

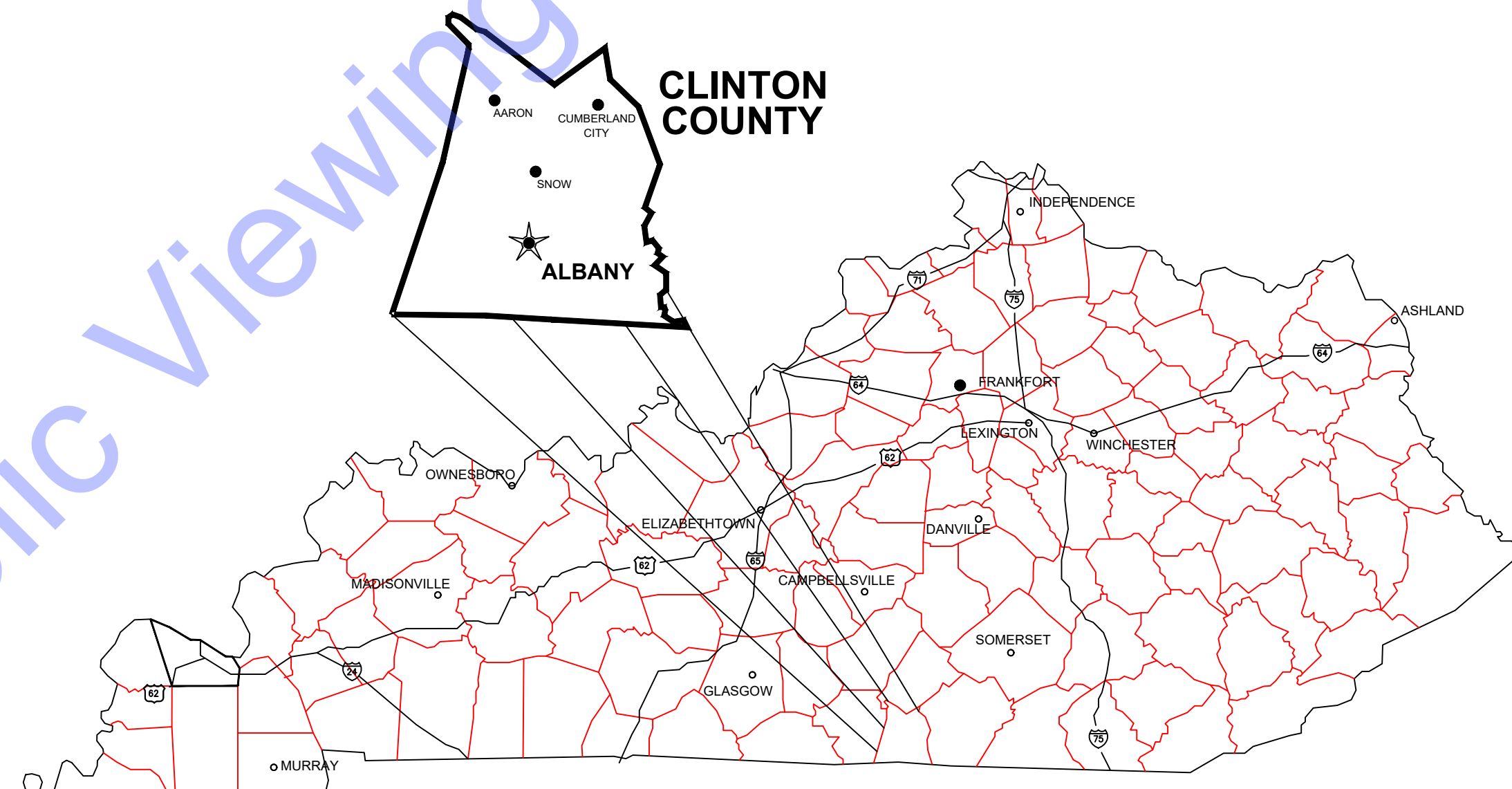
CITY of ALBANY

CLINTON COUNTY, KENTUCKY

WTP-A & WTP-B IMPROVEMENTS: GENERATORS AND AUTOMATIC TRANSFER SWITCHES OCTOBER 2024

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GENERAL LOCATION MAP



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FILE: Z:\SHARED\CLIENTS\ALBANY\WTP\WTP GENERATORS & ATS\SSA\CURRENT FILES\DRAWINGS\02 VICINITY MAP AND INDEX TO SHEETS.DWG
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VICINITY MAP
 SCALE: unknown

WTP-A CLEARWELL

WTP-A HIGH SEVICE
 PUMP BUILDING

WTP-A PUMP ELECTRICAL
 BUILDING

WTP-A PROPOSED SITE
 FOR ATS AND PAD

WTP-A POWER POLE

WTP-A PROPOSED SITE
 FOR GENERATOR AND PAD

WTP-A PROPOSED SITE
 FOR GEN ACCESS DRIVE

WTP-A MAIN BUILDING

WTP-B POWER POLE

WTP-B MAIN BUILDING

WTP-A PROPOSED SITE
 FOR ATS AND PAD

PROPOSED ROUTING
 FOR CONDUIT TO ATS

WTP-B PROPOSED SITE
 FOR GENERATOR AND PAD

WTP-B HIGH SERVICE
 PUMP BUILDING

WTP-B PUMP
 ELECTRICAL BUILDING

WTP-B CLEARWELL

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 SOUTH BEND, IN

STATE OF KENTUCKY
 MARK KENNETH NORDMEYER
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 LICENSED PROFESSIONAL ENGINEER

Mark Nordmeyer
 Signature Date 10/24/2024

CITY OF ALBANY,
 CLINTON COUNTY, KENTUCKY

WTP-A & WTP-B
 GENERATORS AND
 AUTOMATIC TRANSFER
 SWITCHES UPGRADES

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No.	Submittal / Revision	By	Date

Designed By: MOC	Drawn By: MOC	Checked By: TLC
Issue Date: ---	Project No: S24170	Scale: AS SHOWN

VICINITY MAP AND
 INDEX TO SHEETS

PROCESS AND INSTRUMENTATION DIAGRAM LEGEND

INSTRUMENT TAG IDENTIFICATION

AREA: 0550 BUILDING OR PROCESS AREA NUMBER
 TAG TYPE: P FIRST LETTER, SEE ISA TABLE BELOW
 AH SUCCEEDING LETTERS, SEE ISA TABLE BELOW
 TAG NUMBER: 12 P&ID NUMBER
 4 EQUIPMENT NUMBER
 A: DEVICE LETTER IF MULTIPLE DEVICES

TAG FUNCTION: HOA TAG FUNCTION ABBREVIATION, SEE LISTING AT RIGHT
 (QUANTITY) (2): TOTAL NUMBER OF DEVICES WHERE MORE THAN ONE DEVICE IS REQUIRED. DEVICE NUMBERS ARE SEQUENTIAL BEGINNING WITH THE TAG NUMBER SHOWN. IF QUANTITY IS NOT SHOWN, THEN ONE DEVICE ONLY IS REQUIRED.

PLC POINT TYPE

ANALOG INPUT
 ANALOG OUTPUT
 DISCRETE INPUT
 DISCRETE OUTPUT
 NETWORK CONNECTION

TAG FUNCTION ABBREVIATIONS

ALT	ALTERNATE (CLOSED)
CM	COMPUTER-MANUAL
DIFF	DIFFERENCE OR DIFFERENTIAL
DIS	DISSOLVED OXYGEN
F	FAIL
FXI	CHARACTERIZED
FOR	FORWARD-STOP/REVERSE/REVERSE(MAINTAINED CONTACT)
FSR	FORWARD-STOP-REVERSE(MOMENTARY CONTACT)
HOA	HAND-OFF-AUTOMATIC(MAINTAINED CONTACT)
HOR	HAND-OFF-REMOTE(MAINTAINED CONTACT)
I	CURRENT TO CURRENT
IP	CURRENT TO PNEUMATIC
LE	LEAKAGE(MAINTAINED CONTACT)
LOE	LOSS OF ECHO(ULTRASONIC SENSOR FAILURE)
LOR	LOCAL-OFF-REMOTE(MAINTAINED CONTACT)
LOS	LOCKOUT STOP/LOCKABLE IN "STOP" POSITION (MOMENTARY CONTACT)
LRI	LOCAL-REMOTE(MAINTAINED CONTACT)
MA	MANUAL-AUTOMATIC(MAINTAINED CONTACT)
MOA	MANUAL-OFF-AUTOMATIC(MAINTAINED CONTACT)
O	OPEN
OA	OFF-AUTOMATIC
OCA	OPEN-CLOSE(AUTOMATIC(MAINTAINED CONTACT)
OC	OPEN-CLOSE(O/MAINTAINED CONTACT)
ODC	OPEN-STOP-LOCK(MOMENTARY CONTACT SPRING RETURN TO CENTER POSITION)
OR	ON-OFF(MAINTAINED CONTACT)
OOR	ON-OFF-REMOTE(MAINTAINED CONTACT)
R	RUN
SBL	SLUDGE BLANKET INTERFACE LEVEL
SP	SPEED POT
SRT	SQUARE ROOT
SS	START-STOP
SSA	START-STOP-AUTOMATIC
SSL	START-STOP-LOCK (LOCKABLE IN "STOP" POSITION, MOMENTARY CONTACT)
SUM	SUMMATION
VIB	VIBRATION
X	MULTIPLY
FWD	FORWARD
REV	REVERSE
FR	FORWARD/REVERSE(MOTOR STARTER COILS)
ESTP	EMERGENCY STOP
SPD	(SPEED POT)
SUSP	SUSPENDED
ALRT	ALERT
RSET	RESET
STRT	START

TAG SYMBOLS

HORIZONTAL BAR SYMBOLS FOR PHYSICAL MOUNTING OF DEVICE

CONTROL AND I/O DEVICES DISPLAY (ADD APPROPRIATE HORIZ. BARS)

FIELD MOUNTED
 SINGLE FUNCTION SINGLE/I/O DEVICE NON-CONFIGURABLE NON-PROGRAMMABLE
 MULTI FUNCTION MULTI I/O PROGRAMMABLE DEVICE

NON-DISPLAYED CONFIGURABLE DEVICE (SEM-PROGRAMMABLE)
NON-DISPLAYED PROGRAMMABLE DEVICE (PLC)
DISPLAYED CONFIGURABLE DEVICE (SEM-PROGRAMMABLE)
DISPLAYED PROGRAMMABLE DEVICE
PROGRAMMABLE POINT (HMI TOUCH SCREEN OR SCADA SOFTWARE)

INSTRUMENT SOCIETY OF AMERICA TABLE

LETTER	FIRST LETTER(S)	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM/WARNING	ANNUNCIATE	
B	BURNER COMBUSTION		ALARM/WARNING	ANNUNCIATE	
C	USERS CHOICE		USERS CHOICE	CONTROL	
D	USERS CHOICE	DIFFERENTIAL	USERS CHOICE	CONTROL	CLOSE
E	VOLTAJE		PRIMARY ELEMENT		FEEDBACK
F	FLOW RATE	RATIO			FEEDBACK
G	USERS CHOICE		GLASS		FEEDBACK
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE	KEYPAD/DATA ENTRY		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTOR	MOMENTARY		MONITORING	USERS CHOICE
N	USERS CHOICE		USERS CHOICE	USERS CHOICE	USERS CHOICE
O	USERS CHOICE		DRIP/LEAK		USERS CHOICE
P	PRESSURE OR VACUUM		POINT TEST CONNECTION		
Q	QUANTITY	INTEGRATE			
R	RADIATION		RECORD/TREND LOG		
S	SPEED OR FREQUENCY	SAFETY			
T	TEMPERATURE		SWITCH TRANSIT		
U	UNIVERSAL MULTIVARIABLE		MULTIFUNCTIONAL VALVE	NOT FUNCTIONAL (ELECTRICALLY)	
V	VIBRATION		WELL	W	UNCLASSIFIED (ELECTRICALLY)
W	WEIGHT FORCE/TORQUE		WELL	W	UNCLASSIFIED (ELECTRICALLY)
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	RELAY OR COMBINER	
Y	EVENT STATE	Y AXIS	UNCLASSIFIED	DRIVE/ACTUATE OR CONTROL ELEMENT	
Z	POSITION, DIMENSION	Z AXIS			

(*) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL

SPECIAL CASES:
 ETM - ELAPSED TIME MEASUR
 JBX - JUNCTION BOX
 NEX - NETWORK EXISTING
 MS - MOTOR STARTER
 MPR - MOTOR PROTECTION RELAY

CONDUIT NOTES

PVC SCHEDULE 40 BELOW GRADE.
 RIGID ALUMINUM OR PVC COATED RGS CONDUIT ABOVE GRADE OUTDOORS.
 RIGID ALUMINUM OR PVC COATED RGS CONDUIT IN CLASSIFIED AND CORROSIVE SPACES.

