

Department of Veterans Affairs Sioux Falls VA Health Care System Install New Transformers for Buildings 28 and 38

Sioux Falls, South Dakota
CONSTRUCTION DOCUMENTS

December 31, 2012
VA Project # 438-13-103
TSP Project # 04121073 PRIORITY 1

INDEX TO DRAWINGS

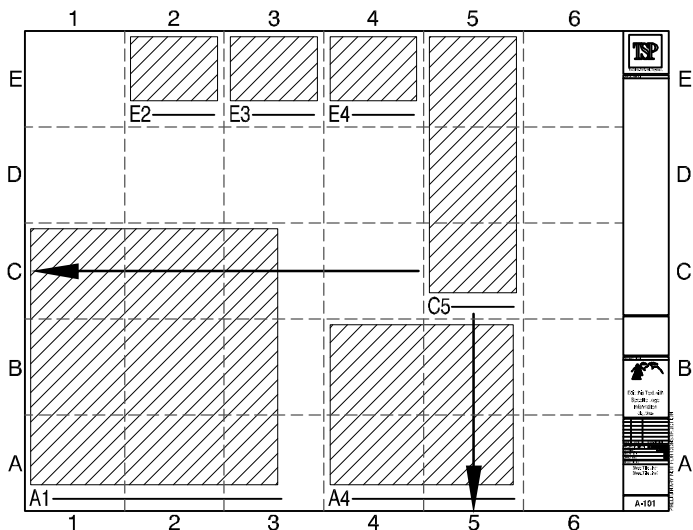
1-GI001 COVER SHEET

ELECTRICAL
E-101 ELECTRICAL SITE PLAN
E-101 ELECTRICAL PLANS - BUILDINGS 5
E-102 ELECTRICAL PLANS - BUILDINGS 11, 24, 28
E-501 ELECTRICAL SCHEDULES
E-601 ELECTRICAL RISER DIAGRAM - SITE
E-602 ELECTRICAL RISER DIAGRAMS AND DETAILS

SHEET IDENTIFICATION

E - 001			
E D N N N			
DISCIPLINE CHARACTER	MODIFIER CHARACTER	SHEET SEQUENCE NUMBER 01-99	SHEET TYPE DESIGNATOR
MODIFIER CHARACTER DESIGNATORS			
S = SITE			
D = DEMOLITION			
L = LIGHTING			
P = POWER			
Y = AUXILIARY			
I = INSTRUMENTATION			
T = TELECOMMUNICATIONS			
SHEET TYPE DESIGNATORS			
0 = GENERAL (SYMBOLS LEGEND)			
1 = PLANS (HORIZONTAL VIEWS)			
2 = ELEVATIONS (VERTICAL VIEWS)			
3 = SECTIONS (SECTIONAL VIEWS)			
4 = LARGE SCALE VIEWS			
5 = DETAILS			
6 = SCHEDULES AND DIAGRAMS			
7 = USER DEFINED			
8 = USER DEFINED			
9 = 3D REPRESENTATIONS			

