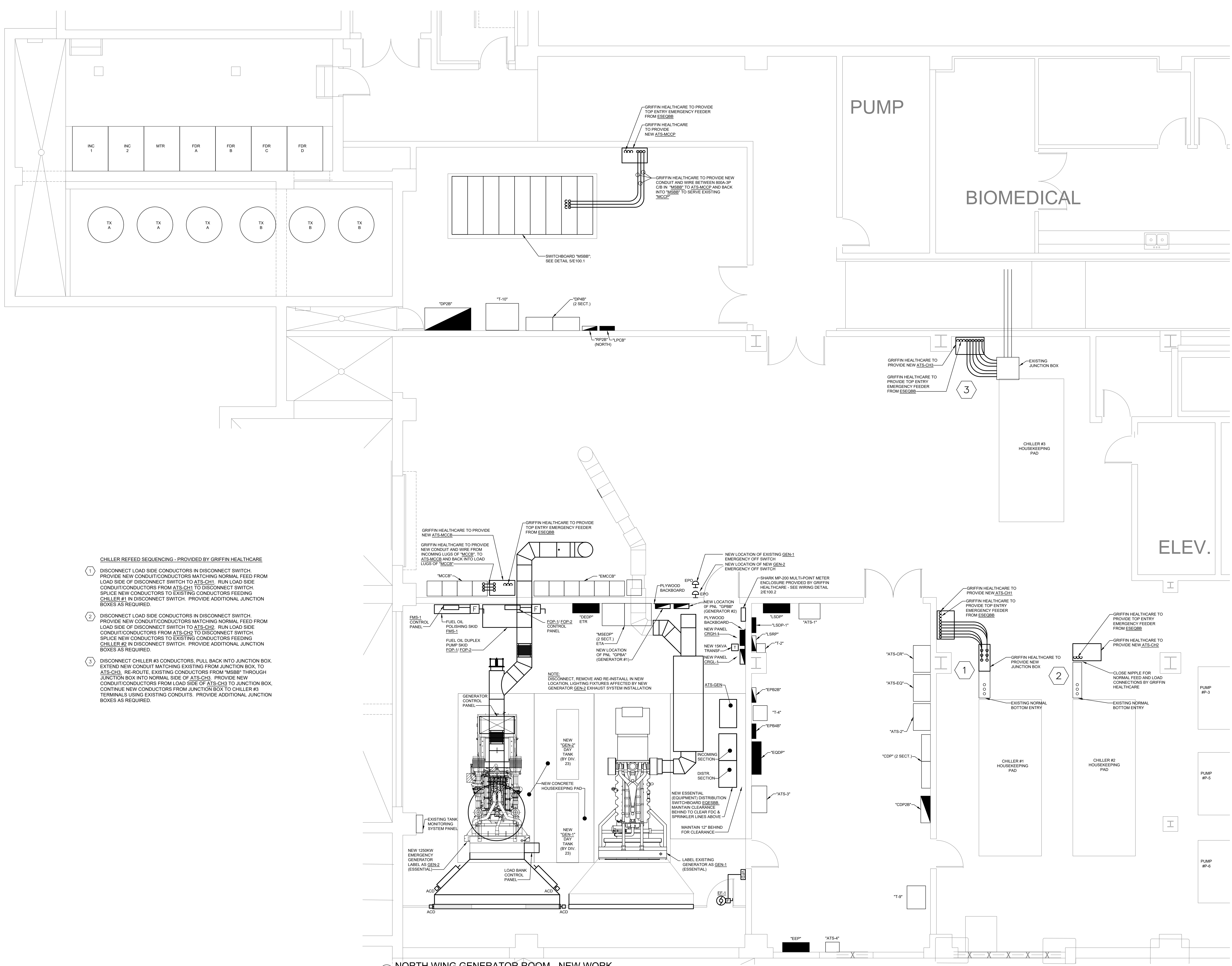
CHECKED BY: SEP

SCALE: AS NOTED

PROJ #: 2021144.01

DRAWING NUMBER:

**E100.4**



**CHILLER REFEED SEQUENCING - PROVIDED BY GRIFFIN HEALTHCARE**

- DISCONNECT LOAD SIDE CONDUCTORS IN DISCONNECT SWITCH. PROVIDE NEW CONDUIT/CONDUCTORS MATCHING NORMAL FEED FROM LOAD SIDE OF DISCONNECT SWITCH TO ATS-CH1. RUN LOAD SIDE CONDUIT/CONDUCTORS FROM ATS-CH1 TO DISCONNECT SWITCH. SPLICE NEW CONDUCTORS TO EXISTING CONDUCTORS FEEDING CHILLER #1 IN DISCONNECT SWITCH. PROVIDE ADDITIONAL JUNCTION BOXES AS REQUIRED.
- DISCONNECT LOAD SIDE CONDUCTORS IN DISCONNECT SWITCH. PROVIDE NEW CONDUIT/CONDUCTORS MATCHING NORMAL FEED FROM LOAD SIDE OF DISCONNECT SWITCH TO ATS-CH2. RUN LOAD SIDE CONDUIT/CONDUCTORS FROM ATS-CH2 TO DISCONNECT SWITCH. SPLICE NEW CONDUCTORS TO EXISTING CONDUCTORS FEEDING CHILLER #2 IN DISCONNECT SWITCH. PROVIDE ADDITIONAL JUNCTION BOXES AS REQUIRED.
- DISCONNECT CHILLER #3 CONDUCTORS. PULL BACK INTO JUNCTION BOX. EXTEND NEW CONDUIT MATCHING EXISTING FROM JUNCTION BOX TO ATS-CH3. RE-ROUTE EXISTING CONDUCTORS FROM 'MSBB' THROUGH JUNCTION BOX INTO NORMAL SIDE OF ATS-CH3. PROVIDE NEW CONDUIT/CONDUCTORS FROM LOAD SIDE OF ATS-CH3 TO JUNCTION BOX. CONTINUE NEW CONDUCTORS FROM JUNCTION BOX TO CHILLER #3 TERMINALS USING EXISTING CONDUITS. PROVIDE ADDITIONAL JUNCTION BOXES AS REQUIRED.

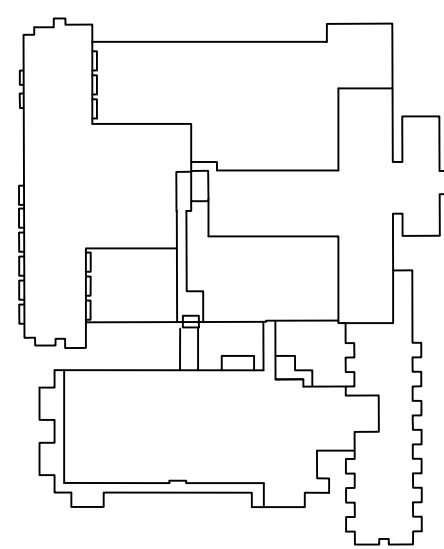
**2 NORTH WING GENERATOR ROOM - NEW WORK**  
SCALE: 1/4" = 1'-0"



**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS		
REV.	DATE	DESCRIPTION

DRAWING TITLE:  
**ELECTRICAL  
GROUND FLOOR  
OVERALL FLOOR PLAN**

DATE: MAY 10, 2024  
DRAWN BY: EMG  
CHECKED BY: SEP  
SCALE: 1/16"=1'-0"  
PROJ #: 2021144.01  
DRAWING NUMBER:  
**E101.0**



PANEL "LP-26L" (SDPL-1)  
PANEL "LP-26H" (SDPL-2H)  
PANEL "ELP-26L" (ESDPL-2L)

LOCATION OF ELECTRICAL CLOSET WITH  
PANEL "HVL51" GRIFIN HEALTHCARE TO  
REFEED FROM NEW 100A-3P C/B, PANEL  
"LSDPA" PANEL IS LOCATED IN EMPLOYEE  
LOUNGE/ELECTRICAL RM 4020S ON  
BASEMENT LEVEL (SEE DWGS E100.3 AND  
E303.0 FOR ADDITIONAL INFORMATION)

FLOOR PLAN NOTES:  
A. PANELBOARDS SHOWN WITH LABEL IN PARENTHESIS (XX1-1X)  
AFTER THE PANEL LABEL INDICATES THE PANEL'S SOURCE  
ACCORDING TO LABELING PLACED ON THE PANELBOARD.  
B. PANELBOARDS SHOWN WITH **XXXXXXXXXX** INDICATES THAT  
THE PANEL IS NOT SHOWN ON THE ONE-LINE RISER DIAGRAMS.  
SOURCE FOR PANEL HAS NOT BEEN DETERMINED AT THIS TIME.  
FURTHER DETAILED SITE VERIFICATIONS WILL BE REQUIRED TO  
DETERMINE SOURCE.  
C. PANELBOARD LABELS FOLLOWED BY AN ASTERISK WITHIN  
PARENTHESIS (\*) INDICATES THAT THE ACTUAL LOCATION HAS NOT  
BEEN VERIFIED AT THIS TIME.