NO CONDUIT SHALL BE RUN ON TOP OF A DECK, ON A WALKWAY, OR IN AN AREA THAT MAY POSE A TRIP HAZARD. NO CONDUIT SHALL BE RUN ABOVE A DECK, ABOVE A WALKWAY, OR IN AN AREA THAT IS COMMONLY TRAVELED. ALL CONDUIT IN SUCH AREAS SHALL BE COORDINATED WITH THE OWNER/ENGINEER AND SHALL BE RUN BELOW GRADE OR IN THE CONCRETE DECKING OR PAD. CONDUIT IN CONCRETE DECKING OR PAD SHALL BE AVOIDED WHEN POSSIBLE. IF CONDUIT IS TO BE ROUTED IN A STRUCTURAL CONCRETE DECK, PAD, WALL, ETC., IT SHALL BE COORDINATED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. CONDUIT RUN IN CONCRETE CAN IMPACT THE STRUCTURAL INTEGRITY OF CONCRETE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFORM TO ANY REQUIREMENTS REQUIRED OF THE STRUCTURAL ENGINEER TO ACCOMMODATE THE INTEGRITY OF THE INSTALLATION AT NO COST TO THE OWNER. FOR A CONDUIT EMBEDDED IN CONCRETE TO BE CONSIDERED IT MUST BE THE ONLY REASONABLE SOLUTION AS DETERMINED BY THE ENGINEER. ALL PROPOSED INSTALLATIONS MUST COMPLY WITH ACI 318 AND BE ENGINEER APPROVED.

ALL UNDERGROUND CONDUITS SHALL BE SEALED AT BOTH ENDS.
 NO CONDUIT PENETRATIONS ON THE TOP OF ANY OUTDOOR PANELS/ENCLOSURES.

CONTROL WIRING REQUIREMENTS

EACH ANALOG INPUT REQUIRES AN 18/2 TWISTED SHIELDED PAIR IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

EACH ANALOG OUTPUT REQUIRES AN 18/2 TWISTED SHIELDED PAIR IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

EACH DISCRETE INPUT REQUIRES 2 #14'S IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

EACH DISCRETE OUTPUT REQUIRES 2 #14'S IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

CONTROL WIRING OF THE SAME TYPE MAY BE COMBINED INTO THE SAME CONDUIT. EXAMPLES: TWO 4-20MA ANALOG SIGNALS MAY BE COMBINED. TWO 24VDC DISCRETE SIGNALS MAY BE COMBINED, AND TWO 120VAC DISCRETE SIGNALS MAY BE COMBINED.

NOTE: INSTRUMENTS AND CABLE SHALL BE AS REQUIRED BY THE INSTRUMENT MANUFACTURER.

INSTRUMENT POWER

INSTRUMENTS REQUIRING 120 VAC:

- MAGNETIC FLOW METERS
- TURBIDITY TRANSMITTERS
- pH TRANSMITTERS
- ORP TRANSMITTERS
- DO TRANSMITTERS
- ULTRASONIC LEVEL TRANSMITTERS
- ULTRASONIC FLOW TRANSMITTERS
- INFLUENT AND EFFLUENT SAMPLERS

NOTE: THIS LIST IS PROVIDED AS A REFERENCE AND IS NOT ALL INCLUSIVE. COORDINATE WITH THE GENERAL CONTRACTOR AND THE EQUIPMENT SUPPLIERS FOR DETAILED WIRING REQUIREMENTS OF INSTRUMENTS, SENSORS, AND EQUIPMENT.

ELECTRICAL GENERAL NOTES

(GENERAL NOTES APPLICABLE TO ALL ELECTRICAL SHEETS)

- CONTRACTOR SHALL EXAMINE NOT ONLY PLANS AND SPECIFICATIONS FOR ELECTRICAL AND INSTRUMENTATION, BUT PLANS AND SPECIFICATIONS FOR OTHER RELATED SECTIONS. VISIT THE SITE TO BECOME ACQUAINTED WITH ALL PROJECT CONDITIONS INCLUDING EXISTING CONDITIONS. EXECUTION OF CONTRACT IS EVIDENCE THAT THE CONTRACTOR HAS EXAMINED ALL DRAWINGS AND SPECIFICATIONS AND THAT ALL CONDITIONS OF INSTALLING THE WORK IN THIS SECTION ARE VERIFIED. LATE CLAIMS FOR LABOR AND MATERIALS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATIONS BEEN MADE WILL NOT BE RECOGNIZED.
- THE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO INCLUDE EVERY DETAIL OF REQUIRED CONSTRUCTION, EQUIPMENT, AND MATERIALS. PROVIDE ALL MATERIALS AND WORK NOT SPECIFICALLY MENTIONED. SHOWN, OR CAN BE REASONABLY INFERRED ON THE DRAWINGS BUT WHICH ARE NECESSARY TO FULLY COMPLETE THE WORK.
- WHEN SUBSTITUTING OTHER EQUIPMENT, MATERIALS, AND PRODUCTS THAN SPECIFIED IN THE CONTRACT DOCUMENTS, INCLUDE IN PROPOSAL ALL COSTS FOR OTHER DESIGN CHANGES TO THE PROJECT (ALL DIVISIONS) WHICH WILL RESULT FROM USE OF THE SUBSTITUTED ITEMS.
- REVIEW THE CONTRACT DOCUMENTS OF OTHER DIVISIONS, AND COORDINATE ELECTRICAL AND CONTROL WORK WITH THE WORK OF OTHER DIVISIONS TO AVOID CONFLICTS AND INTERFERENCE.
- UPON COMPLETION OF THE WORK REQUIRED UNDER THIS CONTRACT, PROVIDE TYPED UPDATED DIRECTORY WITHIN DOOR OF EACH AFFECTED PANELBOARD. LEAVE "SPARE" BREAKERS IN "OFF" POSITION.
- ALL MOUNTING HEIGHTS INDICATED ON DRAWINGS ARE TO CENTERLINE UNLESS NOTED OTHERWISE.
- PROVIDE LIGHTING FIXTURES COMPATIBLE WITH CEILING CONSTRUCTION. COORDINATE WITH ARCHITECTURAL ROOM FINISH SCHEDULES.
- IN AREAS HAVING FINISHED CEILINGS, LOCATE CEILING-MOUNTED ELECTRICAL DEVICES AND FIXTURES ACCORDING TO ARCHITECTURAL REFLECTED CEILING PLAN. DO NOT INSTALL CEILING-MOUNTED SMOKE DETECTORS WITHIN 4 FEET OF HVAC SUPPLY DIFFUSERS.
- IN ELECTRICAL AND MECHANICAL EQUIPMENT SPACES, COORDINATE EXACT LOCATIONS OF LIGHTING FIXTURES WITH CONDUIT BANKS, DUCTWORK, PIPING, STRUCTURE, STRUCTURE, AND OTHER OBSTRUCTIONS. LOCATE FIXTURES SUCH THAT DIMS, GAUGES, METERS, ETC. ARE PROPERLY ILLUMINATED.
- DO NOT USE ANY LIGHTING FIXTURE AS A RACEWAY FOR CONDUCTORS NOT SERVING THAT PARTICULAR FIXTURE.
- CONNECT BATTERY-OPERATED EMERGENCY LIGHTING UNITS AND EXIT SIGNS HAVING BATTERY BACK-UP TO UNSWITCHED LEG OF LOCAL LIGHTING CIRCUIT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND NEC SUCH THAT FAILURE OF CIRCUIT TRANSFERS UNIT FROM NORMAL TO EMERGENCY MODE, CAUSING LAMPS TO RE-ENERGIZE.
- DO NOT INSTALL OUTLET BOXES BACK-TO-BACK IN NON-RATED PARTITIONS. OFFSET AND SEAL SIMILAR TO REQUIREMENTS FOR RATED PARTITIONS. TO MINIMIZE SOUND TRANSMISSION.
- COORDINATE ROUTING OF ALL LARGE CONDUITS (2" DIA AND LARGER) AND PULL BOX LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION TO AVOID CONFLICTS AND TO GUARANTEE REQUIRED CLEARANCE AND ACCESSIBILITY OF ELECTRICAL AND OTHER SYSTEMS.
- COORDINATE WITH OWNER OR OWNERS SELECTED VENDOR PRIOR TO ROUGH-IN FOR EXACT LOCATIONS OF SPECIAL PURPOSE OUTLETS DEDICATED TO SPECIFIC EQUIPMENT. VERIFY REQUIRED NEMA CONFIGURATION OF ALL SUCH OUTLETS.
- PROVIDE APPROPRIATE PULL WIRE IN EACH EMPTYSYSTEMS CONDUIT INCLUDED IN THIS PROJECT.
- INCLUDE GREEN-INSULATED GROUNDING CONDUCTOR SIZED PER 2002 NEC TABLE 250-122 WITH ALL BRANCH CIRCUIT CONDUCTORS SERVING LIGHTING FIXTURES, RECEPTACLES, MECHANICAL OR OTHER DEVICES INSTALLED AT OR BELOW 8'-0".
- MATCH A.I.C. RATINGS AND OTHER CHARACTERISTICS OF EXISTING DEVICES IN PANELBOARD WHEN ADDING BREAKERS TO EXISTING PANELBOARDS.
- ALL WORK SHALL BE IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE - LATEST EDITION ADOPTED BY INDIANA, THE INDIANA CODE AMENDMENT, LOCAL/MUNICIPAL CODE, AND THE AUTHORITIES HAVING JURISDICTION.
- ALL CONNECTIONS TO EQUIPMENT SUBJECT TO MOVEMENT OR VIBRATION SHALL BE LIQUID TIGHT FLEXIBLE METAL CONDUIT, NOT LESS THAN 1/2" IN LENGTH, NOR GREATER THAN 36" IN LENGTH.
- ALL CONDUIT PENETRATIONS SHALL BE SEALED WITH APPROPRIATE CONDUIT SEALING MATERIAL.
- ALL CABLE SIZES SHALL UTILIZE COPPER CONDUCTORS.
- FIELD VERIFY LOCATIONS OF BUILDING EXPANSION JOINTS WHEN ROUTING CONDUIT. ALL CONDUITS CROSSING EXPANSION JOINTS SHALL BE INSTALLED WITH THE EXPANSION FITTINGS. EXPANSION FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC AND MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- FEEDERS FROM PANELBOARDS BACK TO MAIN SWITCHBOARD, BETWEEN AUTO TRANSFER SWITCHES AND THEIR SOURCE LOADS, BETWEEN DRY TRANSFORMERS AND THEIR SOURCE LOADS ARE NOT INDICATED. FEEDERS ARE PART OF THE WORK, AND SHALL BE SIZED AS INDICATED ON THE LINE DIAGRAM.
- HOMERUNS SHALL NOT BE COMBINED IN A RACEWAY UNLESS SHOWN ON THE CONTRACT DRAWINGS. SINGLE PHASE BRANCH CIRCUIT HOMERUNS MAY BE COMBINED AT THE CONTRACTORS DISCRETION NOT GREATER THAN (3) PHASE CONDUCTORS, NEUTRAL CONDUCTORS, AND A GROUNDING CONDUCTOR.
- EACH SINGLE PHASE BRANCH CONDUCTOR SHALL HAVE A DEDICATED NEUTRAL BACK TO THE PANEL.
- ALL PENETRATIONS BELOW GRADE SHALL USE LINK SEALS.
- WHERE LOW VOLTAGE (CONTROL) CABLING IS ALLOWED TO BE INSTALLED WITHOUT A RACEWAY, IT SHALL BE SUPPORTED NOT EXCEEDING INTERVALS OF 4'-0" AND NOT MORE THAN 6" FROM THE CABINETS, BOXES, FITTINGS, OUTLETS, RACKS, FRAMES AND TERMINALS.
- ALL MOUNTING HARDWARE INCLUDING NUTS, BOLTS, SCREWS, WASHERS, ETC. SHALL BE STAINLESS STEEL.
- MOUNT JUNCTION BOXES AND DISCONNECT SWITCHES ON STAINLESS STEEL UNISTRUT.
- ALL UNISTRUT, MOUNTING BRACKETS AND SUPPORTING STRUCTURES SHALL BE STAINLESS STEEL.
- DO NOT MIX CONTROL AND POWER CONDUCTORS IN THE SAME CONDUIT. DO NOT MIX DISCRETE AND ANALOG CONTROL CONDUCTORS IN THE SAME CONDUIT.
- ADJUSTABLE SPEED DRIVES (ASD) LINE AND LOAD WIRE SHALL BE RUN IN SEPARATE RACEWAYS.
- CONTRACTOR SHALL COORDINATE WITH HEAT TRACE MANUFACTURER DURING BIDDING AND CONSTRUCTION AND SHALL PROVIDE ALL CONDUIT, WIRING, AND CIRCUITS AS REQUIRED. HEAT TRACE SHALL BE PROVIDED/INSTALLED COMPLETE. ALL HEAT TRACE IS REQUIRED TO BE GFI PROTECTED.