COORDINATE SYSTEM

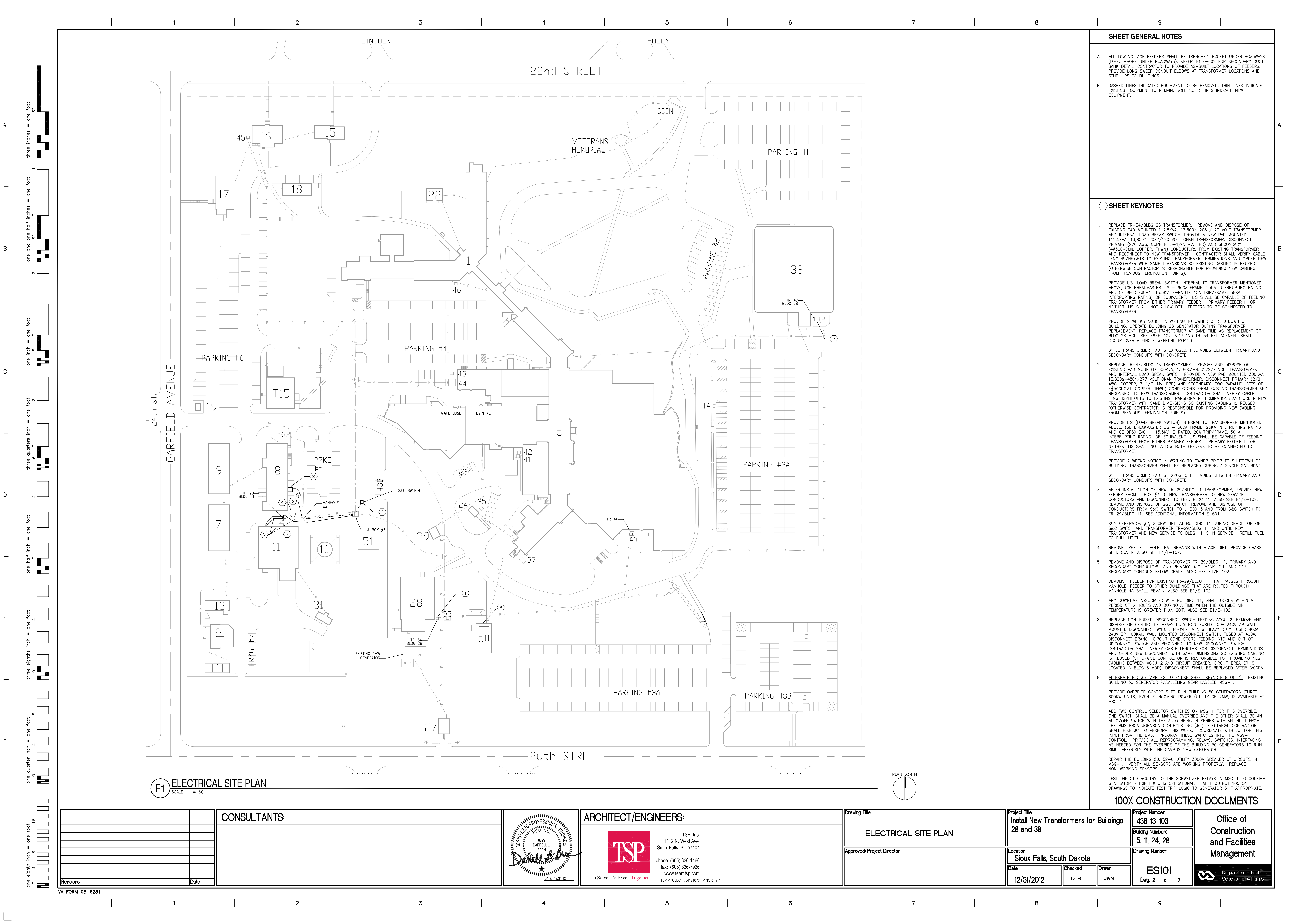


ABBREVIATIONS

AFC	ABOVE FINISHED COUNTER, INSTALLED DEVICE 8"	FLUOR	FLUORESCENT	NC	NORMALLY CLOSED
AFF	ABOVE COUNTERTOP	FLA	FULL LOAD AMPERES	NO	NORMALLY OPEN
AFG	ABOVE FINISHED FLOOR	FBO	FURNISHED BY OWNER	PNL	PANEL
AHJ	ABOVE FINISHED GRADE	FUSE	FUSE	PH	PHASE
ALUM	AIR HANDLING UNIT	PVNR	FULL VOLT NON-REVERSE	PL	PILOT LIGHT
AMP/A	ALUMINUM	CC	GENERAL CONTRACTOR	PVC	POLYVINYL CHLORIDE, CONDUIT
A/E	AMPERE	GND	GROUND	PF	POWER FACTOR
X-NC	ARCHITECT/ENGINEER	GI/GFCI	GROUND FAULT CIRCUIT INTERRUPTER	PRV	POWER ROOF VENTILATOR
X-NO	AUXILIARY CONTACTS, NORMALLY CLOSED	NOA	HAND-OFF-AUTOMATIC SELECTOR SWITCH	RECPT	RECEPTACLE
CUH	AUXILIARY CONTACTS, NORMALLY OPEN	HTR	HEATER	RMC	RIGID METAL CONDUIT
CLG	CABINET UNIT HEATER	HP	HORSEPOWER	SN	SOLID NEUTRAL
CKT	CEILING	IC	INTERLUPTING CIRCUIT	SW	SWITCH
CS/CB	CIRCUIT	IG	ISOLATED GROUND	TEL	TELEPHONE
CS/FD	COMBINATION STARTER, CIRCUIT BREAKER DISCONNECT	J-BOX	JUNCTION BOX	TR	TAMPER RESISTANT
CS/NFD	COMBINATION STARTER, FUSED DISCONNECT	KV	KILOVOLT	TRC	TEMPERATURE CONTROLS CONTRACTOR
C	COMBINATION STARTER, NON-FUSED DISCONNECT	KVA	KILOVOLT AMPERE	TSTAT	THERMOSTAT
CON	CONDUIT	KW	KILOWATT	XFMR	TRANSFORMER
CU	COPPER	KWH	KILOWATT HOUR	TYP	TYPICAL
KCM	THOUSAND CIRCULAR MILS	LTS	LIGHTING	UH	UNIT HEATER
DISTR	DISTRIBUTION	MDP	MAIN DISTRIBUTION PANEL	UV	UNIT VENTILATOR
DIV	DIVISION	MLO	MAIN LUGS ONLY	VFD	VARIABLE FREQUENCY DRIVE
DF	DOUBLE FACE	MAN	MANUAL	V	VOLT