GRIFFIN HEALTH

**GRIFFIN HOSPITAL- PHASE 2**

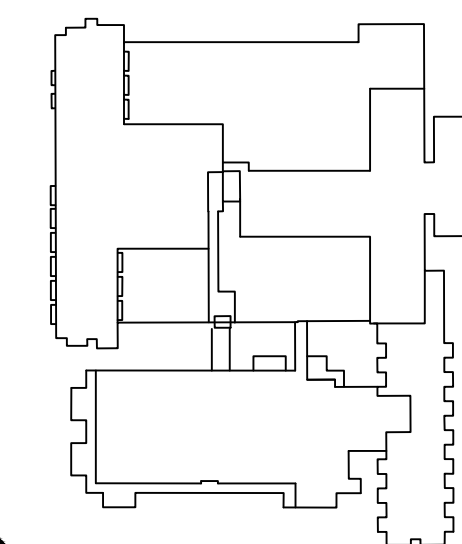
EMERGENCY GENERATOR and DISTRIBUTION

UPGRADES

130 DIVISION STREET, DERBY, CT

PROJECT NAME:

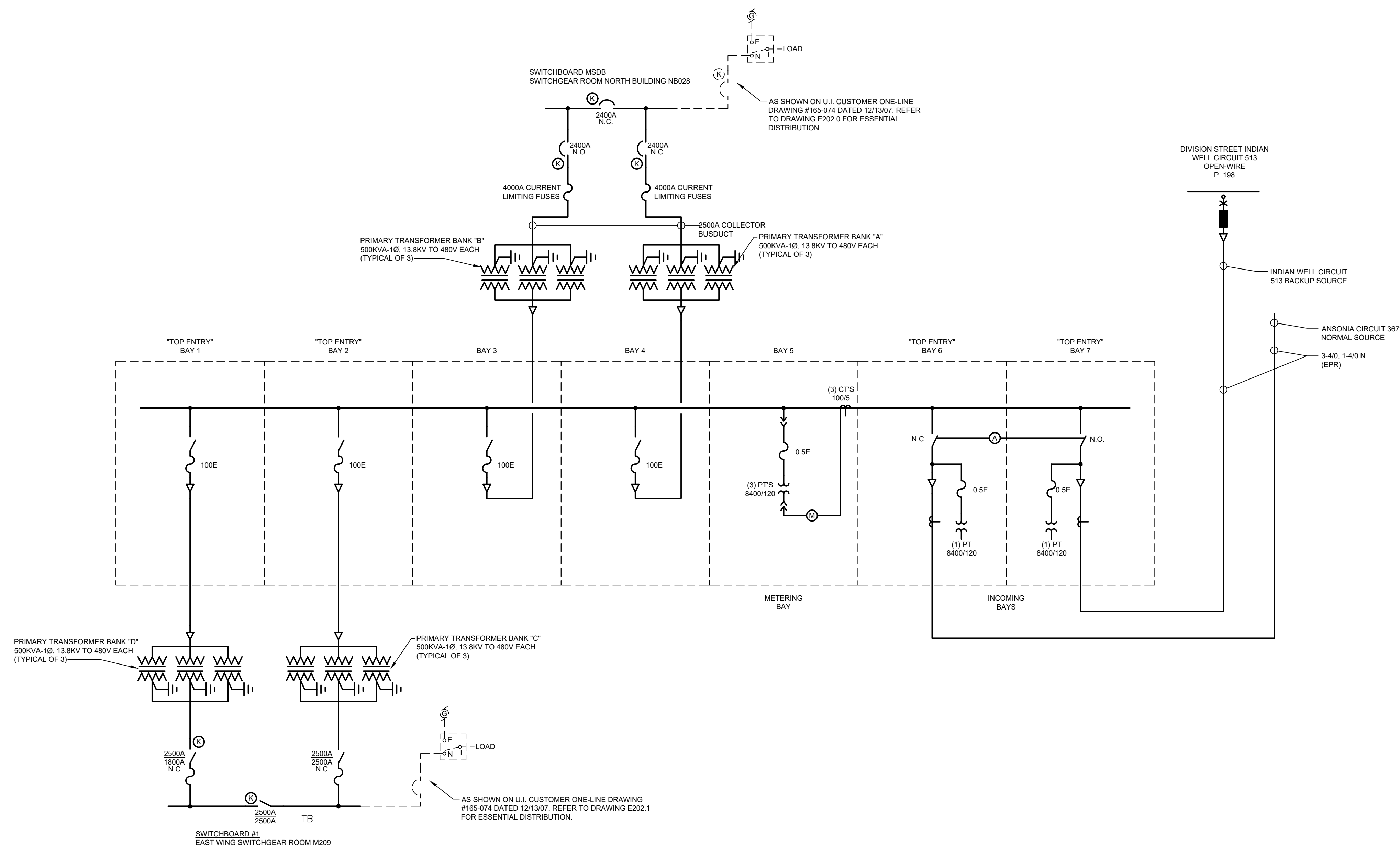
KEYPLAN



REVISIONS		
REV.	DATE	DESCRIPTION

DRAWING TITLE:  
**PRIMARY ELECTRICAL DISTRIBUTION ONE-LINE RISER DIAGRAM**

DATE: MAY 10, 2024	DRAWING NUMBER:
DRAWN BY: EMG	<b>E200.0</b>
CHECKED BY: SEP	
SCALE: NONE	
PROJ #: 2021144.01	



**1 U.I. PRIMARY ONE-LINE DIAGRAM**  
SCALE: NONE

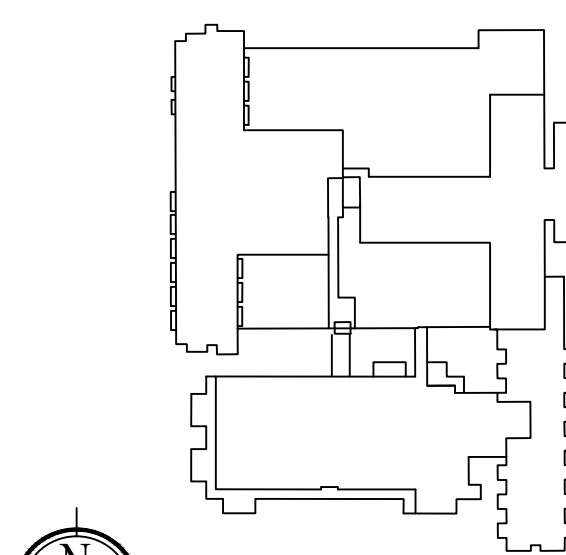


**GRIFFIN HEALTH**

**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS		
REV.	DATE	DESCRIPTION

**DRAWING TITLE:**  
**EMERGENCY/STANDBY  
GENERATOR DESIGN  
ONE-LINE DIAGRAM**

**DATE:** MAY 10, 2024  
**DRAWN BY:** EMG  
**CHECKED BY:** SEP  
**SCALE:** NONE  
**PROJ #:** 2021144.01  
**DRAWING NUMBER:**  
**E200.1**