PUMP AND METER LEGEND

SYMBOL	DESCRIPTION
	MAGNETIC FLOW METER
	SONIC FLOW METER
	CENTRIFUGAL PUMP
	LOBE PUMP
	PERISTALTIC PUMP
	SUBMERSIBLE PUMP
	GRINDER PUMP

LIGHTING LEGEND

SYMBOL	DESCRIPTION
	FIXTURE WITH STANDARD BALLAST
	FIXTURE WITH STANDARD BALLAST AND EMERGENCY BALLAST

LEGEND

SYMBOL	DESCRIPTION	MTG HGT AFF TO CL UN
	OPEN LIGHTING FIXTURE SYMBOLOLOGY DENOTING FIXTURES CONNECTED TO NORMAL POWER; FIXTURE TYPE DETERMINES MOUNTING.	----
	SINGLE DIAGONAL LIGHTING FIXTURE SYMBOLOLOGY DENOTING FIXTURES CONNECTED TO CRITICAL OR EQUIPMENT BRANCH (OR EMERGENCY POWER); UNLESS OTHERWISE NOTED, FIXTURE TYPE DETERMINES MOUNTING.	----
	DOUBLE DIAGONAL LIGHTING FIXTURE SYMBOLOLOGY DENOTING FIXTURES CONNECTED TO LIFE SAFETY BRANCH (OR EMERGENCY POWER); UNLESS OTHERWISE NOTED, FIXTURE TYPE DETERMINES MOUNTING.	----
	BATTERY POWERED EMERGENCY LIGHTING UNIT	7'-6"
	EXIT SIGN: ARROWS DENOTE DIRECTIONAL INDICATING CHEVRON ORIENTATION.	----
	WALLWASH OR OTHER DIRECTIONALLY ADJUSTABLE/IMMEDIATE FIXTURE: OPEN SIDE DENOTES ORIENTATION. TYPE DETERMINES MOUNTING.	----
	TRACK LIGHTING FIXTURE: TYPE DETERMINES MOUNTING.	----
	POLE-MOUNTED SITE LIGHTING FIXTURE: TYPE DETERMINES MTG.	----
	FLOOR LIGHTING FIXTURE: TYPE DETERMINES MOUNTING.	----
	PHOTO-CELL	----
	ALL FIXTURES IN THIS SPACE SHALL BE SAME TYPE INDICATED U.O.N.	----
	SINGLE-POLE TOGGLE SWITCH	3'-10"
	SINGLE-POLE TOGGLE SWITCH: SLASH DENOTES ESSENTIAL POWER SYSTEM CONNECTION - TYPICAL FOR ALL SWITCHES.	3'-10"
	DUAL TECHNOLOGY, WALL MNTD OCCUPANCY SENSOR WITH MANUAL OVERRIDE SWITCH	3'-10"
	DUAL TECHNOLOGY, CEILING MNTD OCCUPANCY SENSOR WITH REMOTE MANUAL OVERRIDE SWITCH FOR CEILING MNTD	3'-10"
	DIMMER SWITCH	3'-10"
	THREE-WAY DIMMER SWITCH	3'-10"
	SINGLE-POLE TOGGLE SWITCH WITH PILOT LIGHT	3'-10"
	SINGLE-POLE MOTOR-RATED TOGGLE SWITCH DISCONNECT	3'-10"
	SINGLE-POLE OR DOUBLE-POLE MANUAL MOTOR STARTER WITH MELTING ALLOY ELEMENTS FOR THERMAL OVERLOAD PROTECTION	3'-10"
	OCCUPANCY SENSOR SWITCH	3'-10"
	INTERVAL TIMER RESET AND CONTROL SWITCH	3'-10"
	JOG SWITCH	3'-10"
	MUSHROOM HEAD TYPE PUSHBUTTON STATION	5'-0"
	AUTO DOOR CONTROL PUSHPLATE	----
	VARIABLE INTENSITY CONTROLLER INCLUDED WITH OWNER-FURNISHED-CONTRACTOR-INSTALLED SURGICAL LIGHTING FIXTURE	5'-0"
	LOW VOLTAGE CONTROL SWITCH	3'-10"
	FACTORY SUPPLIED WALL CONTROLLER FOR CEILING MOUNTED LIGHT-INSTALLED BY ELECTRICAL CONTRACTOR	3'-10"
	120V DUPLEX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
	120V DUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT	ABOVE COUNTER
	120V DUPLEX RECEPTACLE (OTHER THAN 120V), VOLTAGE, AMP RATING, NEMA CONFIGURATION, AND MOUNTING HEIGHT AS NOTED	ABOVE COUNTER
	120V QUADRUPLEX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
	120V QUADRUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT	ABOVE COUNTER
	120V QUADRUPLEX RECEPTACLE (OTHER THAN 120V), VOLTAGE, AMP RATING, NEMA CONFIGURATION, AND MOUNTING HEIGHT AS NOTED	ABOVE COUNTER
	120V SINGLE RECEPTACLE, AMP RATING (IF OTHER THAN 20A) SHOWN; STANDARD MOUNTING HEIGHT, OR OTHER HEIGHT AS NOTED	1'-6", UNLESS NOTED
	120V GFCI DUPLEX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
	120V GFCI DUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT	ABOVE COUNTER
	120V GFCI DUPLEX RECEPTACLE (OTHER THAN 120V), VOLTAGE, AMP RATING, NEMA CONFIGURATION, AND MOUNTING HEIGHT AS NOTED	ABOVE COUNTER
	SINGLE RECEPTACLE (OTHER THAN 120V), VOLTAGE, AMP RATING, NEMA CONFIGURATION, AND MOUNTING HEIGHT AS NOTED	ABOVE COUNTER
	RECEPTACLE OR J-BOX CONNECTION FOR X-RAY VIEWER; VERIFY CONNECTION RGMTS WITH UNIT FURNISHED PRIOR TO ROUGH-IN	----
	120V DUPLEX RECEPTACLE IN FLUSH FLOOR-MOUNTED BOX	----
	TELE-POWER POLE	----
	HALON DUMP STATION	----
	FIRE ALARM MANUAL PULL STATION	3'-10"
	FIRE ALARM MANUAL PULL STATION, KEY-OPERATED	3'-10"
	FIRE ALARM CEILING-MOUNTED SMOKE DETECTOR	----
	FIRE ALARM CEILING-MOUNTED HEAT DETECTOR	----
	FIRE ALARM SUPPLY AIR DUCT-MOUNTED SMOKE DETECTOR	----
	FIRE ALARM RETURN AIR DUCT-MOUNTED SMOKE DETECTOR	----
	FIRE ALARM PROJECTED BEAM SMOKE DETECTOR - RECEIVER	AS NOTED
	FIRE ALARM PROJECTED BEAM SMOKE DETECTOR - TRANSMITTER	AS NOTED
	FIRE ALARM CONNECTION TO SPRINKLER SYSTEM VALVE STATUS SWITCH (TAMPER SWITCH)	----
	FIRE ALARM CONNECTION TO SPRINKLER SYSTEM WATER FLOW SWITCH	----
	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE-CHIME & STROBE	6'-8"
	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE-HORN & STROBE	6'-8"
	FIRE ALARM VISUAL ONLY NOTIFICATION DEVICE - STROBE LIGHT	6'-8"
	FIRE ALARM SPEAKER: CEILING-MOUNTED, WALL-MOUNTED	6'-8"
	FIRE ALARM HORN, WALL-MOUNTED	AS NOTED
	DUCT SMOKE DETECTOR ALARM REMOTE INDICATOR LIGHT: CEILING-MOUNTED, WALL-MOUNTED	6'-8"
	DUCT SMOKE DETECTOR ALARM REMOTE INDICATOR LIGHT AND TEST SWITCH: CEILING-MOUNTED, WALL-MOUNTED	6'-8"
	FIRE ALARM ZONE ADDRESSABLE MODULE	----
	FIRE ALARM INDIVIDUAL ADDRESSABLE MODULE	----
	FIRE ALARM ELECTRO-MAGNETIC DOOR HOLDER	6'-4"
	FIRE RELAY	----
	DESK MOUNTED INTERCOM	----
	WALL MOUNTED INTERCOM	----
	EXPLOSION PROOF SWITCH	3'-10"
	3 WAY SWITCH	3'-10"
	4 WAY SWITCH	3'-10"
	NEMA 4X SWITCH	3'-10"

LEGEND

ABBREVIATION	MEANING
ABV	ABOVE
AFR	ABOVE FINISHED FLOOR
ADLG	ABOVE FINISHED CEILING
BFC	BELOW FINISHED CEILING
C	CRITICAL BRANCH OR EMERG PWR-RED DEVICE & PLATE, UNLESS NOTED OTHERWISE
CL	CENTER-LINE
CLG	CEILING-MOUNTED
COF	COFFEE MAKER
COP	COPPER
CTR	COUNTER
ECB	ENCLOSED CIRCUIT BREAKER
EMER	EMERGENCY
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FAX	FACSIMILE MACHINE
FBO	FURNISHED BY OTHERS
GFCI	GROUND FAULT INTERRUPTING - PERSONNEL PROTECTION
GFI	GROUND FAULT INTERRUPTING - EQUIPMENT PROTECTION
HGT	HEIGHT
FPMR	FUSED PER MANUFACTURER'S RECOMMENDATIONS
IG	ISOLATED GROUND
MON	MONITOR
MTG	MOUNTING
MV	MULTI-VIEWER
MW	MICROWAVE OVEN
NEC	NATIONAL ELECTRICAL CODE
OCPD	OVERCURRENT PROTECTIVE DEVICE
OFCI	OWNER-FURNISHED-CONTRACTOR-INSTALLED
OFE	OWNER-FURNISHED EQUIPMENT
PRT	PRINTER
PTS	PNEUMATIC TUBE STATION
Q	EQUIP BRANCH OR EMERG PWR-RED DEVICE & PLATE, UNLESS NOTED OTHERWISE
REF	REFRIGERATOR
RMTS	REQUIREMENTS
WP	WEATHERPROOF
T	TAMPERPROOF DEVICE
UN	UNLESS OTHERWISE NOTED
UCR	UNDER-COUNTER REFRIGERATOR

SYMBOL	DESCRIPTION	MTG HGT AFF TO CL UN
	EXPOSED RACEWAY	----
	RACEWAY CONCEALED IN OR ABOVE CEILINGS AND WITHIN WALLS	----
	BRANCH CIRCUIT RACEWAY CONCEALED IN OR BELOW FLOOR SLAB OR BELOW GRADE	----
	FEEDER RACEWAY CONCEALED BELOW FLOOR SLAB OR BELOW GRADE	----
	LIGHTNING PROTECTION CABLING	----
	HOMERUN RACEWAY: NUMBER OF ARROWHEADS DENOTES NUMBER OF CIRCUITS.	----
	RACEWAY TURNING UP AS VIEWED FROM THE LOAD	----
	RACEWAY TURNING DOWN AS VIEWED FROM THE LOAD	----
	RACEWAY VERTICAL RISER WITH HORIZONTAL CONTINUATION AT TWO LEVELS SHOWN	----
	CAPPED RACEWAY	----
	GENERAL LIGHTING OR OUTLET CIRCUIT - MAY BE DAISY CHAINED	----
	JUNCTION BOX	AS NOTED
	ENCLOSED BREAKER	----
	SURFACE- OR FLUSH-MOUNTED LIGHTING/RECEPTACLE PANELBOARD	----
	POWER DISTRIBUTION PANELBOARD	----
	DRY TYPE TRANSFORMER	----
	MISCELLANEOUS SYSTEMS PANEL OR CABINET: REFER TO ABBREVIATIONS.	----
	MOTOR	----
	FLEXIBLE CONDUIT CONNECTION	----

NOTE: IF ALL ABBREVIATIONS, NOTES, AND SYMBOLS SHOWN ON THIS DRAWING DO NOT NECESSARILY APPEAR IN THIS SET OF CONTRACT DOCUMENTS, REFER ONLY TO THOSE THAT APPLY.