DN	DOWN	MMS	MANUAL MOTOR STARTER	VA	VOLT AMPERE
EC	ELECTRICAL CONTRACTOR	MFRS	MANUFACTURERS	VAC	VOLTS, ALTERNATING CURRENT
EMT	ELECTRICAL METALLIC TUBE	MC	MECHANICAL CONTRACTOR	VDC	VOLTS, DIRECT CURRENT
EWC	ELECTRIC WATER COOLER	M	METER	WTR	WATER
EM	EMERGENCY	MCC	MOTOR CONTROL CENTER	W	WATT
EQUIP	EQUIPMENT	MSS	MOTOR STARTER SWITCH	WP	WEATHER PROOF
EF	EXHAUST FAN	MTD	MOUNTED	W/O	WITHOUT
EPHF	EXPLOSION PROOF	MDA	MULTI-OUTLET ASSEMBLY	WYE	WYE CONNECTED
FA	FIRE ALARM	NEC	NATIONAL ELECTRICAL CODE		
		NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION		

100% CONSTRUCTION DOCUMENTS

CONSULTANTS:			ARCHITECT/ENGINEERS:		Drawing Title COVER SHEET		Project Title Install New Transformers for Buildings 28 and 38		Project Number 438-13-103		Office of Construction and Facilities Management 	
Revisions:			 To Solve. To Excel. Together. TSP PROJECT #04121073 - PRIORITY 1		Approved: Project Director		Building Numbers 5, 11, 24, 28		Drawing Number 1-GI001 Dwg. 1 of 7			
Date		Location Sioux Falls, South Dakota		Date 12/31/2012		Checked DLB		Drawn JWN				



SHEET GENERAL NOTES

- A. ALL LOW VOLTAGE FEEDERS SHALL BE TRENCHED, EXCEPT UNDER ROADWAYS (DIRECT-BORE UNDER ROADWAYS), REFER TO E-602 FOR SECONDARY DUCT BANK DETAIL. CONTRACTOR TO PROVIDE AS-BUILT LOCATIONS OF FEEDERS. PROVIDE LONG SWEEP CONDUIT ELBOWS AT TRANSFORMER LOCATIONS AND STUB-UPS TO BUILDINGS.
- B. DASHED LINES INDICATED EQUIPMENT TO BE REMOVED, THIN LINES INDICATE EXISTING EQUIPMENT TO REMAIN. BOLD SOLID LINES INDICATE NEW EQUIPMENT.