**GENERAL NOTES:**

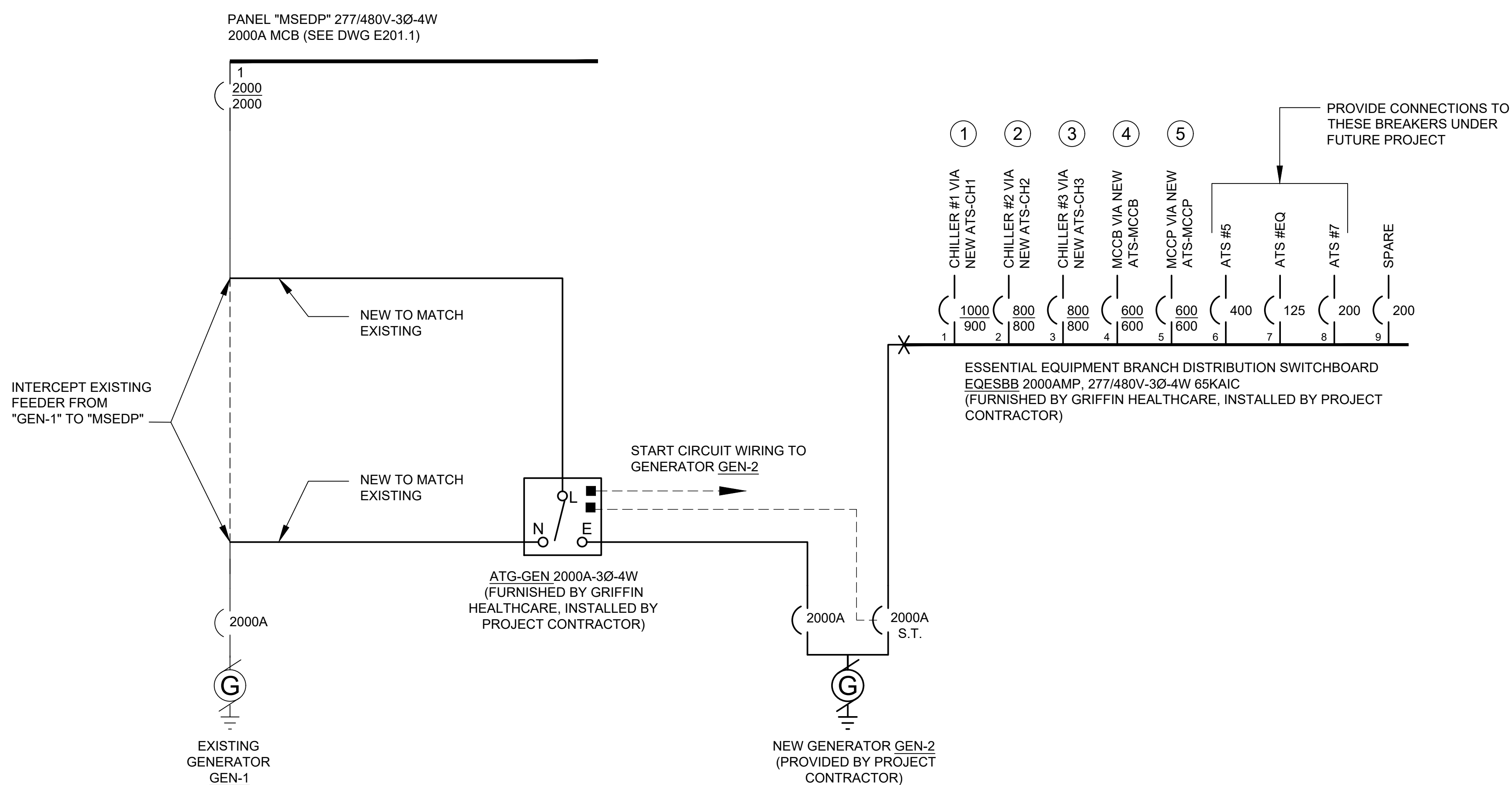
- FEEDER BREAKERS IN EQESBB FOR CHILLERS "CH-1", "CH-2" AND "CH-3" PLUS MOTOR CONTROL CENTERS "MCCB" & "MCCP" SHALL BE ELECTRICALLY OPERATED TO ENABLE GENERATOR PLANT LOAD CONTROL.
- DISCONNECT AND REMOVE 250KW GENERATOR "G2" AND 400A D.T. SWITCH TO "MSEDP".
- INSTALL NEW EQESBB AND ATS-GEN
- INSTALL NEW GENERATOR GEN-2
- INTERCONNECT EXISTING GENERATOR GEN-1 AND NEW GENERATOR THROUGH NEW ATS-GEN.
- DISCONNECT, REMOVE AND RELOCATE PANELS "GPBA" & "GPBB" WITHIN GENERATOR ROOM, EXTEND SOURCE WIRING FROM "CDP2B" AS REQUIRED.
- PROVIDE NEW PANEL CRGH-1, CRGL1 AND TRANSFORMER T-2, WIRE TO NEW BREAKER IN PANEL "CDP".

**SEQUENCING OF ELECTRICAL WORK - BY GRIFFIN HEALTHCARE:**

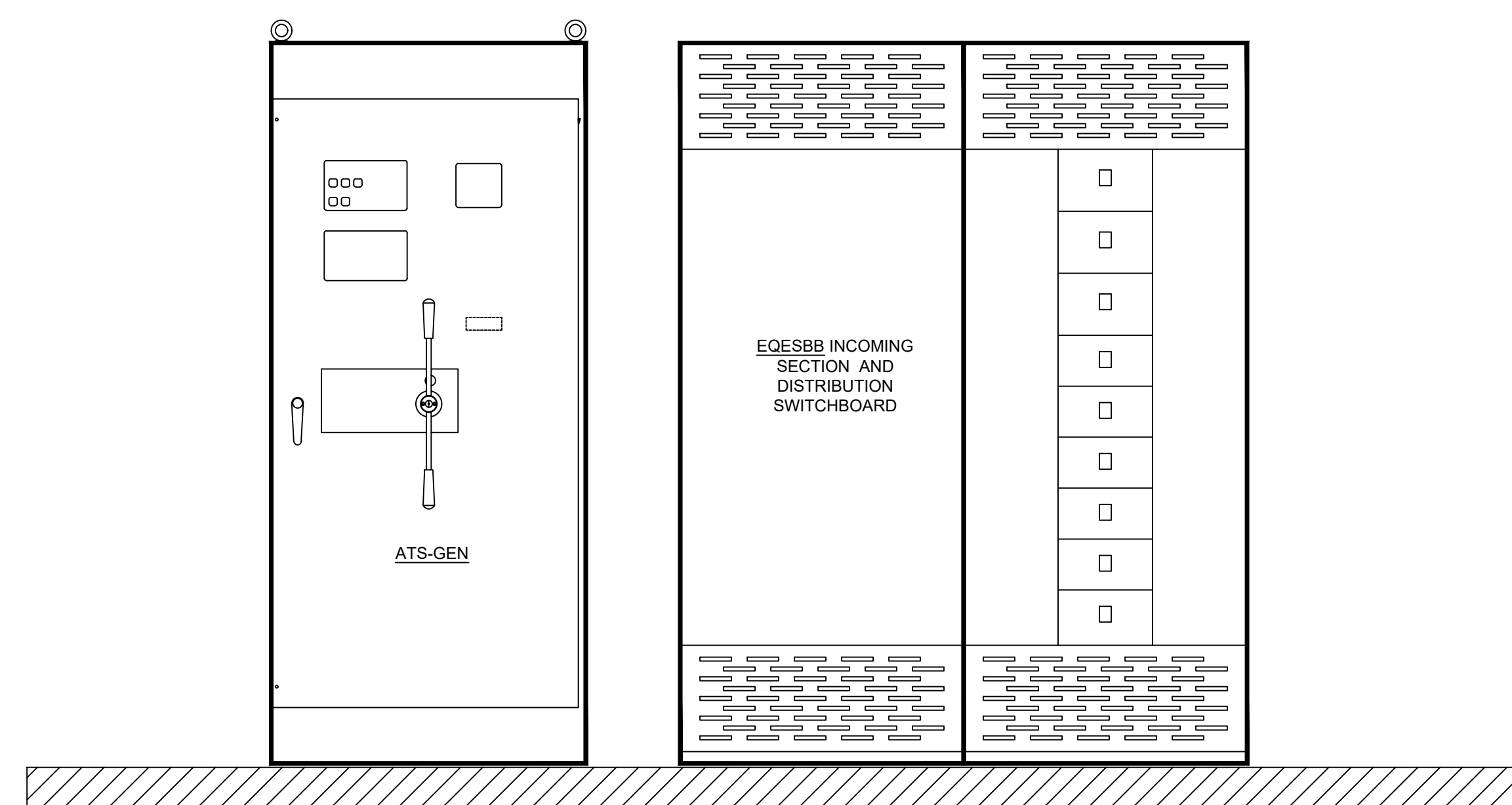
- PROVIDE NEW TRANSFER SWITCHES FOR CHILLERS AND MCCs.
- INTERCEPT NORMAL FEEDER FOR "CHILLER #1", AND CONNECT TO NORMAL AND LOAD LUGS OF NEW ATS-CH1. EXTEND EMERGENCY FEEDER FROM INDICATED C/B OF EQESBB TO EMERGENCY LUGS OF ATS-CH1.
- INTERCEPT NORMAL FEEDER FOR "CHILLER #23", AND CONNECT TO NORMAL AND LOAD LUGS OF NEW ATS-CH2. EXTEND EMERGENCY FEEDER FROM INDICATED C/B OF EQESBB TO EMERGENCY LUGS OF ATS-CH2.
- INTERCEPT NORMAL FEEDER FOR "CHILLER #3", AND CONNECT TO NORMAL AND LOAD LUGS OF NEW ATS-CH3. EXTEND EMERGENCY FEEDER FROM INDICATED C/B OF EQESBB TO EMERGENCY LUGS OF ATS-CH3.
- INTERCEPT NORMAL FEEDER FOR MCCB, AND CONNECT TO NORMAL AND LOAD LUGS OF NEW ATS-MCCB. EXTEND EMERGENCY FEEDER FROM INDICATED C/B OF EQESBB TO EMERGENCY LUGS OF ATS-MCCB.
- INTERCEPT NORMAL FEEDER FOR MCCP, AND CONNECT TO NORMAL AND LOAD LUGS OF NEW ATS-MCCP. EXTEND EMERGENCY FEEDER FROM INDICATED C/B OF EQESBB TO EMERGENCY LUGS OF ATS-MCCP.