ABBREVIATIONS

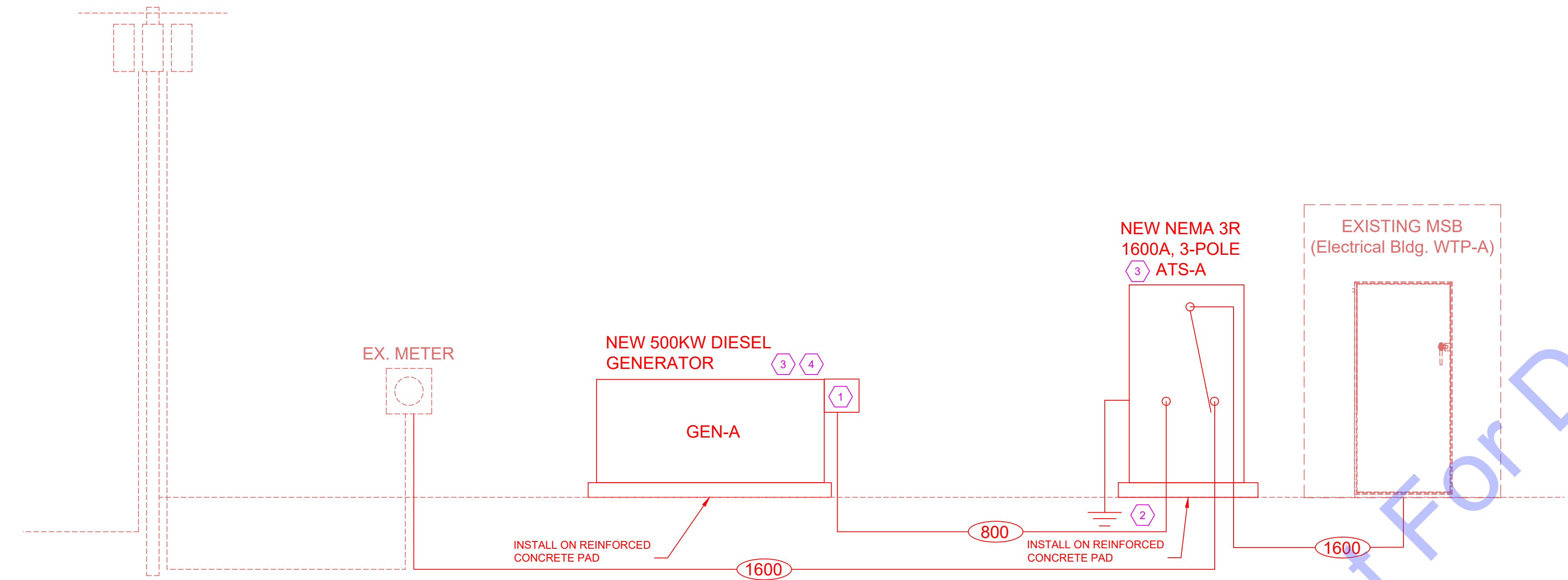
ABBREVIATION	MEANING
GFI	GROUND FAULT INTERRUPTER
WP	WEATHER PROOF
AFR	ABOVE FINISHED FLOOR
UNO	UNLESS NOTED OTHERWISE
FPMR	FUSE PER MANUFACTURER'S RECOMMENDATIONS
IG	ISOLATED GROUND-ORANGE RECEPTACLE
M	MONITOR RECEPTACLE, CRITICAL POWER- RED RECEPTACLE - 60" A.F.F. (UNO) UNLESS VENDOR DRAWINGS REQUIRE DIFFERENT HEIGHT
TSP	TWISTED SHIELDED PAIR

MOTOR CONTROLLER LEGEND

SYMBOL	DESCRIPTION
	ACROSS THE LINE MOTOR STARTER
	SOFT STARTER
	VARIABLE FREQUENCY DRIVE
	ACROSS THE LINE MOTOR STARTER WITH INTEGRAL DISCONNECT
	SOFT STARTER WITH INTEGRAL DISCONNECT
	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECT

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EX. UTILITY POLE AND TRANSFORMERS



FEEDER SCHEDULE					
TYPE NO.	COPPER WIRE		CONDUIT	W/O NEUTRAL	SERVICE GROUND
	QUANTITIES & WIRE SIZE				
15	4#12 & #12 GROUND		3/4"	3/4"	#8
20	4#12 & #12 GROUND		3/4"	3/4"	#8
30	4#10 & #10 GROUND		3/4"	3/4"	#8
50	4#8 & #10 GROUND		1"	1"	#8
65	4#6 & #8 GROUND		1-1/4"	1-1/4"	#8
85	4#4 & #8 GROUND		1-1/4"	1-1/4"	#8
100	4#3 & #8 GROUND		1-1/2"	1-1/4"	#8
115	4#2 & #6 GROUND		1-1/2"	1-1/2"	#8
130	4#1 & #6 GROUND		2"	1-1/2"	#6
150	4#1/0 & #6 GROUND		2"	2"	#6
175	4#2/0 & #6 GROUND		2"	2"	#4
200	4#3/0 & #6 GROUND		2-1/2"	2"	#4
225	4#4/0 & #4 GROUND		2-1/2"	2-1/2"	#2
250	4#250MCM & #4 GROUND		3"	2-1/2"	#2
300	4#350MCM & #3 GROUND		3"	3"	#2
380	4#500MCM & #3 GROUND		4"	4"	#1/0
420	4#600MCM & #2 GROUND		4"	4"	#1/0
460	(2 SETS) 4#4/0 & #2 GROUND		2-1/2"	2-1/2"	#1/0
500	(2 SETS) 4#250MCM & #2 GROUND		4"	3"	#1/0
600	(2 SETS) 4#350MCM & #1 GROUND		4"	3"	#2/0
700	(2 SETS) 4#500MCM & #1/0 GND		4"	4"	#2/0
800	(3 SETS) 4#300MCM & #1/0 GND		3"	3"	#2/0
1000	(3 SETS) 4#500MCM & #2/0 GND		4"	4"	#3/0
1200	(4 SETS) 4#350 MCM & #3/0 GND		4"	4"	#3/0
1600	(5 SETS) 4#600 MCM & #3/0 GND		4"	3 1/2"	#3/0
2000	(6 SETS) 4#600MCM & #3/0 GND		4"	3 1/2"	#3/0

ALL FEEDERS ARE ASSUMED TO BE 4 CURRENT CARRYING CONDUCTORS (3 PHASE CONDUCTORS AND 1 NEUTRAL) UNLESS NOTED OTHERWISE.

FEEDER KEY IS AS FOLLOWS (PARENTHESIS DENOTES SUBSCRIPT):

- ### = 3 PHASES AND NEUTRAL WITH GROUND
- ###(N) = 3 PHASES, NO NEUTRAL WITH GROUND
- ###(2) = 2 PHASES AND NEUTRAL WITH GROUND

ALL CIRCUITS SHALL BE RUN IN PVC BELOW GROUND/PVC COATED RIGID ABOVE GROUND

GENERATOR (3) (4)

MINIMUM RATED CAPACITY: 500 KW
 BASIS OF DESIGN: 500DFE* MANUFACTURER: CUMMINS
 RATED VOLTAGE: 480V 3 PHASE/4-WIRE
 ENCLOSURE RATING: SEE SPECIFICATIONS FUEL TYPE: DIESEL
 FUEL TANK CAPACITY: 24 HOURS
 PARALLEL CAPABLE: YES
 SEE SPECIFICATIONS FOR ADDITIONAL FEATURES

NEMA 3R TRANSFER SWITCH (3)

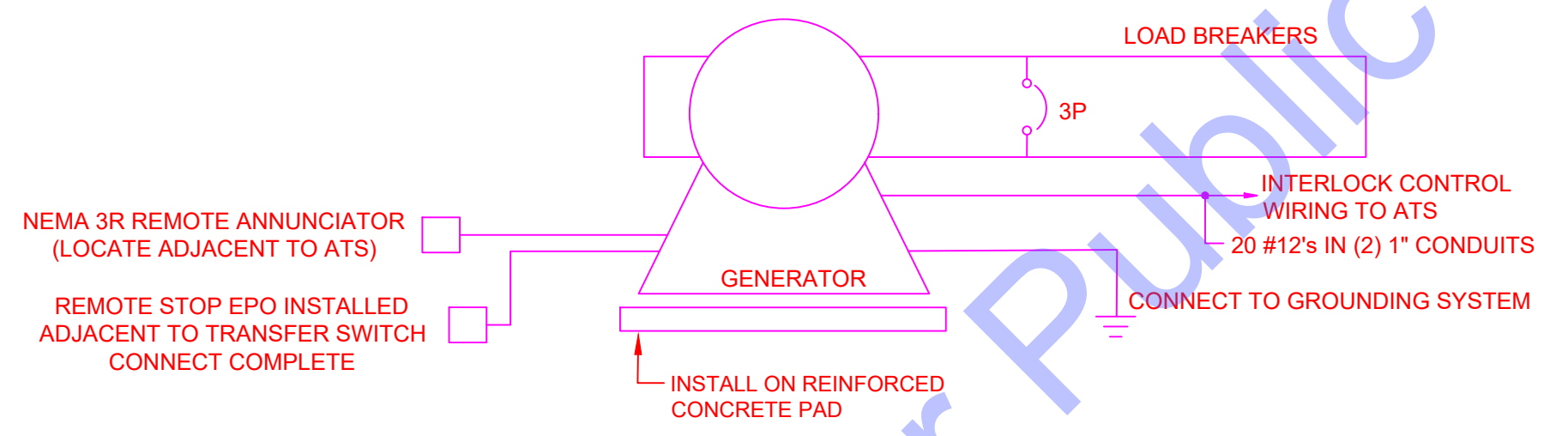
TRANSFER SWITCH TYPE: AUTOMATIC CURRENT RATING: 1600 A
 RATED VOLTAGE: 480V 3 PHASE/4-WIRE # OF POLES: 3
 NEUTRAL CONFIGURATION: SOLID IN-SYNC TRANSFER: YES
 MAIN CIRCUIT BREAKER: 1600 A GROUND FAULT ON MAIN: YES
 SERVICE ENTRANCE RATED: YES REMOTE ANNUNCIATION: NO
 BY-PASS/ISOLATION: NO NEC LOAD BRANCH: Art. 702 KAIC: 42 (CONTRACTOR TO CONFIRM W/ UTILITY)
 SEE SPECIFICATIONS FOR ADDITIONAL FEATURES
 NEMA RATING: 3R CYCLE RATING: 3

PLAN NOTES

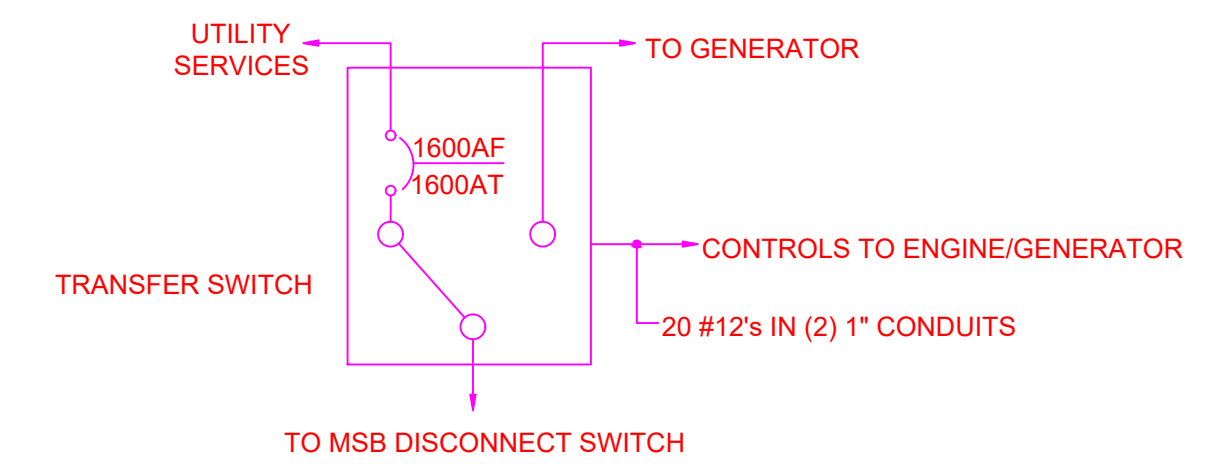
- CONTRACTOR IS RESPONSIBLE TO PROVIDE GENERATOR INTEGRAL CIRCUIT BREAKER TO PROVIDE MEANS OF CURRENT PROTECTION AND DISCONNECTION AT THE GENERATOR. CONTRACTOR SHALL COORDINATE WITH GENERATOR MANUFACTURER TO ENSURE THE PROPER SIZED CIRCUIT BREAKER IS PROVIDED.
- PROVIDE TRIAD GROUNDING SYSTEM.
- COORDINATE WITH GENERATOR AND ATS SUPPLIER/MANUFACTURER FOR WIRING REQUIREMENTS DURING BIDDING AND CONSTRUCTION.
- VERIFY THAT THE NEUTRAL TO GROUND IS NOT BONDED AT GENERATOR BY THE GENERATOR MANUFACTURER.