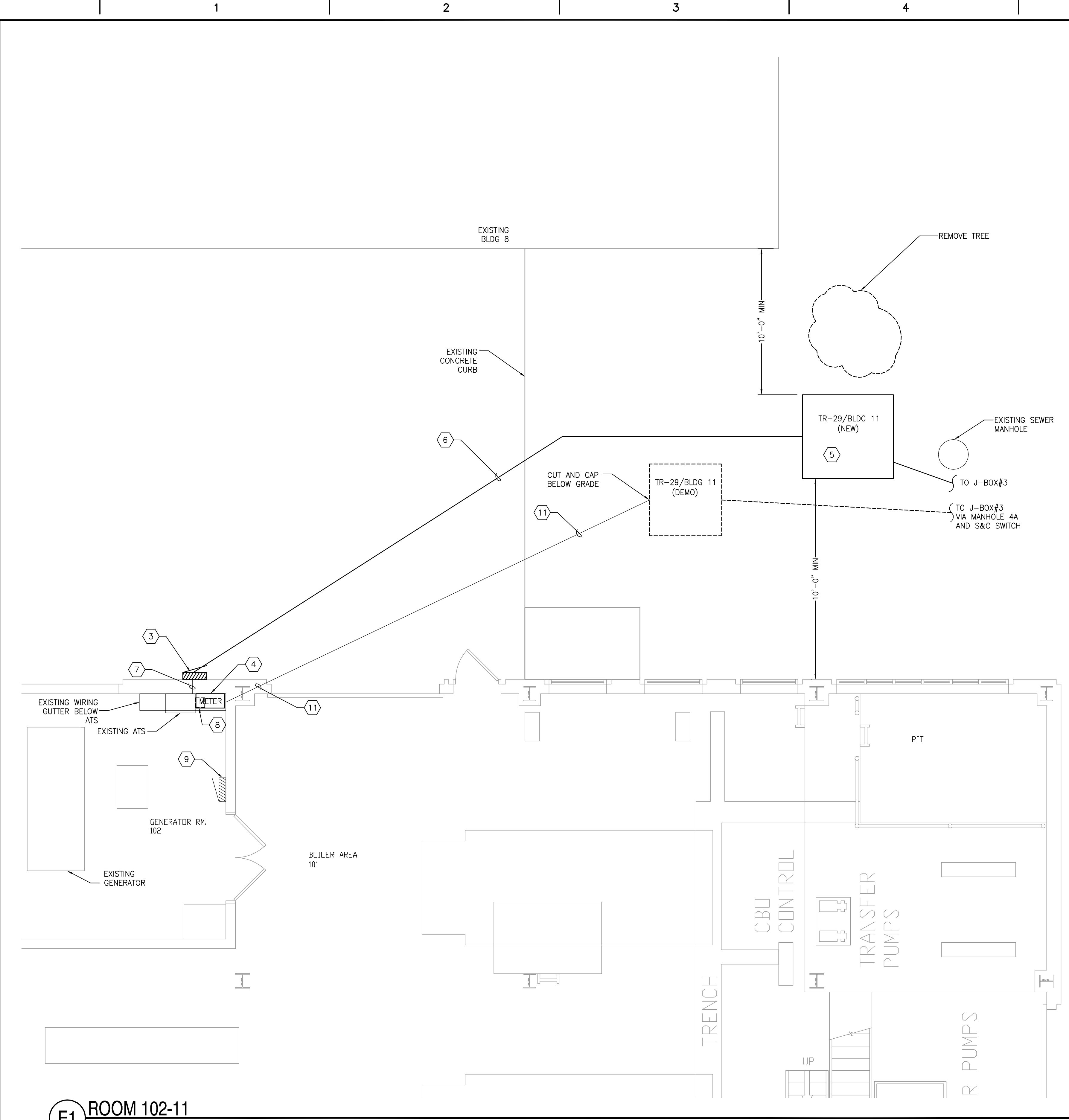
SHEET KEYNOTES

1. REPLACE TR-34/BLDG 28 TRANSFORMER. REMOVE AND DISPOSE OF EXISTING PAD MOUNTED 112.5KVA, 13,800V-208Y/120 VOLT TRANSFORMER AND INTERNAL LOAD BREAK SWITCH. PROVIDE A NEW PAD MOUNTED 112.5KVA, 13,800V-208Y/120 VOLT ONAN TRANSFORMER. DISCONNECT PRIMARY (2/0 AWG, COPPER, 3-1/0, MV, EPR) AND SECONDARY (4#500KCMIL COPPER, THWN) CONDUCTORS FROM EXISTING TRANSFORMER AND RECONNECT TO NEW TRANSFORMER. CONTRACTOR SHALL VERIFY CABLE LENGTHS/HEIGHTS TO EXISTING TRANSFORMER TERMINATIONS AND ORDER NEW TRANSFORMER WITH SAME DIMENSIONS SO EXISTING CABLING IS REUSED (OTHERWISE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NEW CABLING FROM PREVIOUS TERMINATION POINTS).
- PROVIDE LIS (LOAD BREAK SWITCH) INTERNAL TO TRANSFORMER MENTIONED ABOVE. (GE BREAKMASTER LIS - 600A FRAME, 25KA INTERRUPTING RATING AND GE 9F60 EJO-1, 15.5KV, E-RATED, 15A TRIP/FRAME, 38KA INTERRUPTING RATING) OR EQUIVALENT. LIS SHALL BE CAPABLE OF FEEDING TRANSFORMER FROM EITHER PRIMARY FEEDER I, PRIMARY FEEDER II, OR NEITHER. LIS SHALL NOT ALLOW BOTH FEEDERS TO BE CONNECTED TO TRANSFORMER.
- PROVIDE 2 WEEKS NOTICE IN WRITING TO OWNER OF SHUTDOWN OF BUILDING, OPERATE BUILDING 28 GENERATOR DURING TRANSFORMER REPLACEMENT. REPLACE TRANSFORMER AT SAME TIME AS REPLACEMENT OF BLDG 28 MDP. SEE E5/E-102, MDP AND TR-34 REPLACEMENT SHALL OCCUR OVER A SINGLE WEEKEND PERIOD.
- WHILE TRANSFORMER PAD IS EXPOSED, FILL VOIDS BETWEEN PRIMARY AND SECONDARY CONDUITS WITH CONCRETE.
2. REPLACE TR-47/BLDG 38 TRANSFORMER. REMOVE AND DISPOSE OF EXISTING PAD MOUNTED 300KVA, 13,800A-480Y/277 VOLT TRANSFORMER AND INTERNAL LOAD BREAK SWITCH. PROVIDE A NEW PAD MOUNTED 300KVA, 13,800A-480Y/277 VOLT ONAN TRANSFORMER. DISCONNECT PRIMARY (2/0 AWG, COPPER, 3-1/0, MV, EPR) AND SECONDARY (TWO PARALLEL SETS OF 4#500KCMIL COPPER, THWN) CONDUCTORS FROM EXISTING TRANSFORMER AND RECONNECT TO NEW TRANSFORMER. CONTRACTOR SHALL VERIFY CABLE LENGTHS/HEIGHTS TO EXISTING TRANSFORMER TERMINATIONS AND ORDER NEW TRANSFORMER WITH SAME DIMENSIONS SO EXISTING CABLING IS REUSED (OTHERWISE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NEW CABLING FROM PREVIOUS TERMINATION POINTS).