**FEEDING/REFEEDING OF NEW TRANSFER SWITCHES - BY GRIFFIN HEALTHCARE:**

- ATS-CH1: 1000A-3W-SOLID NEUTRAL-DELAYED TRANSFER. EXTEND EXISTING NORMAL SOURCE FROM 4,MSBB INTO NEW SWITCH, NEW EMERGENCY FEED FROM NEW EQESBB; (1, EQESBB)
- ATS-CH2: 800A-3W-SOLID NEUTRAL-DELAYED TRANSFER. EXTEND EXISTING NORMAL SOURCE FROM 16,SWBD#1 INTO NEW SWITCH, NEW EMERGENCY FEED FROM NEW EQESBB; (2, EQESBB)
- ATS-CH3: 800A-3W-SOLID NEUTRAL-DELAYED TRANSFER. EXTEND NORMAL SOURCE 13,MSBB INTO NEW SWITCH, NEW EMERGENCY FEED NEW EQESBB; (3, EQESBB)
- ATS-MCCB: 600A-4W-SOLID NEUTRAL-DELAYED TRANSFER, MCCB (NORMAL SOURCE 7,MSBB) FEED FROM NEW EQESBB; (4, EQESBB)
- ATS-MCCP: 600A-4W-SOLID NEUTRAL-DELAYED TRANSFER, MCCP (NORMAL SOURCE 3,MSBB) FEED FROM NEW EQESBB; (5, EQESBB)



**1** UPGRADED ESSENTIAL EQUIPMENT SYSTEM SCHEMATIC ONE-LINE DIAGRAM  
SCALE: NONE



**NOTE:**  
TRANSFER SWITCH ATS-GEN AND ESSENTIAL EQUIPMENT BRANCH DISTRIBUTION SWITCHBOARD EQESBB SHALL BE PURCHASED AND DELIVERED TO PROJECT SITE (INSIDE GENERATOR ROOM) BY GRIFFIN HEALTHCARE. FINAL PLACEMENT AND INSTALLATION IN GENERATOR ROOM SHALL BE RESPONSIBILITY OF THE PROJECT CONTRACTOR.

**2** NEW ATS-GEN AND ESSENTIAL EQUIPMENT DISTRIBUTION SWITCHBOARD EQESBB ELEVATION (REFER TO ONE-LINE DIAGRAM ON DWG E200.1)  
SCALE: NONE

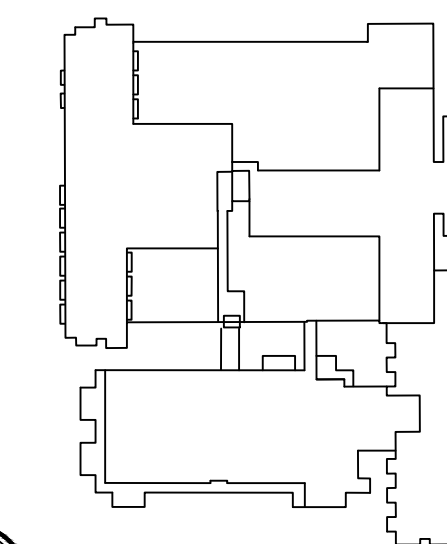


GRIFFIN HEALTH

**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN

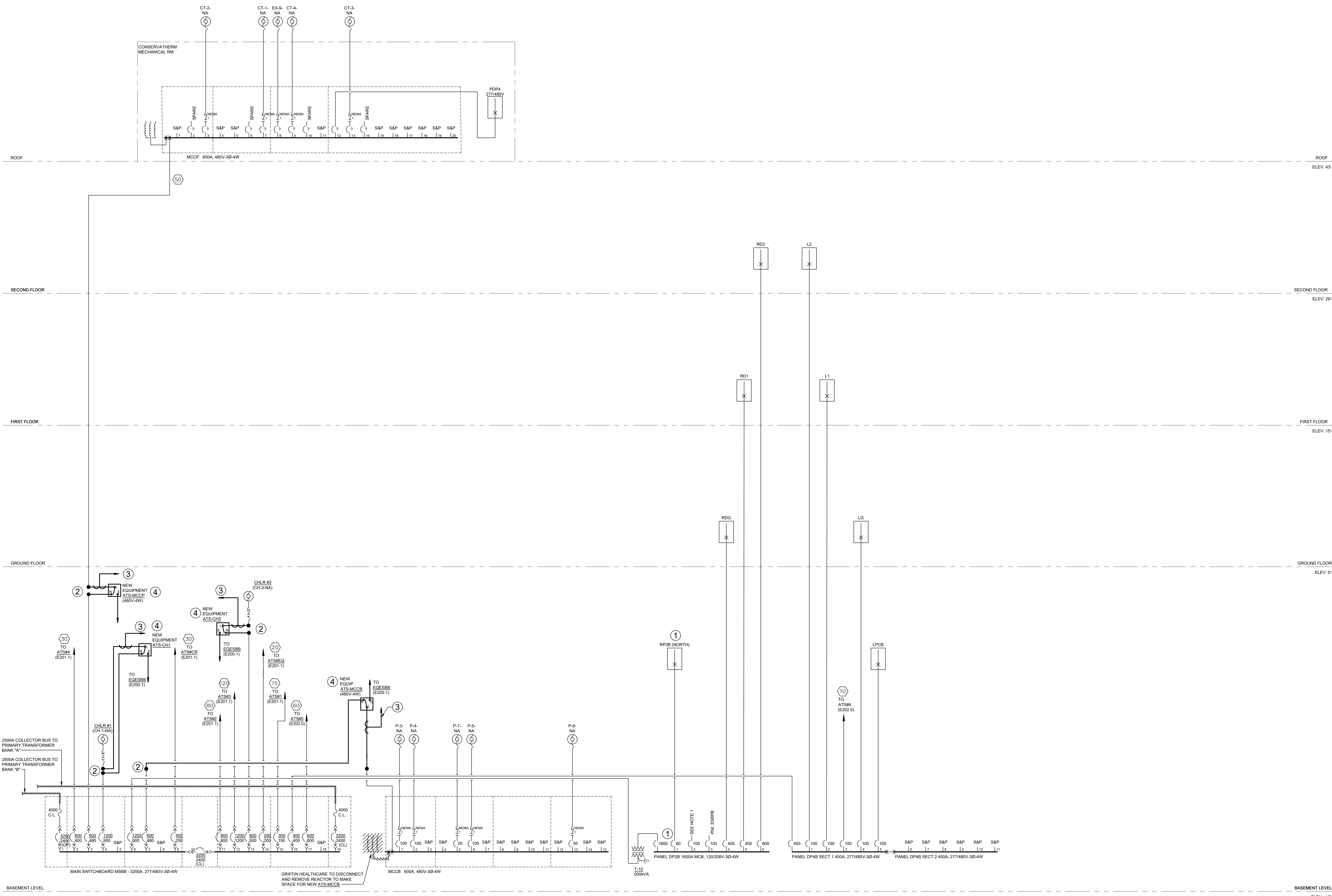


REVISIONS

REV.	DATE	DESCRIPTION

**DRAWING TITLE:**  
NORMAL ELECTRICAL  
ONE-LINE RISER DIAGRAM  
NORTH BUILDING

DATE: MAY 10, 2024  
DRAWN BY: EMG  
CHECKED BY: SEP  
SCALE: NONE  
PROJ #: 2021144.01  
DRAWING NUMBER:  
**E201.0**



- ONE-LINE RISER DIAGRAM DRAWING NOTES:**
1. BREAKER LABELED "BRRP (NORTH)", FIELD INVESTIGATION FOUND "BRRP (NORTH)" IS LOCATED IN FACILITIES ENGINEERING AND FED FROM "RP2B (EAST)" IN M204 (SEE DETAIL 4/E100.2 AND RISER DIAGRAM E202.0).
  2. WHERE INTERCEPTING EXISTING FEEDER TO CONNECT TO NEW ATS, NORMAL FEED, PROVIDE APPROPRIATELY SIZED, CODE COMPLIANT JUNCTION BOX - COORDINATE LOCATION IN FIELD, ENSURING ACCESSIBILITY IN FUTURE.
  3. TO METER PANEL (SEE DETAIL 7/E100.2 BY GRIFFIN HEALTHCARE)
  4. GRIFFIN HEALTHCARE TO PROVIDE NEW TRANSFER SWITCH

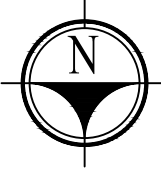
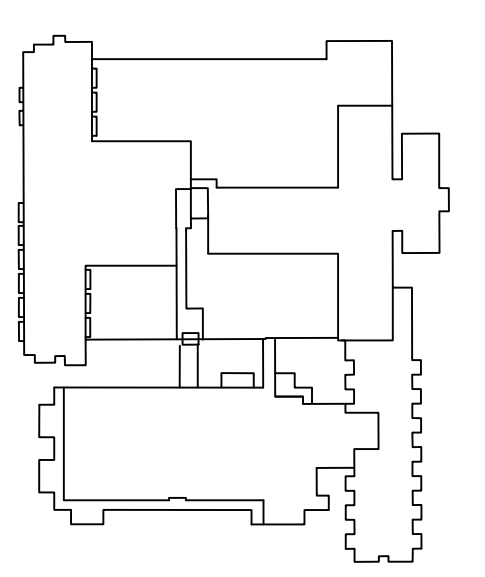
- ONE-LINE RISER DIAGRAM GENERAL NOTES:**
- A. CONTINUATION REFERENCES TO LOAD SHOWN WITH NOMENCLATURE IN PARENTHESIS (E200.0) INDICATES THE DRAWING WHERE CONTINUATION OCCURS.
  - B. ACTUAL FEEDER SIZES ARE NOT INCLUDED, WHERE FEEDER SIZES AND/OR TAGS ARE SHOWN, INFORMATION IS FROM EXISTING CONDITIONS DRAWINGS AND NOT NECESSARILY ACCURATE. FURTHER DETAILED SITE VERIFICATION WILL BE REQUIRED TO IDENTIFY FEEDER SIZING AND OCP DEVICES.