NOTES:

- SEE E0.0 FOR PROJECT CONDUIT REQUIREMENTS.



GENERATOR DETAIL



AUTOMATIC TRANSFER SWITCH

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STATE OF KENTUCKY
 MARK KENNETH NORDMEYER
 30193
 LICENSED PROFESSIONAL ENGINEER
 Signature: *Mark Nordmeyer* Date: 10/24/2024

CITY OF ALBANY, CLINTON COUNTY, KENTUCKY
 WTP-A & WTP-B GENERATORS AND AUTOMATIC TRANSFER SWITCHES UPGRADES

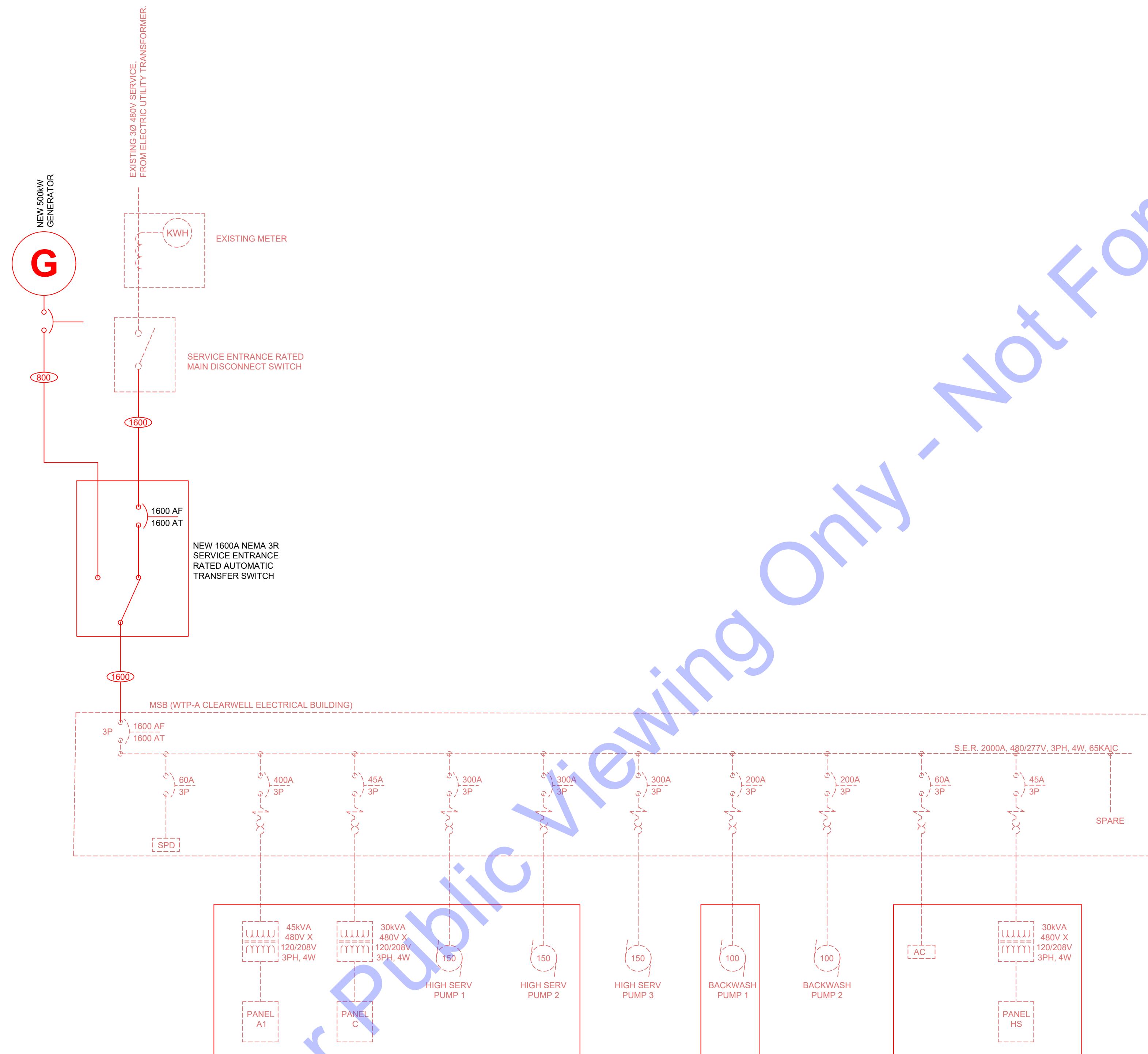
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Issue Date: ---	Project No: S24170	Scale: AS SHOWN

ELECTRICAL - WTP-A RISER DIAGRAM

FILE: Z:\GENSERV\CLIENTS\ALBANY\WTP-A\WTP-A GENERATORS & ATS\GENSERV\ELECTRICAL\DRAWINGS.DWG
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LOADS TO BE POWERED WHEN EPSS IS ACTIVE

NOTES:

- CONTRACTOR SHALL VISIT THE SITE TO BECOME ACQUAINTED WITH ALL PROJECT CONDITIONS INCLUDING EXISTING CONDITIONS. EXECUTION OF CONTRACT IS EVIDENCE THAT THE CONTRACTOR HAS EXAMINED ALL DRAWINGS AND SPECIFICATIONS AND THAT ALL CONDITIONS OF INSTALLING THE WORK IN THIS SECTION ARE VERIFIED. CLAIMS FOR LABOR, MATERIAL, OR TIME EXTENSIONS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATIONS BEEN MADE, WILL NOT BE RECOGNIZED.
- NEW 1600A, NEMA 3R (MINIMUM) RATED, ENTRY RATED, AUTOMATIC TRANSFER SWITCH TO BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH ATS MANUFACTURER AND PROVIDE ALL NECESSARY POWER AND CONTROL WIRING FOR A COMPLETE AND FUNCTIONING SYSTEM. LACK OF COORDINATION IS NOT JUSTIFICATION FOR ADDITIONAL FUNDS.
- CONTRACTOR SHALL MOUNT THE AUTOMATIC TRANSFER SWITCH ON A PAD 6" TALL TO PREVENT WATER POOLING. THE PAD SHALL BE INSTALLED A MINIMUM OF 6" FROM THE BUILDING. CONTRACTOR SHALL VERIFY THAT PIPE OPENING VISIBLE IS FOR RIGGING PURPOSES ONLY BEFORE PLACING PAD AND AUTOMATIC TRANSFER SWITCH.
- CONTRACTOR IS RESPONSIBLE FOR A MINIMUM 48" WORKING CLEARANCE, AS REQUIRED PER NEC TABLE 110.26(A)(1), IN FRONT OF THE CONTROL PANEL. ADDITIONAL CLEARANCE MAY BE NEEDED ON THE BACK OR SIDES, CONTRACTOR SHALL CONSULT MANUFACTURER FOR THESE SPACING REQUIREMENTS AND ENSURE THEY ARE MET.
- CONTRACTOR SHALL SUPPLY A NEW 500kW GENERATOR WHICH SHALL BE CAPABLE OF PARALLEL OPERATION UPON DELIVERY. CONTRACTOR SHALL SUPPLY ALL CONTROL SOFTWARE AND ACCESSORIES REQUIRED FOR PARALLEL OPERATION.
- CONTRACTOR SHALL COORDINATE WITH GENERATOR MANUFACTURER TO ENSURE GENERATOR IS INSTALLED CORRECTLY. CONTRACTOR TO ENSURE THE EXISTING PUMPS LOCATED AT WTP-A RUN PROPERLY WITH THE GENERATOR INSTALLED.
- AFTER A LOSS OF UTILITY POWER, AND ONCE THE GENERATOR IS READY, MOTOR LOADS WILL NEED TO BE RESTARTED MANUALLY FROM THE SCADA SYSTEM VIA OPERATOR CONSOLE. ONLY THE LOADS MARKED ON THIS DRAWING SHOULD BE RUN WHEN OPERATING ON GENERATOR POWER ALONE.
- MANDATORY DEDUCT #1: PROVIDE A DEDUCT FOR ALL INSTALLATION COSTS ASSOCIATED WITH THE INSTALLATION OF THE GENERATOR AND AUTOMATIC TRANSFER SWITCH AT WTP-A. THIS IS FOR ALL ASSOCIATED PLACEMENT, PAD(S), ACCESS ROAD, CONDUIT, WIRE, ETC. FOR THE INSTALLATION OF THE GENERATOR AND AUTOMATIC TRANSFER SWITCH AT WTP-A. IF THIS MANDATORY DEDUCT IS ACCEPTED THE CONTRACTOR SHALL STILL PURCHASE AND PROVIDE THE GENERATOR AND AUTOMATIC TRANSFER SWITCH TO THE OWNER FOR STORAGE IN ALBANY WITHIN 10 MILES OF ALBANY CITY LIMITS. CONTRACTOR SHALL DELIVER THE GENERATOR AND ATS TO A STORAGE FACILITY AND PLACE THE UNITS IN THE STORAGE FACILITY.