- PROVIDE LIS (LOAD BREAK SWITCH) INTERNAL TO TRANSFORMER MENTIONED ABOVE. (GE BREAKMASTER LIS - 600A FRAME, 25KA INTERRUPTING RATING AND GE 9F60 EJO-1, 15.5KV, E-RATED, 20A TRIP/FRAME, 50KA INTERRUPTING RATING) OR EQUIVALENT. LIS SHALL BE CAPABLE OF FEEDING TRANSFORMER FROM EITHER PRIMARY FEEDER I, PRIMARY FEEDER II, OR NEITHER. LIS SHALL NOT ALLOW BOTH FEEDERS TO BE CONNECTED TO TRANSFORMER.
- PROVIDE 2 WEEKS NOTICE IN WRITING TO OWNER PRIOR TO SHUTDOWN OF BUILDING, TRANSFORMER SHALL RE PLACED DURING A SINGLE SATURDAY.
- WHILE TRANSFORMER PAD IS EXPOSED, FILL VOIDS BETWEEN PRIMARY AND SECONDARY CONDUITS WITH CONCRETE.
3. AFTER INSTALLATION OF NEW TR-29/BLDG 11 TRANSFORMER, PROVIDE NEW FEEDER FROM J-BOX #3 TO NEW TRANSFORMER TO NEW SERVICE CONDUCTORS AND DISCONNECT TO FEED BLDG 11. ALSO SEE E1/E-102. REMOVE AND DISPOSE OF S&C SWITCH. REMOVE AND DISPOSE OF CONDUCTORS FROM S&C SWITCH TO J-BOX 3 AND FROM S&C SWITCH TO TR-29/BLDG 11. SEE ADDITIONAL INFORMATION E-601.
- RUN GENERATOR #2, 260KW UNIT AT BUILDING 11 DURING DEMOLITION OF S&C SWITCH AND TRANSFORMER TR-29/BLDG 11 AND UNTIL NEW TRANSFORMER AND NEW SERVICE TO BLDG 11 IS IN SERVICE. REFILL FUEL TO FULL LEVEL.
4. REMOVE TREE. FILL HOLE THAT REMAINS WITH BLACK DIRT. PROVIDE GRASS SEED COVER. ALSO SEE E1/E-102.
5. REMOVE AND DISPOSE OF TRANSFORMER TR-29/BLDG 11, PRIMARY AND SECONDARY CONDUCTORS, AND PRIMARY DUCT BANK. CUT AND CAP SECONDARY CONDUITS BELOW GRADE. ALSO SEE E1/E-102.
6. DEMOLISH FEEDER FOR EXISTING TR-29/BLDG 11 THAT PASSES THROUGH MANHOLE 4A. SHALL REMAIN. ALSO SEE E1/E-102.
7. ANY DOWNTIME ASSOCIATED WITH BUILDING 11, SHALL OCCUR WITHIN A PERIOD OF 8 HOURS AND DURING A TIME WHEN THE OUTSIDE AIR TEMPERATURE IS GREATER THAN 20°F. ALSO SEE E1/E-102.