**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

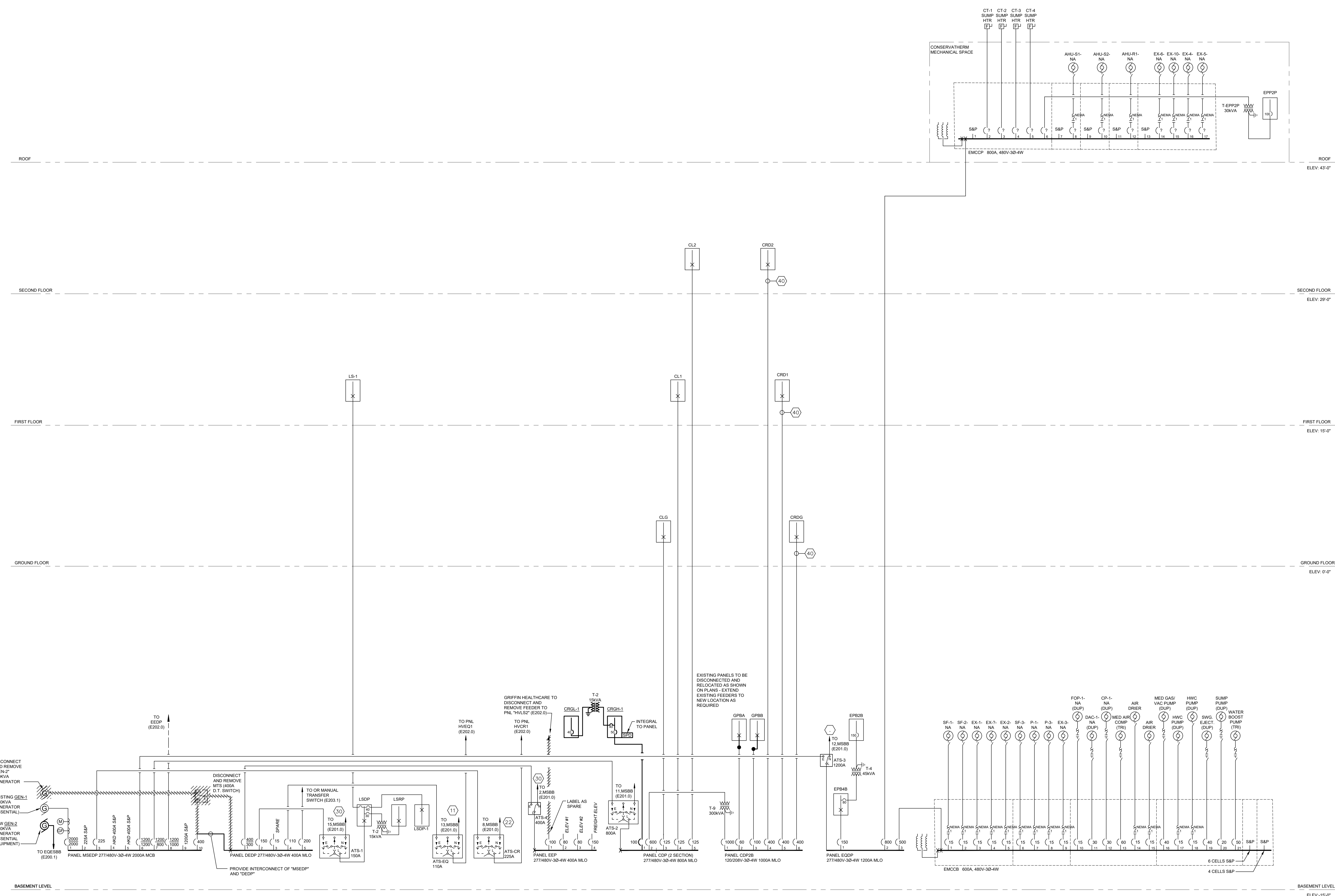
**KEYPLAN**



REVISIONS		
REV.	DATE	DESCRIPTION
1	5/03/24	RESPONSIBILITY DELINEATION

**DRAWING TITLE:**  
**ESSENTIAL ELECTRICAL ONE-LINE RISER DIAGRAM NORTH BUILDING**

DATE: MAY 10, 2024	DRAWING NUMBER:
DRAWN BY: EMG	<b>E201.1</b>
CHECKED BY: SEP	
SCALE: NONE	
PROJ #: 2021144.01	



**ONE-LINE RISER DIAGRAM GENERAL NOTES:**

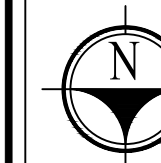
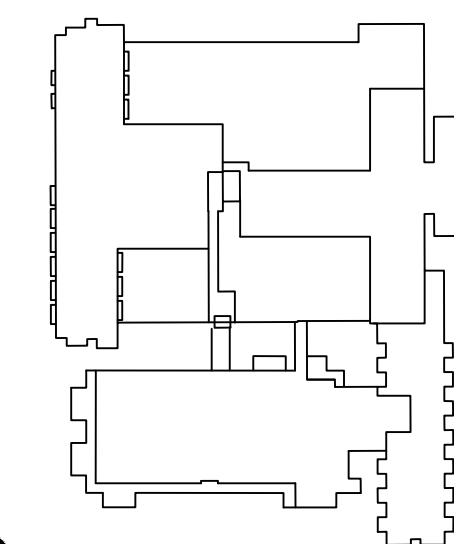
- A. CONTINUATION REFERENCES TO LOAD SHOWN WITH NOMENCLATURE IN PARENTHESIS (E200.0) INDICATES THE DRAWING WHERE CONTINUATION OCCURS.
- B. ACTUAL FEEDER SIZES ARE NOT INCLUDED, WHERE FEEDER SIZES AND/OR TAGS ARE SHOWN, INFORMATION IS FROM EXISTING CONDITIONS DRAWINGS AND NOT NECESSARILY ACCURATE. FURTHER DETAILED SITE VERIFICATION WILL BE REQUIRED TO IDENTIFY FEEDER SIZING AND OCP DEVICES.



**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT

PROJECT NAME:

KEYPLAN



REVISIONS

REV.	DATE	DESCRIPTION

**DRAWING TITLE:**  
NORMAL & ESSENTIAL  
ELECTRICAL ONE-LINE  
RISER DIAGRAM  
EAST WING

DATE: MAY 10, 2024

DRAWN BY: EMG

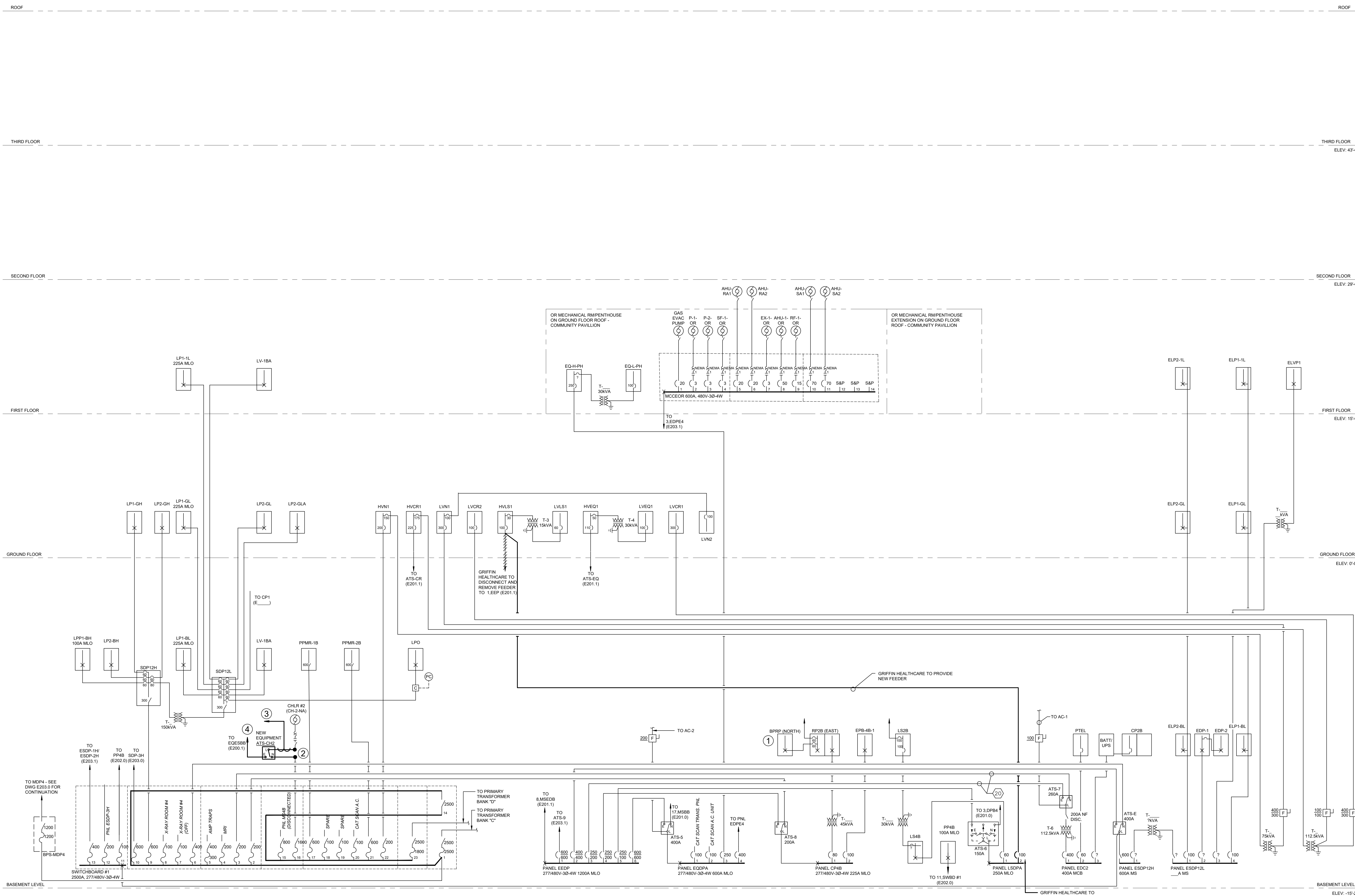
CHECKED BY: SEP

SCALE: NONE

PROJ #: 2021144.01

DRAWING NUMBER:

**E202.0**



- ONE-LINE RISER DIAGRAM DRAWING NOTES:**
- BREAKER LABELED "BRP (NORTH)", FIELD INVESTIGATION FOUND "BRP (NORTH)" IS LOCATED IN FACILITIES/ENGINEERING AND FED FROM "RP2B (EAST)" IN M204 (SEE DETAIL 4/E100.2 AND RISER DIAGRAM E202.0).
  - WHERE INTERCEPTING EXISTING FEEDER TO CONNECT TO NEW ATS, NORMAL FEED, GRIFFIN HEALTHCARE TO PROVIDE APPROPRIATELY SIZED, CODE COMPLIANT JUNCTION BOX - COORDINATE LOCATION IN FIELD, ENSURING ACCESSIBILITY IN FUTURE.
  - TO METER PANEL (SEE DETAIL 7/E100.2) BY GRIFFIN HEALTHCARE
  - GRIFFIN HEALTH CARE TO PROVIDE NEW TRANSFER SWITCH
- ONE-LINE RISER DIAGRAM GENERAL NOTES:**
- CONTINUATION REFERENCES TO LOAD SHOWN WITH NOMENCLATURE IN PARENTHESIS (E200.0) INDICATES THE DRAWING WHERE CONTINUATION OCCURS.
  - ACTUAL FEEDER SIZES ARE NOT INCLUDED, WHERE FEEDER SIZE AND/OR TAGS ARE SHOWN, INFORMATION IS FROM EXISTING CONDITIONS DRAWINGS AND NOT NECESSARILY ACCURATE, FURTHER DETAILED SITE VERIFICATION WILL BE REQUIRED TO IDENTIFY FEEDER SIZING AND GCP DEVICES

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### 3 PHASE FEEDER SIZE SCHEDULE

(COPPER CONDUCTORS)

CIRCUIT SYMBOL	CONDUCTORS (3 PHASE, 3 WIRE) AND GROUND*	SIZE CONDUIT	CONDUCTORS (3 PHASE, 4 WIRE) AND GROUND*	SIZE CONDUIT	CIRCUIT OR OVERCURRENT RATING 3-POLE
①	3#12, 1#12G	3/4"	4#12, 1#12G	3/4"	15A
②	3#12, 1#12G	3/4"	4#12, 1#12G	3/4"	20A
②⑤	3#10, 1#10G	3/4"	4#10, 1#10G	3/4"	25A
③	3#10, 1#10G	3/4"	4#10, 1#10G	3/4"	30A
③⑤	3#8, 1#10G	3/4"	4#8, 1#10G	1"	35A
④	3#8, 1#10G	3/4"	4#8, 1#10G	1"	40A
④⑤	3#6, 1#10G	1"	4#6, 1#10G	1"	45A
⑤	3#6, 1#10G	1"	4#6, 1#10G	1"	50A
⑥	3#4, 1#10G	1 1/4"	4#4, 1#10G	1 1/4"	60A
⑦	3#4, 1#8G	1 1/4"	4#4, 1#8G	1 1/4"	70A
⑧	3#3, 1#8G	1 1/4"	4#3, 1#8G	1 1/4"	80A
⑧①	3#2, 1#8G	1 1/4"	4#2, 1#8G	1 1/2"	90A
⑩	3#1, 1#8G	1 1/2"	4#1, 1#8G	2"	100A
⑪	3#1, 1#6G	1 1/2"	4#1, 1#6G	2"	110A
⑫	3#1/0, 1#6G	2"	4#1/0, 1#6G	2"	125A
⑬	3#1/0, 1#6G	2"	4#1/0, 1#6G	2"	150A
⑭	3#2/0, 1#6G	2"	4#2/0, 1#6G	2"	175A
⑰	3#3/0, 1#6G	2"	4#3/0, 1#6G	2 1/2"	200A
⑱	3#4/0, 1#4G	2 1/2"	4#4/0, 1#4G	2 1/2"	225A
⑲	3-250KCM, 1#4G	2 1/2"	4-250KCM, 1#4G	3"	250A
⑳	3-350KCM, 1#4G	3"	4-350KCM, 1#4G	3"	300A
㉑	3-500KCM, 1#3G	3 1/2"	4-500KCM, 1#3G	4"	350A
㉒	3-500KCM, 1#3G	3 1/2"	4-500KCM, 1#3G	4"	400A
㉓	2 SETS OF 3#4/0, 1#2G	(2) 2 1/2"	2 SETS OF 4#4/0, 1#2G	(2) 2 1/2"	450A
㉔	2 SETS OF 3-250KCM, 1#2G	(2) 2 1/2"	2 SETS OF 4-250KCM, 1#2G	(2) 3"	500A
㉕	2 SETS OF 3-350KCM, 1#1G	(2) 3"	2 SETS OF 4-350KCM, 1#1G	(2) 3"	600A
㉖	2 SETS OF 3-500KCM, 1#1/0G	(2) 3 1/2"	2 SETS OF 4-500KCM, 1#1/0G	(2) 4"	700A
㉗	2 SETS OF 3-500KCM, 1#1/0G	(2) 3 1/2"	2 SETS OF 4-500KCM, 1#1/0G	(2) 4"	800A
㉘	3 SETS OF 3-350KCM, 1#2/0G	(3) 3"	3 SETS OF 4-350KCM, 1#2/0G	(3) 3"	900A
㉙	3 SETS OF 3-500KCM, 1#2/0G	(3) 3 1/2"	3 SETS OF 4-500KCM, 1#2/0G	(3) 4"	1000A
㉚	4 SETS OF 3-350KCM, 1#3/0G	(4) 4"	4 SETS OF 4-350KCM, 1#3/0G	(4) 4"	1200A
㉛	4 SETS OF 3-600KCM, 1#4/0G	(4) 4"	4 SETS OF 4-600KCM, 1#4/0G	(4) 4"	1600A
㉜	5 SETS OF 3-600KCM, 1-250KCM G	(5) 4"	5 SETS OF 4-600KCM, 1-250KCM G	(5) 4"	2000A
㉝	6 SETS OF 3-600KCM, 1-350KCM G	(6) 4"	6 SETS OF 4-600KCM, 1-350KCM G	(6) 4"	2500A
㉞	8 SETS OF 3-500KCM, 1-400KCM G	(8) 3 1/2"	8 SETS OF 4-500KCM, 1-400KCM G	(8) 4"	3000A
㉟	8 SETS OF 8-600KCM, 1-500KCM G	(8) 4"	8 SETS OF 4-600KCM, 1-500KCM G	(8) 4"	3200A
㊱	10 SETS OF 3-500KCM, 1-500KCM G	(10) 3 1/2"	10 SETS OF 4-500KCM, 1-500KCM G	(10) 4"	3500A
㊲	10 SETS OF 3-600KCM, 1-500KCM G	(10) 4"	10 SETS OF 4-600KCM, 1-500KCM G	(10) 4"	4000A
⑩	3#1, 2#1N, 1#8G, 1#8IG	2"			100A
⑫	3#1/0, 2#1/0N, 1#6G, 1#6IG	2"			125A
⑬	3#1/0, 2#1/0N, 1#6G, 1#6IG	2"			150A
⑭	3#2/0, 2#2/0N, 1#6G, 1#6IG	2"			175A
⑰	3#3/0, 2#3/0N, 1#6G, 1#6IG	2 1/2"			200A
⑱	3#4/0, 2#4/0N, 1#4G, 1#4IG	2 1/2"			225A
⑲	3-250KCM, 2-250KCM N, 1#4G, 1#4IG	3"			250A
⑳	3-350KCM, 2-350KCM N, 1#4G, 1#4IG	3"			300A
㉑	3-500KCM, 2-500KCM N, 1#3G, 1#3IG	4"			400A

\*CONDUCTORS (3 PHASE, 5 WIRE) WITH GROUNDS CONSIST OF THREE PHASE CONDUCTORS, TWO NEUTRAL CONDUCTOR (FOR 200% RATED NEUTRALS), AN EQUIPMENT GROUND CONDUCTOR AND AN ISOLATED GROUND CONDUCTOR.