IMAGE IDENTIFIER LEGEND

IMAGE	DESCRIPTION
A	EXISTING SWITCHBOARD MSB



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 MARK KENNETH NORDMEYER
 30193
 LICENSED PROFESSIONAL ENGINEER

Signature: *Mark Nordmeyer* Date: 10/24/2024

CITY OF ALBANY, CLINTON COUNTY, KENTUCKY
WTP-A & WTP-B GENERATORS AND AUTOMATIC TRANSFER SWITCHES UPGRADES

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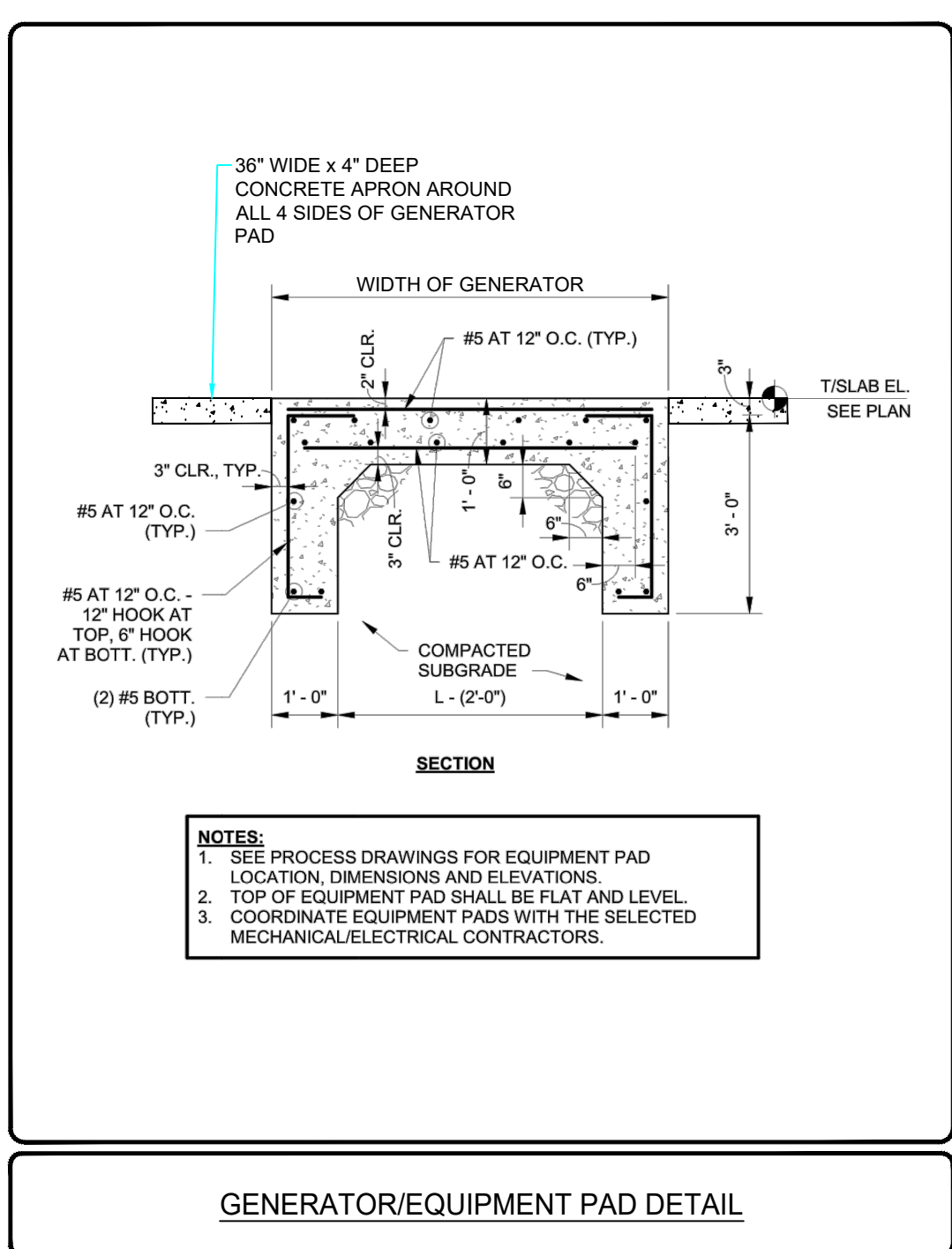
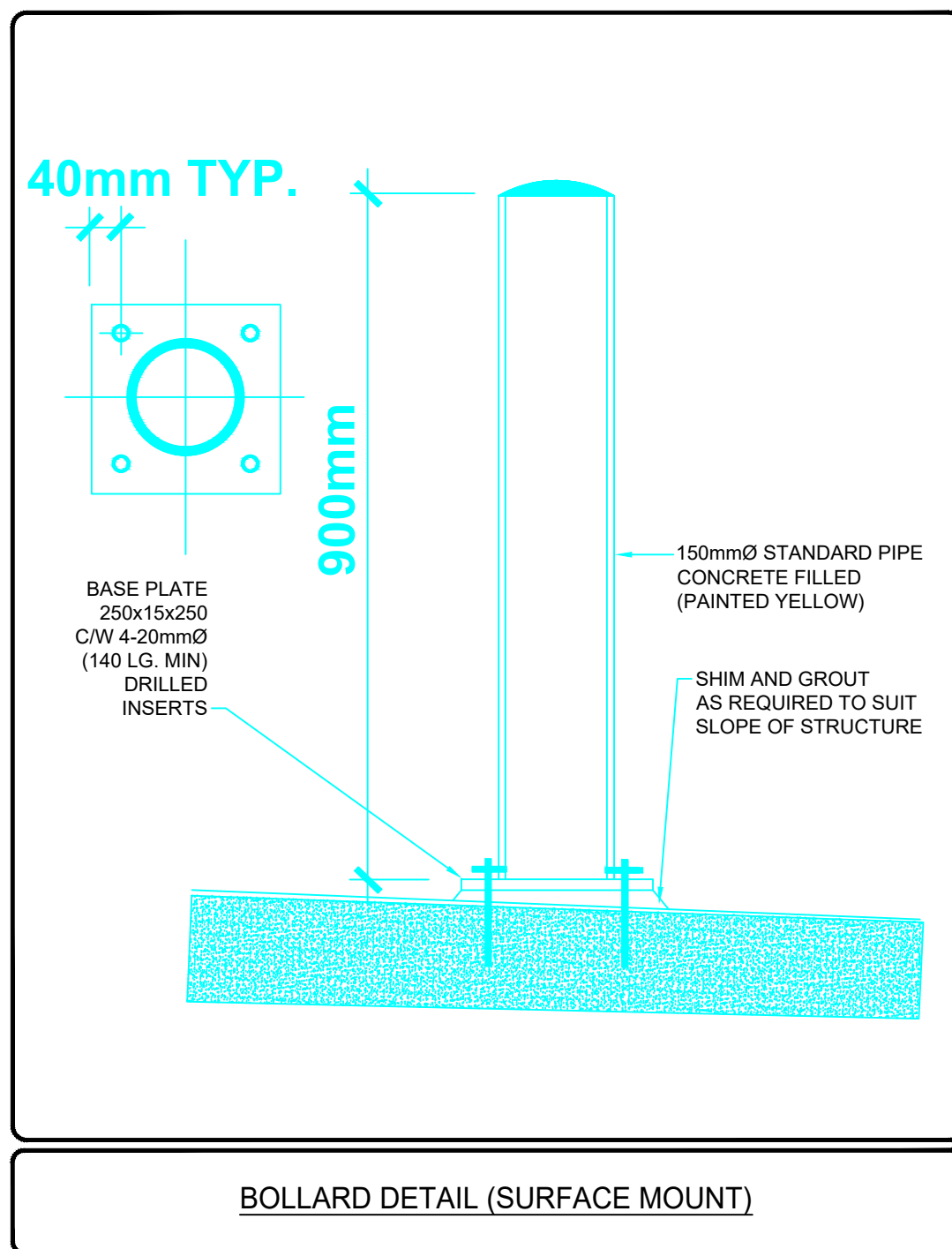
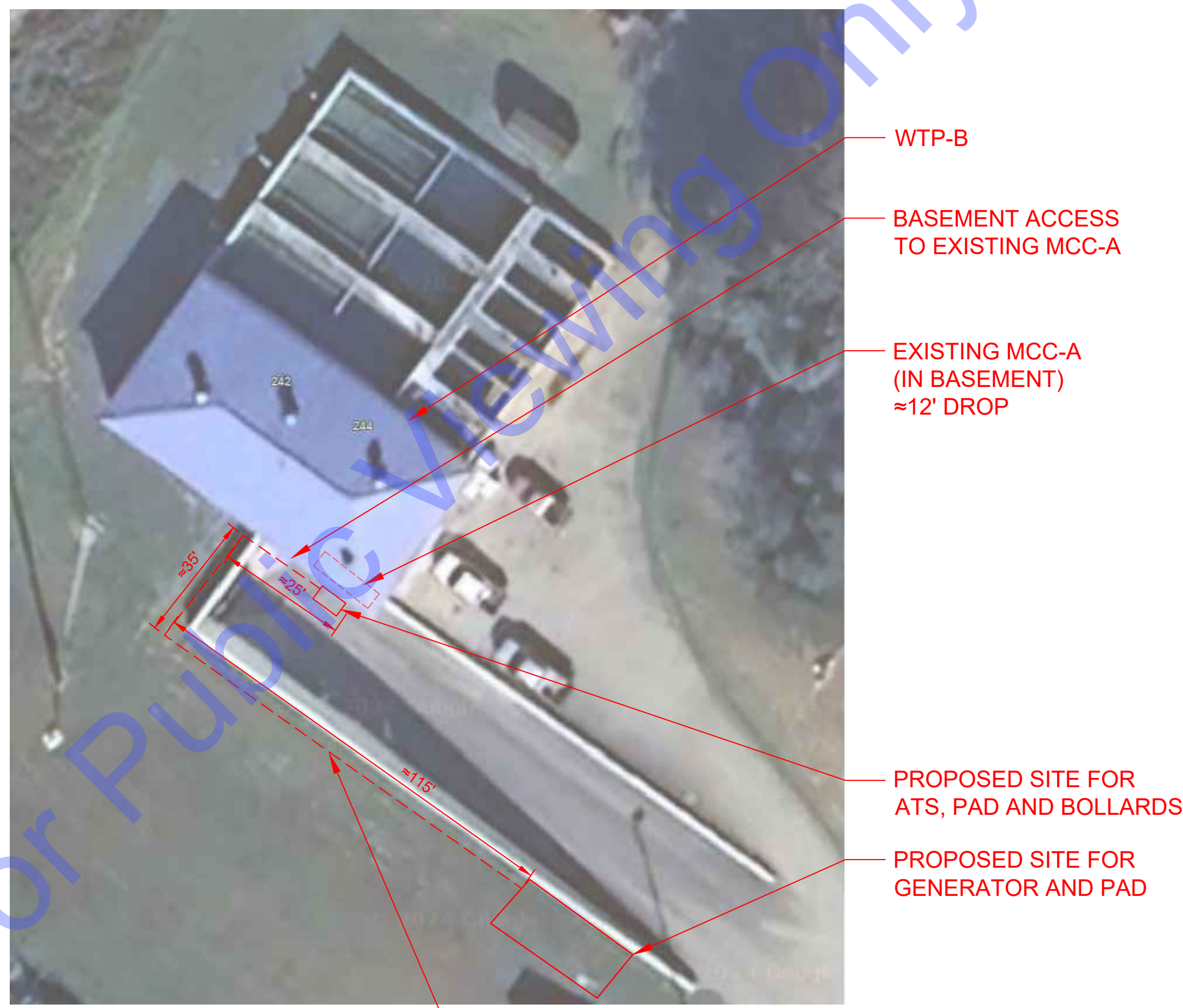
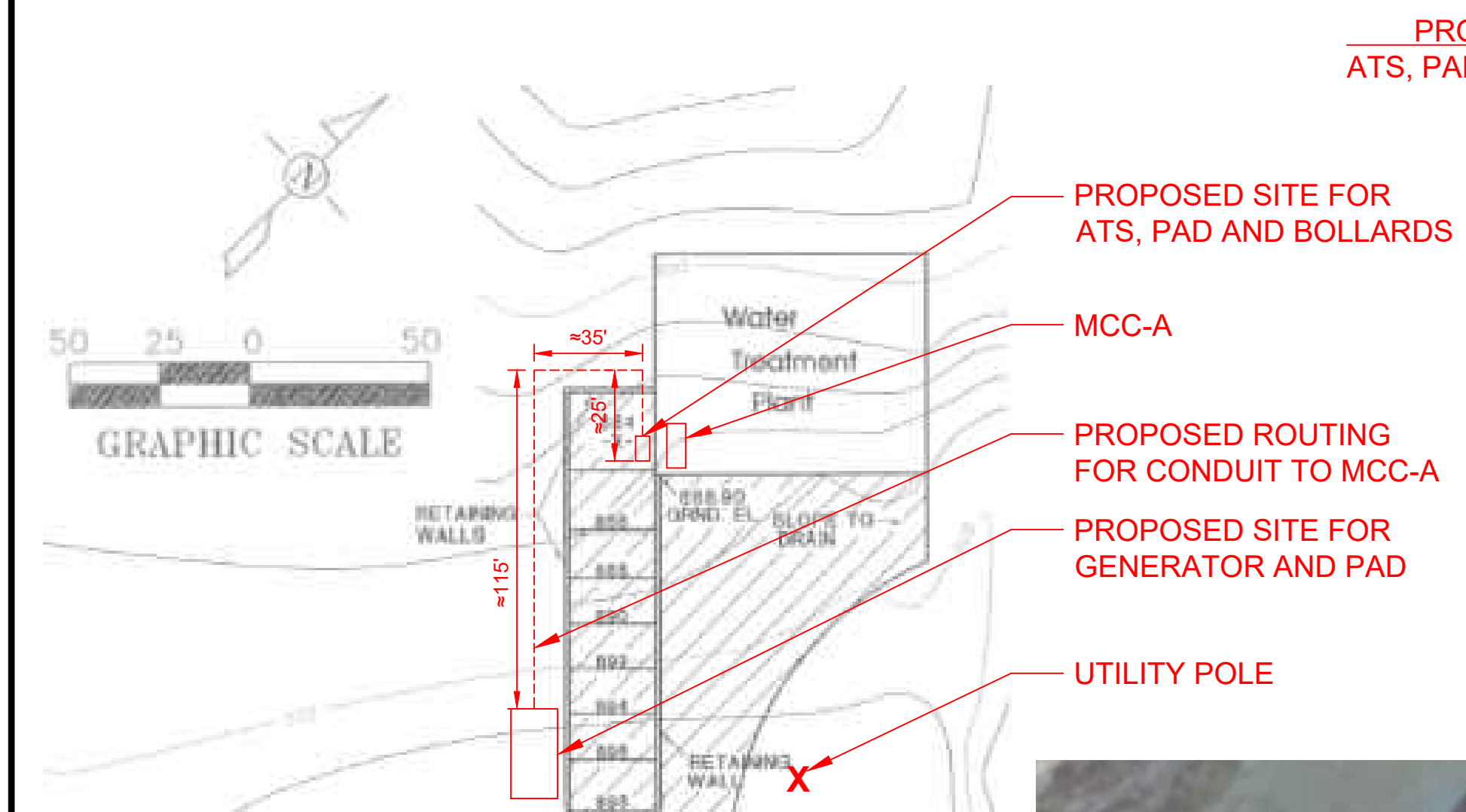
No.	Submission / Revision	By	Date

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Issue Date: ---	Project No: S24170	Scale: AS SHOWN

ELECTRICAL - WTP-A SINGLE LINE DIAGRAM

NOTES:

- CONTRACTOR SHALL VISIT THE SITE TO BECOME ACQUAINTED WITH ALL PROJECT CONDITIONS INCLUDING EXISTING CONDITIONS. EXECUTION OF CONTRACT IS EVIDENCE THAT THE CONTRACTOR HAS EXAMINED ALL DRAWINGS AND SPECIFICATIONS AND THAT ALL CONDITIONS OF INSTALLING THE WORK IN THIS SECTION ARE VERIFIED. CLAIMS FOR LABOR, MATERIAL, OR TIME EXTENSIONS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATIONS BEEN MADE, WILL NOT BE RECOGNIZED.
- NEW 500kW GENERATOR TO BE PROVIDED BY CONTRACTOR SHALL BE LOCATED ALONG RETAINING WALL (AS INDICATED ON DRAWING) ON A CONCRETE PAD.
- NEW 1200A, NEMA 3R (MINIMUM RATED, ENTRY RATED, AUTOMATIC TRANSFER SWITCH TO BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH ATS MANUFACTURER AND PROVIDE ALL NECESSARY POWER AND CONTROL WIRING FOR A COMPLETE AND FUNCTIONING SYSTEM. LACK OF COORDINATION IS NOT JUSTIFICATION FOR ADDITIONAL FUNDS.
- DUE TO LOCATION OF EXISTING MCC-A, A CHEMICAL RICH ENVIRONMENT, THE NEW 1200A NEMA 3R AUTOMATIC TRANSFER SWITCH ENCLOSURE SHALL BE MOUNTED EXTERNAL TO THE BUILDING ON A 6" PAD ALLOWING ADEQUATE SPACING FOR COMPLETE ACCESS TO THE PANEL.
- CONTRACTOR IS RESPONSIBLE FOR A MINIMUM 48" WORKING CLEARANCE, AS REQUIRED PER NEC TABLE 110.26(A)(1), IN FRONT OF THE CONTROL PANEL. ADDITIONAL CLEARANCE MAY BE NEEDED ON THE BACK OR SIDES, CONTRACTOR SHALL CONSULT MANUFACTURER FOR THESE SPACING REQUIREMENTS AND ENSURE THEY ARE MET.
- CONTRACTOR SHALL INSTALL BOLLARDS AS NEEDED TO PROTECT THE AUTOMATIC TRANSFER SWITCH INSTALLATION.
- CONTRACTOR SHALL SUPPLY A NEW 500kW GENERATOR CAPABLE OF PARALLEL OPERATION UPON DELIVERY. CONTRACTOR SHALL SUPPLY ALL CONTROL SOFTWARE AND ACCESSORIES REQUIRED FOR PARALLEL OPERATION.
- CONTRACTOR SHALL COORDINATE WITH GENERATOR MANUFACTURER TO ENSURE GENERATOR IS INSTALLED CORRECTLY. CONTRACTOR TO ENSURE THE EXISTING PUMPS LOCATED AT WTP-B RUN PROPERLY WITH THE GENERATOR INSTALLED.



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 30193
 LICENSED PROFESSIONAL ENGINEER

Mark Nordmeyer 10/24/2024
 Signature Date

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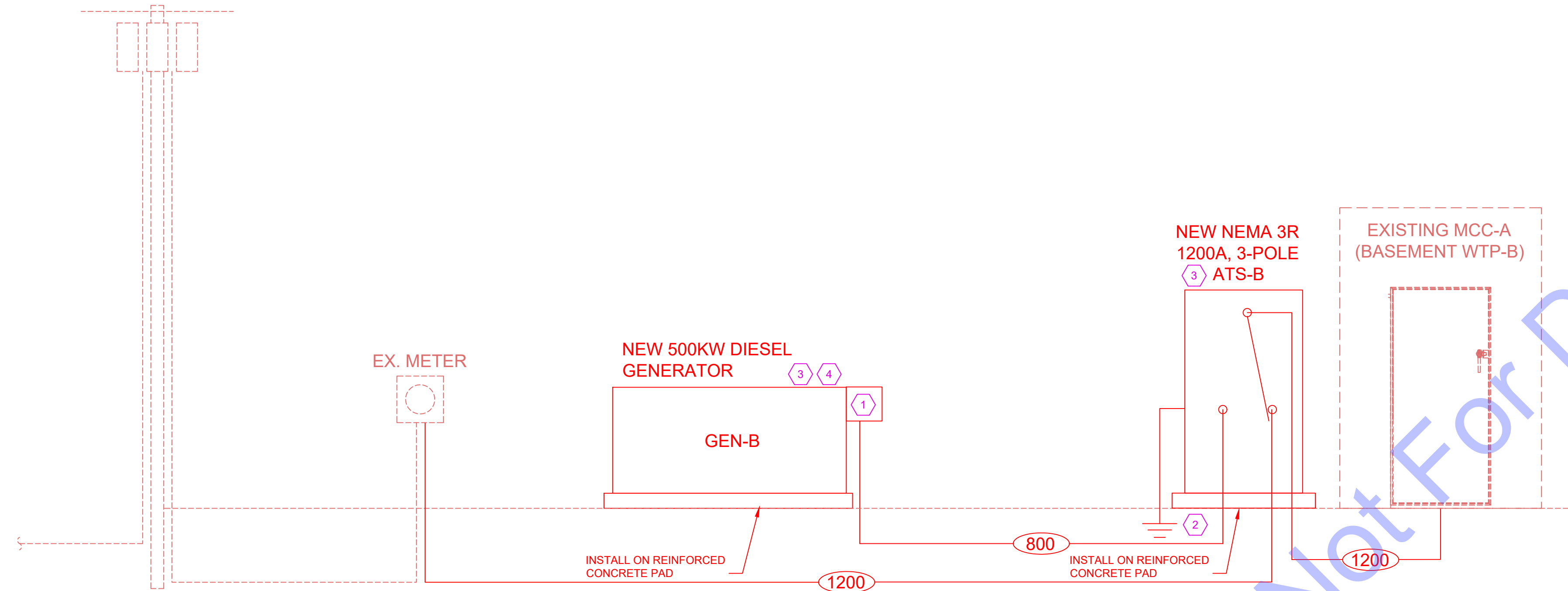
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ELECTRICAL - WTP-B LOCATIONS

Drawing No:
E2-0

Sheet: 7 OF 9

EX. UTILITY POLE AND TRANSFORMERS



FEEDER SCHEDULE					
TYPE NO.	COPPER WIRE		CONDUIT	W/O NEUTRAL	SERVICE
	QUANTITIES	WIRE SIZE			
15	4#12 & #12 GROUND	3/4"	3/4"	3/4"	#8
20	4#12 & #12 GROUND	3/4"	3/4"	3/4"	#8
30	4#10 & #10 GROUND	3/4"	3/4"	3/4"	#8
50	4#8 & #10 GROUND	1"	1"	1"	#8
65	4#6 & #8 GROUND	1-1/4"	1-1/4"	1-1/4"	#8
85	4#4 & #8 GROUND	1-1/4"	1-1/4"	1-1/4"	#8
100	4#3 & #8 GROUND	1-1/2"	1-1/4"	1-1/4"	#8
115	4#2 & #6 GROUND	1-1/2"	1-1/2"	1-1/2"	#8
130	4#1 & #6 GROUND	2"	1-1/2"	1-1/2"	#6
150	4#1/0 & #6 GROUND	2"	2"	2"	#6
175	4#2/0 & #6 GROUND	2"	2"	2"	#4
200	4#3/0 & #6 GROUND	2-1/2"	2"	2"	#4
225	4#4/0 & #4 GROUND	2-1/2"	2-1/2"	2-1/2"	#2
250	4#250MCM & #4 GROUND	3"	2-1/2"	2-1/2"	#2
300	4#350MCM & #3 GROUND	3"	3"	3"	#2
380	4#500MCM & #3 GROUND	4"	4"	4"	#1/0
420	4#600MCM & #2 GROUND	4"	4"	4"	#1/0
460	(2 SETS) 4#4/0 & #2 GROUND	2-1/2"	2-1/2"	2-1/2"	#1/0
500	(2 SETS) 4#250MCM & #2 GROUND	4"	3"	3"	#1/0
600	(2 SETS) 4#350MCM & #1 GROUND	4"	3"	3"	#2/0
700	(2 SETS) 4#500MCM & #1/0 GND	4"	4"	4"	#2/0
800	(3 SETS) 4#300MCM & #1/0 GND	3"	3"	3"	#2/0
1000	(3 SETS) 4#500MCM & #2/0 GND	4"	4"	4"	#3/0
1200	(4 SETS) 4#350 MCM & 3#3/0 GND	4"	4"	4"	#3/0
1600	(5 SETS) 4#600 MCM & #3/0 GND	4"	3 1/2"	3 1/2"	#3/0
2000	(6 SETS) 4#600MCM & #3/0 GND	4"	3 1/2"	3 1/2"	#3/0

ALL FEEDERS ARE ASSUMED TO BE 4 CURRENT CARRYING CONDUCTORS (3 PHASE CONDUCTORS AND 1 NEUTRAL) UNLESS NOTED OTHERWISE.

FEEDER KEY IS AS FOLLOWS (PARENTHESIS DENOTES SUBSCRIPT):
 ### = 3 PHASES AND NEUTRAL WITH GROUND
 ###(N) = 3 PHASES, NO NEUTRAL WITH GROUND
 ###(2) = 2 PHASES AND NEUTRAL WITH GROUND
 ALL CIRCUITS SHALL BE RUN IN PVC BELOW GROUND/PVC COATED RIGID ABOVE GROUND

GENERATOR (3 4)

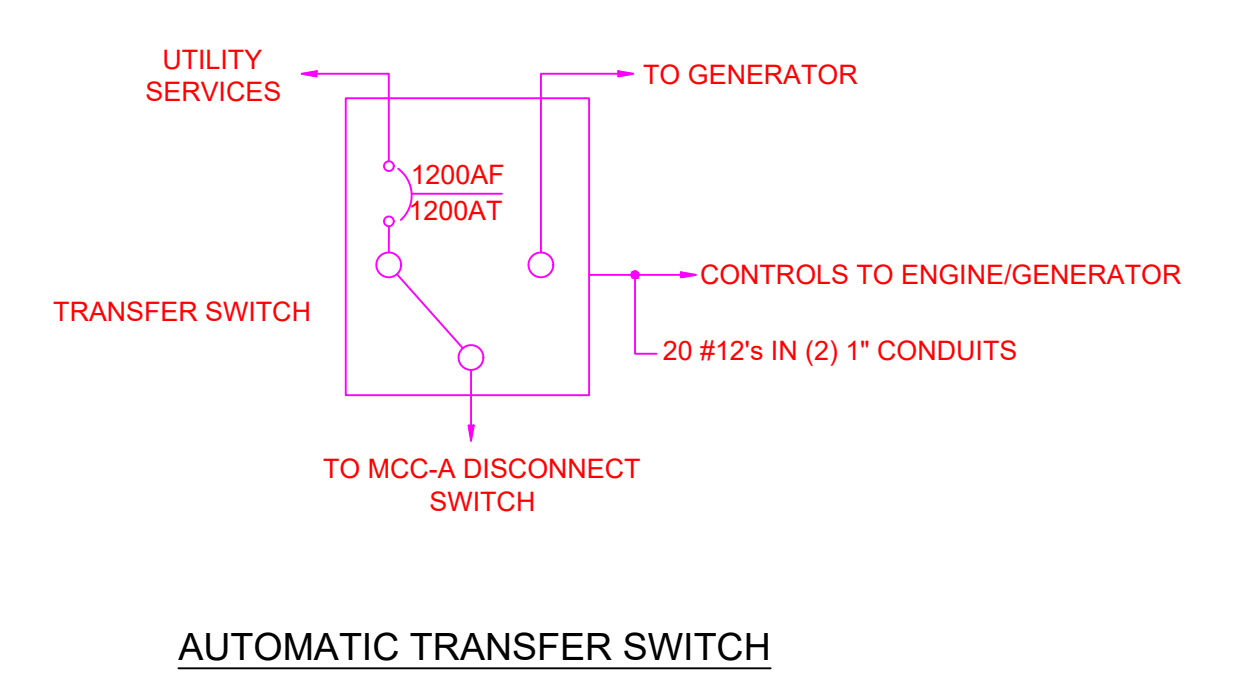
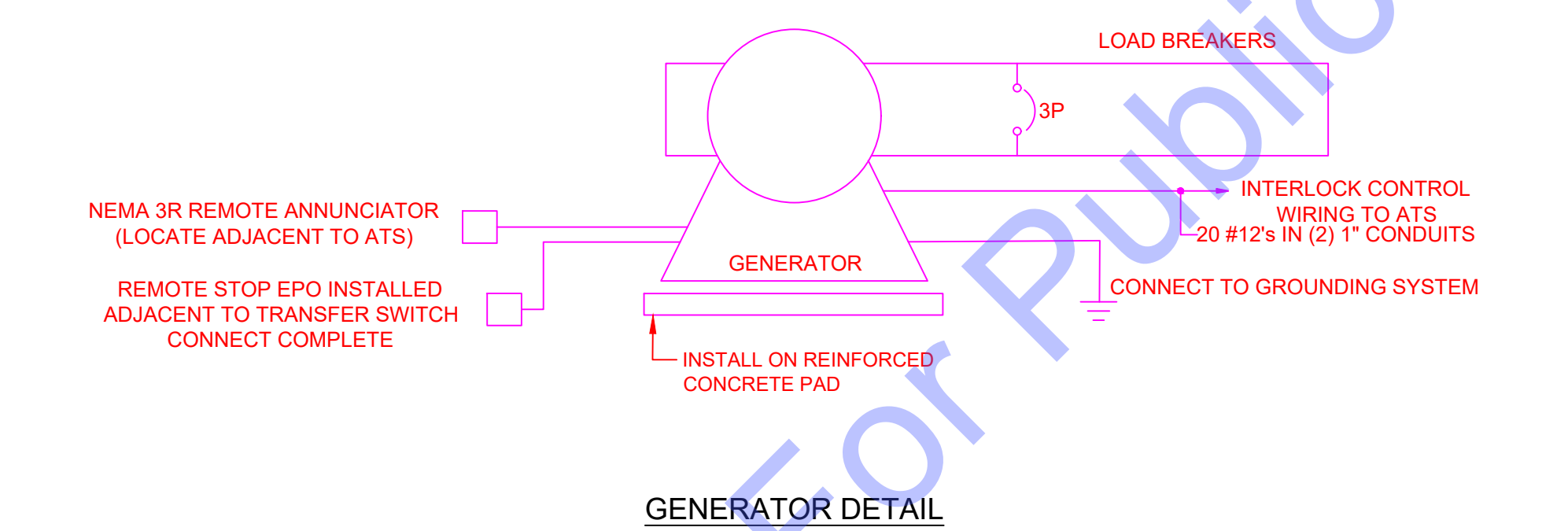
MINIMUM RATED CAPACITY: 500 KW
 BASIS OF DESIGN: 500DFEK* MANUFACTURER: CUMMINS
 RATED VOLTAGE: 480V 3 PHASE/4-WIRE
 ENCLOSURE RATING: SEE SPECIFICATIONS FUEL TYPE: DIESEL
 FUEL TANK CAPACITY: 24 HOURS
 PARALLEL CAPABLE: YES
 SEE SPECIFICATIONS FOR ADDITIONAL FEATURES