THREE PHASE, 5 WIRE FEEDERS WITH GROUNDS SHALL BE USED FOR FEEDERS SUPPLYING OR BEING FED FROM ELECTRONIC GRADE PANELBOARDS.

- CIRCUIT SIZE SCHEDULE NOTES:**
- CS1 UNLESS OTHERWISE INDICATED, FEEDER SIZING SHALL MATCH THE SIZE INDICATED ABOVE FOR THE APPLICABLE OVERCURRENT DEVICE PROVIDED OR LARGER FEEDER WHERE INDICATED.
  - CS2 SCHEDULE AS BASED ON THE TYPE THHN/THWN FOR CONDUCTOR SIZES SMALLER THAN #3 AWG AND TYPE XHHW FOR CONDUCTOR SIZES #3 AWG AND LARGER.
  - CS3 PROVIDE 4 WIRE CIRCUIT UNLESS EQUIPMENT SERVED DOES NOT HAVE PROVISIONS FOR A NEUTRAL CONNECTION.
  - CS4 MINIMUM SIZE CONDUIT UNDERGROUND IS 4 INCH EXCEPT 1 INCH FOR SITE BRANCH CIRCUIT FOR SYSTEMS, LIGHTING AND MISCELLANEOUS POWER, UNLESS SPECIFICALLY INDICATED OTHERWISE.
  - CS5 REFER TO TRANSFORMER SCHEDULE FOR CONDUCTOR AND CONDUIT SIZE REQUIREMENTS FOR PRIMARY AND SECONDARY FEEDERS OF TRANSFORMERS.
  - CS6 REFER TO MOTOR CIRCUIT SCHEDULE FOR CONDUCTOR AND CONDUIT SIZE REQUIREMENTS FOR EQUIPMENT LOADS.
- \* CONDUCTOR SIZES ARE BASED ON 60°C TEMPERATURE RATING FOR BREAKER SIZES 100A AND SMALLER AND BASED ON 75°C TEMPERATURE RATING FOR BREAKER SIZES LARGER THAN 100A. NOT MORE THAN THREE CURRENT CARRYING CONDUCTORS SHALL BE PROVIDED IN RACEWAY, CABLE OR EARTH (DIRECT BURY), BASED ON AMBIENT TEMPERATURE OF 30°C, UNLESS OTHERWISE NOTED.

### THREE PHASE TRANSFORMER SCHEDULE

KVA RATING	480V. PRIMARY (Δ) 3PH, 3W.			208/120V. SECONDARY (Y) 3PH, 4W.			GROUND ELECT/ BOND JUMP/CONDUIT
	O.C.P.D.	PRIMARY FEEDER	O.C.P.D.	SECONDARY FEEDER	O.C.P.D.	SECONDARY FEEDER	
15	40A	3#8, 1#10 G., 3/4" C.	50A	3#6, 1#6 N., 1#6 G., 1-1/4" C.			1#6, 3/4" C.
30	80A	3#3, 1#6 G., 1-1/4" C.	100A	3#1, 1#1 N., 1#6 G., 1-1/2" C.			1#6, 3/4" C.
45	125A	3#1, 1#6 G., 1-1/2" C.	150A	3#1/0, 1#1/0 N., 1#6 G., 2" C.			1#6, 3/4" C.
75	200A	3#3/0, 1#6 G., 2" C.	225A	3#4/0, 1#4/0 N., 1#2 G., 2-1/2" C.			1#2, 3/4" C.
112.5	250A	3-250KCM, 1#4 G., 2" C.	400A	3-600KCM, 1-600KCM N., 1#1/0 G., 3-1/2" C.			1#1/0, 1" C.
150	300A	3-350KCM, 1#4 G., 2-1/2" C.	500A	2 SETS OF 3-250KCM, 1-250KCM N., 1# 1/0 G., 2-1/2" C. EA			1#1/0, 1" C.
225	400A	3-500KCM, 1#3 G., 3-1/2" C.	800A	2 SETS OF 3-600KCM, 1-600KCM N., 1# 2/0 G., 3-1/2" C. EA			1#2/0, 1" C.
300	600A	2 SETS OF 3-350KCM, 1#1 G., 3" C. EA	1000A	3 SETS OF 3-400KCM, 1-400KCM N., 1# 3/0 G., 3-1/2" C. EA			1#3/0, 1" C.
500	800A	2 SETS OF 3-500KCM, 1#1/0 G., 3-1/2" C. EA	1600A	4 SETS OF 3-600KCM, 1-600KCM N., 1-250KCM G., 3-1/2" C. EA			1#3/0, 1" C.

- TRANSFORMER NOTES:**
- CONNECT GROUNDING ELECTRODE CONDUCTOR TO THE NEAREST OF THE FOLLOWING:
    - AN EFFECTIVELY GROUNDED STRUCTURAL METAL MEMBER OF THE STRUCTURE.
    - AN EFFECTIVELY GROUNDED METAL WATER PIPE WITHIN 5 FEET FROM THE POINT OF ENTRANCE INTO THE BUILDING.
  - REFER TO DISTRIBUTION TRANSFORMER GROUNDING DETAIL.
  - CONDUCTOR SIZES ARE BASED ON COPPER CONDUCTORS (TYPE THHN/THWN FOR CONDUCTOR SIZES SMALLER THAN #3 AWG AND TYPE XHHW FOR CONDUCTOR SIZES #3 AWG AND LARGER).
  - SECONDARY CONDUCTOR OVERCURRENT PROTECTIVE DEVICE SHALL BE LOCATED NO MORE THAN 25 FT FROM THE TRANSFORMER SECONDARY TERMINALS.
  - THIS SCHEDULE APPLIES TO "STANDARD" AND "HARMONIC MITIGATING" TRANSFORMER CONFIGURATIONS.

### NEW TRANSFER SWITCH SCHEDULE

ATS DESIGNATION	PROVIDED BY	AMP/RE RATING/POLE/ WIRE	MANUF./MODEL	FUNCTION	NORMAL FEED	NORMAL FEED OCP	NEW EMG EMERGENCY FEED	NEW EMG FEED OCP	COMMENTS
ATS-GEN	GRIFFIN HEALTHCARE - INSTALLED BY PROJECT CONTRACTOR	2000A-3P-4W	ASCO 7000 SERIES	AUTOMATIC TRANSFER	EXIST. GEN-1	2000	NEW GEN-2	2000	TRANSFER SWITCH TO TRANSFER WITH IN 10 SECONDS FROM GEN-1 TO NEW GEN-2 UPON FAILURE OF GEN-1.
ATS-CH1	GRIFFIN HEALTHCARE	1000A-3P-3W	ASCO 7000 SERIES	AUTOMATIC, DELAYED TRANSFER	4, MSBB	1200/900	1, EQESBB	1000/900	PROVIDE 2#12 FROM GENERATOR CONTROLLER TO TRANSFER SWITCH FOR LOAD SHED INITIATION.
ATS-CH2	GRIFFIN HEALTHCARE	800A-3P-3W	ASCO 7000 SERIES	AUTOMATIC, DELAYED TRANSFER	16, SWBD #1	1600/800	2, EQESBB	800/800	PROVIDE 2#12 FROM GENERATOR CONTROLLER TO TRANSFER SWITCH FOR LOAD SHED INITIATION.
ATS-CH3	GRIFFIN HEALTHCARE	800A-3P-3W	ASCO 7000 SERIES	AUTOMATIC, DELAYED TRANSFER	13, MSBB	800/500	3, EQESBB	800/800	PROVIDE 2#12 FROM GENERATOR CONTROLLER TO TRANSFER SWITCH FOR LOAD SHED INITIATION.
ATS-MCCB	GRIFFIN HEALTHCARE	600A-3P-4W	ASCO 7000 SERIES	AUTOMATIC, DELAYED TRANSFER	7, MSBB	600/480	4, EQESBB	600/600	PROVIDE 2#12 FROM GENERATOR CONTROLLER TO TRANSFER SWITCH FOR LOAD SHED INITIATION.
ATS-MCCP	GRIFFIN HEALTHCARE	600A-3P-4W	ASCO 7000 SERIES	AUTOMATIC, DELAYED TRANSFER	3, MSBB	600/480	5, EQESBB	600/600	PROVIDE 2#12 FROM GENERATOR CONTROLLER TO TRANSFER SWITCH FOR LOAD SHED INITIATION.