NEMA 3R TRANSFER SWITCH (3)

TRANSFER SWITCH TYPE: AUTOMATIC CURRENT RATING: 1200 A
 RATED VOLTAGE: 480V 3 PHASE/4-WIRE # OF POLES: 3
 NEUTRAL CONFIGURATION: SOLID IN-SYNC TRANSFER: YES
 MAIN CIRCUIT BREAKER: 1200 A GROUND FAULT ON MAIN: YES
 SERVICE ENTRANCE RATED: YES REMOTE ANNUNCIATION: NO
 BY-PASS/ISOLATION: NO NEC LOAD BRANCH: Art. 702 KAIC: 42 (CONTRACTOR TO CONFIRM W/ UTILITY)
 SEE SPECIFICATIONS FOR ADDITIONAL FEATURES
 NEMA RATING: 3R CYCLE RATING: 3

- #### PLAN NOTES
- CONTRACTOR IS RESPONSIBLE TO PROVIDE GENERATOR INTEGRAL CIRCUIT BREAKER TO PROVIDE MEANS OF CURRENT PROTECTION AND DISCONNECTION AT THE GENERATOR. CONTRACTOR SHALL COORDINATE WITH GENERATOR MANUFACTURER TO ENSURE THE PROPER SIZED CIRCUIT BREAKER IS PROVIDED.
 - PROVIDE TRIAD GROUNDING SYSTEM.
 - COORDINATE WITH GENERATOR AND ATS SUPPLIER/MANUFACTURER FOR WIRING REQUIREMENTS DURING BIDDING AND CONSTRUCTION.
 - VERIFY THAT THE NEUTRAL TO GROUND IS NOT BONDED AT GENERATOR BY THE GENERATOR MANUFACTURER.

NOTES:
 1. SEE E0.0 FOR PROJECT CONDUIT REQUIREMENTS.



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 Signature: *Mark Nordmeyer* Date: 10/24/2024

CITY OF ALBANY, CLINTON COUNTY, KENTUCKY
 WTP-A & WTP-B GENERATORS AND AUTOMATIC TRANSFER SWITCHES UPGRADES

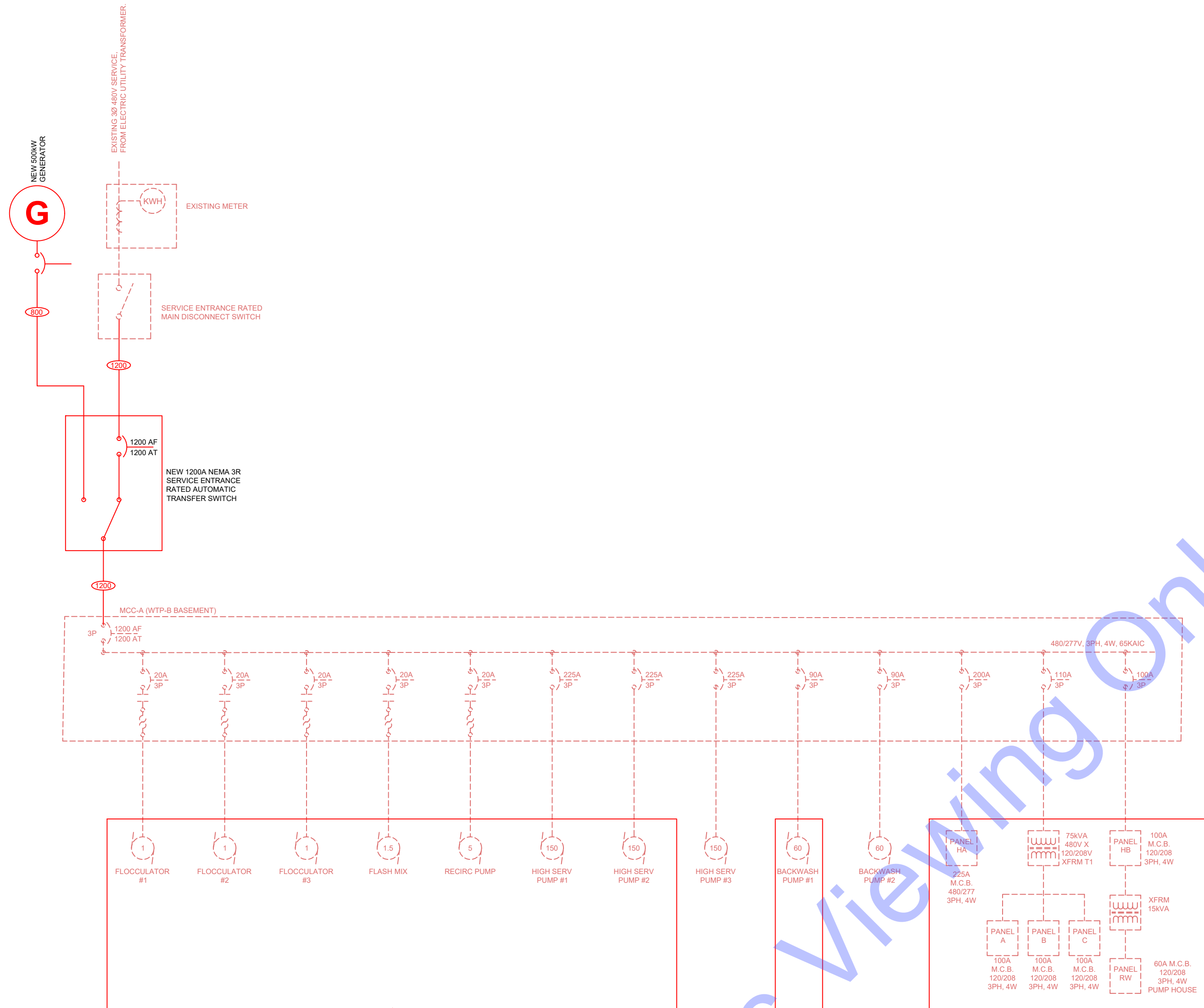
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No.	Submittal / Revision	Date	By

Designed By: MOC	Drawn By: MOC	Checked By: TLC
Issue Date: ---	Project No: S24170	Scale: AS SHOWN

ELECTRICAL - WTP-B RISER DIAGRAM

FILE: Z:\SHARED\CLIENTS\ALBANY\WTP-B\GENERATOR & ATS\DWG\CAD\MECH\ELECTRICAL\DRAWINGS.DWG
 Sheet: 10/23/2024 3:54:32 PM Plotted: 10/24/2024 10:15:02 AM Current User: Mark Nordmeyer User: Mark Nordmeyer Plotter: HP DesignJet 5000



LOADS TO BE POWERED WHEN EPSS IS ACTIVE

NOTES:

- CONTRACTOR SHALL VISIT THE SITE TO BECOME ACQUAINTED WITH ALL PROJECT CONDITIONS INCLUDING EXISTING CONDITIONS. EXECUTION OF CONTRACT IS EVIDENCE THAT THE CONTRACTOR HAS EXAMINED ALL DRAWINGS AND SPECIFICATIONS AND THAT ALL CONDITIONS OF INSTALLING THE WORK IN THIS SECTION ARE VERIFIED. CLAIMS FOR LABOR, MATERIAL, OR TIME EXTENSIONS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATIONS BEEN MADE, WILL NOT BE RECOGNIZED.
- NEW 1200A, NEMA 3R (MINIMUM) RATED, ENTRY RATED, AUTOMATIC TRANSFER SWITCH TO BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH ATS MANUFACTURER AND PROVIDE ALL NECESSARY POWER AND CONTROL WIRING FOR A COMPLETE AND FUNCTIONING SYSTEM. LACK OF COORDINATION IS NOT JUSTIFICATION FOR ADDITIONAL FUNDS.
- CONTRACTOR IS RESPONSIBLE FOR A MINIMUM 48" WORKING CLEARANCE, AS REQUIRED PER NEC TABLE 110.26(A)(1), IN FRONT OF THE CONTROL PANEL. ADDITIONAL CLEARANCE MAY BE NEEDED ON THE BACK OR SIDES. CONTRACTOR SHALL CONSULT MANUFACTURER FOR THESE SPACING REQUIREMENTS AND ENSURE THEY ARE MET.
- CONTRACTOR SHALL SUPPLY A NEW 500KW GENERATOR WHICH SHALL BE CAPABLE OF PARALLEL OPERATION UPON DELIVERY. CONTRACTOR SHALL SUPPLY ALL CONTROL SOFTWARE AND ACCESSORIES REQUIRED FOR PARALLEL OPERATION.
- CONTRACTOR SHALL COORDINATE WITH GENERATOR MANUFACTURER TO ENSURE GENERATOR IS INSTALLED CORRECTLY. CONTRACTOR TO ENSURE THE EXISTING PUMPS LOCATED AT WTP-B RUN PROPERLY WITH THE GENERATOR INSTALLED.
- AFTER A LOSS OF UTILITY POWER, AND ONCE THE GENERATOR IS READY, MOTOR LOADS WILL NEED TO BE RESTARTED MANUALLY FROM THE SCADA SYSTEM VIA OPERATOR CONSOLE. ONLY THE LOADS MARKED ON THIS DRAWING SHOULD BE RUN WHEN OPERATING ON GENERATOR POWER ALONE.

IMAGE IDENTIFIER LEGEND

IMAGE	DESCRIPTION
A	EXISTING MMC-A ISO VIEW
B	EXISTING MMC-A MAIN POWER SECTION



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STATE OF KENTUCKY
 MARK KENNETH NORDMEYER
 30193
 LICENSED PROFESSIONAL ENGINEER
 Signature: *Mark Nordmeyer* Date: 10/24/2024

CITY OF ALBANY, CLINTON COUNTY, KENTUCKY
WTP-A & WTP-B GENERATORS AND AUTOMATIC TRANSFER SWITCHES UPGRADES

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ELECTRICAL - WTP-B SINGLE LINE DIAGRAM