**NOTES**

- ALL NEW TRANSFER SWITCHES ARE SOLID NEUTRAL, NOT A SEPARATELY DERIVED SYSTEM.
- ALL NEW WIRING FROM EQESBB TO TRANSFER SWITCHES SHALL BE SIZED TO MATCH THE RATING OF THE O.C.P. IN EQESBB.
- ALL NEW WIRING FROM NORMAL SOURCES BEING INTERCEPTED FOR NEW TRANSFER SWITCHES SHALL MATCH EXISTING.

### PANELBOARD SCHEDULE

PANEL	LOCATION	PANEL DESCRIPTION					BRANCH CIRCUIT BREAKER		REMARKS
		MAINS	VOLTAGE	POLES	MT'G	A.I.C.	ACTIVE	SPARE	
CRGH-1	GENERATOR ROOM	50A-3P MCB	277/480	24	S	35KAIC	1-20A-3P 1-15A-3P	2 20A-1P 1 20A-3P	PROVIDED BY PROJECT CONTRACTOR
CRGL-1	GENERATOR ROOM	40A-3P MCB	120/208	24	S	22KAIC	3-20A-1P	2 20A-1P 1 20A-3P	PROVIDED BY PROJECT CONTRACTOR

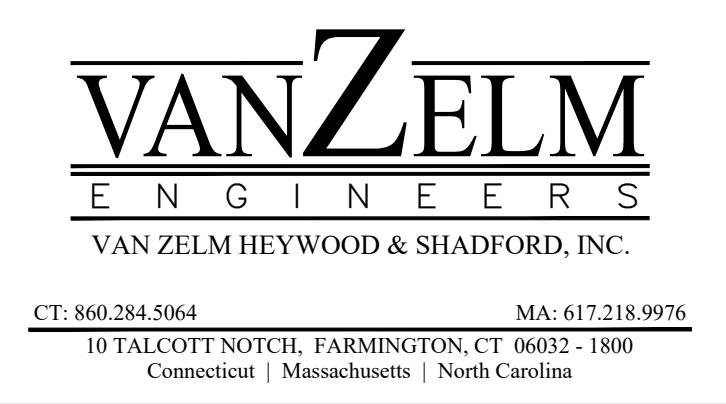
- NOTES:**
- AFI: ARC-FAULT INTERRUPTER CIRCUIT BREAKER
  - GFI: GROUND-FAULT INTERRUPTER CIRCUIT BREAKER

### MOTOR CIRCUIT SCHEDULE

EQUIPMENT	LOCATION	CIRCUIT / SOURCE PANEL	OCP DEVICE	FEEDER	LOCAL DISC SWITCH	MOTOR STARTER		LOAD		REMARKS		
						TYPE	SIZE	HP	PH		VOLT	
FOP-1/FOP-2	GENERATOR ROOM	CRGH-1	20A-3P	3#12, 1#12G, IN 3/4" C.	30A/20A	-	-	CONTROL PANEL	(2) 1/2	3	480	NOTES: 5 AND 6
FMS-1	GENERATOR ROOM	CRGL-1	20A-1P	2#12, 1#12G, IN 3/4" C.	30A/20A	-	-	ON UNIT	3/4	1	120	NOTES: 5 AND 6
DAY TANK 1	GENERATOR ROOM	CRGL-1	20A-1P	2#12, 1#12G, IN 3/4" C.	30A/20A	-	-	ON UNIT	1/2	1	120	NOTES: 5 AND 6
DAY TANK 2	GENERATOR ROOM	CRGL-1	20A-1P	2#12, 1#12G, IN 3/4" C.	30A/20A	-	-	ON UNIT	1/2	1	120	NOTES: 5 AND 6
EF-1	GENERATOR ROOM	CRGH-1	15A-3P	3#12, 1#12G, IN 3/4" C.	30A/15	VFD	-	ON WALL	2	3	480	NOTES: 2, 4, AND 6

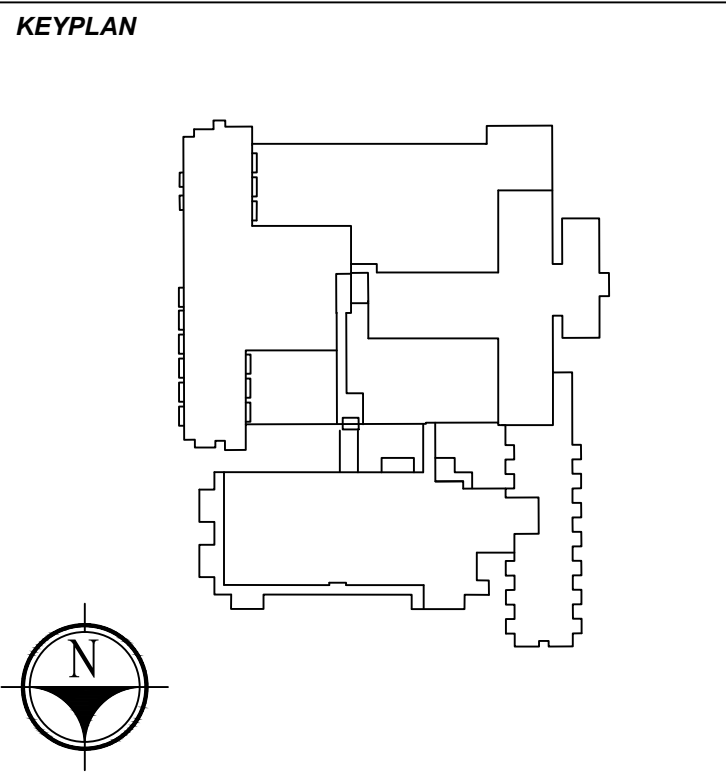
- MOTOR CIRCUIT SCHEDULE REFERENCED NOTES:**
- REFER TO FLOOR PLANS FOR CIRCUIT/SOURCE PANEL INFORMATION.
  - DISCONNECT SWITCH TO HAVE MICRO SWITCH FOR SIGNALING VFD SHUTDOWN PRIOR TO OPENING OF MOTOR FEEDER BLADES.
  - VFD FURNISHED BY DIVISION 23 AND INSTALLED BY DIV. 26. POWER WIRING FROM SOURCE TO VFD BY DIV. 26. POWER WIRING BETWEEN VFD AND MOTORS BY DIV. 26. CONTROL WIRING BY DIVISION 23.
  - STARTER/CONTROLLER IS PREWIRED TO MOTORS AND FURNISHED BY DIV. 23.
  - LOCAL DISCONNECT SWITCH FURNISHED BY DIVISION 23 AS AN INTEGRAL COMPONENT OF THE EQUIPMENT.

- MOTOR CIRCUIT SCHEDULE GENERAL NOTES:**
- REFER TO SPECIFICATIONS FOR STANDARD FEATURES.
  - ABBREVIATIONS:
    - FVNS - FULL VOLTAGE, NON-REVERSING
    - FHMS - FRACTIONAL HORSEPOWER MOTOR STARTER
    - MAN - MANUAL STARTER (TOGGLE SWITCH WITH THERMAL OVERLOADS)
  - OCP DEVICES AND LOCAL DISC SWITCHES ARE THREE POLE UNLESS OTHERWISE NOTED.
  - LOCAL DISCONNECT SWITCH SIZE INDICATES SWITCH FRAME FOLLOWED BY FUSE SIZE (I.E. 30A/20A REPRESENTS 30A FRAME SWITCH WITH 20A FUSES).
  - PROVIDE WEATHERPROOF FUSED DISCONNECT SWITCHES WHERE LOCATED OUTSIDE OR IN WET LOCATIONS.
  - STARTERS, DISCONNECT SWITCHES, CIRCUIT BREAKERS, BRANCH CIRCUIT WIRING, ETC. INDICATED IN THE MOTOR CIRCUIT SCHEDULE SHALL BE FURNISHED AND INSTALLED BY DIVISION 26 UNLESS OTHERWISE NOTED.
  - THE "OCP DEVICE" SHALL BE A CIRCUIT BREAKER UNLESS OTHERWISE NOTED.



**PROJECT NAME:**

**GRIFFIN HOSPITAL- PHASE 2**  
EMERGENCY GENERATOR and DISTRIBUTION  
UPGRADES  
130 DIVISION STREET, DERBY, CT



**REVISIONS**

REV.	DATE	DESCRIPTION

**DRAWING TITLE:**  
ELECTRICAL SCHEDULES

**DRAWING NUMBER:**  
E300.0

DATE: MAY 10, 2024  
DRAWN BY: EMG  
CHECKED BY: SEP  
SCALE: NONE  
PROJ #: 2021144.01