8. REPLACE NON-FUSED DISCONNECT SWITCH FEEDING ACCU-2. REMOVE AND DISPOSE OF EXISTING GE HEAVY DUTY NON-FUSED 400A 240V 3P WALL MOUNTED DISCONNECT SWITCH. PROVIDE A NEW HEAVY DUTY FUSED 400A 240V 3P 100KAIC WALL MOUNTED DISCONNECT SWITCH, FUSED AT 400A. DISCONNECT BRANCH CIRCUIT CONDUCTORS FEEDING INTO AND OUT OF DISCONNECT SWITCH AND RECONNECT TO NEW DISCONNECT SWITCH. CONTRACTOR SHALL VERIFY CABLE LENGTHS FOR DISCONNECT TERMINATIONS AND ORDER NEW DISCONNECT WITH SAME DIMENSIONS SO EXISTING CABLING IS REUSED (OTHERWISE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NEW CABLING BETWEEN ACCU-2 AND CIRCUIT BREAKER. CIRCUIT BREAKER IS LOCATED IN BLDG 8 MDP). DISCONNECT SHALL BE REPLACED AFTER 3:00PM.
9. ALTERNATE BID #3 (APPLIES TO ENTIRE SHEET KEYNOTE 9 ONLY): EXISTING BUILDING 50 GENERATOR PARALLELING GEAR LABELED MSG-1.
- PROVIDE OVERRIDE CONTROLS TO RUN BUILDING 50 GENERATORS (THREE 600KW UNITS) EVEN IF INCOMING POWER (UTILITY OR 2MW) IS AVAILABLE AT MSG-1.
- ADD TWO CONTROL SELECTOR SWITCHES ON MSG-1 FOR THIS OVERRIDE. ONE SWITCH SHALL BE A MANUAL OVERRIDE AND THE OTHER SHALL BE AN AUTO/OFF SWITCH WITH THE AUTO BEING IN SERIES WITH AN INPUT FROM THE BMS FROM JOHNSON CONTROLS INC (JCI). ELECTRICAL CONTRACTOR SHALL HIRE JCI TO PERFORM THIS WORK. COORDINATE WITH JCI FOR THIS INPUT FROM THE BMS. PROGRAM THESE SWITCHES INTO THE MSG-1 CONTROL. PROVIDE ALL REPROGRAMMING, RELAYS, SWITCHES, INTERFACING AS NEEDED FOR THE OVERRIDE OF THE BUILDING 50 GENERATORS TO RUN SIMULTANEOUSLY WITH THE CAMPUS 2MW GENERATOR.
- REPAIR THE BUILDING 50, 52-U UTILITY 3000A BREAKER CT CIRCUITS IN MSG-1. VERIFY ALL SENSORS ARE WORKING PROPERLY. REPLACE NON-WORKING SENSORS.
- TEST THE CT CIRCUITRY TO THE SCHWEITZER RELAYS IN MSG-1 TO CONFIRM GENERATOR 3 TRIP LOGIC IS OPERATIONAL. LABEL OUTPUT 105 ON DRAWINGS TO INDICATE TEST TRIP LOGIC TO GENERATOR 3 IF APPROPRIATE.

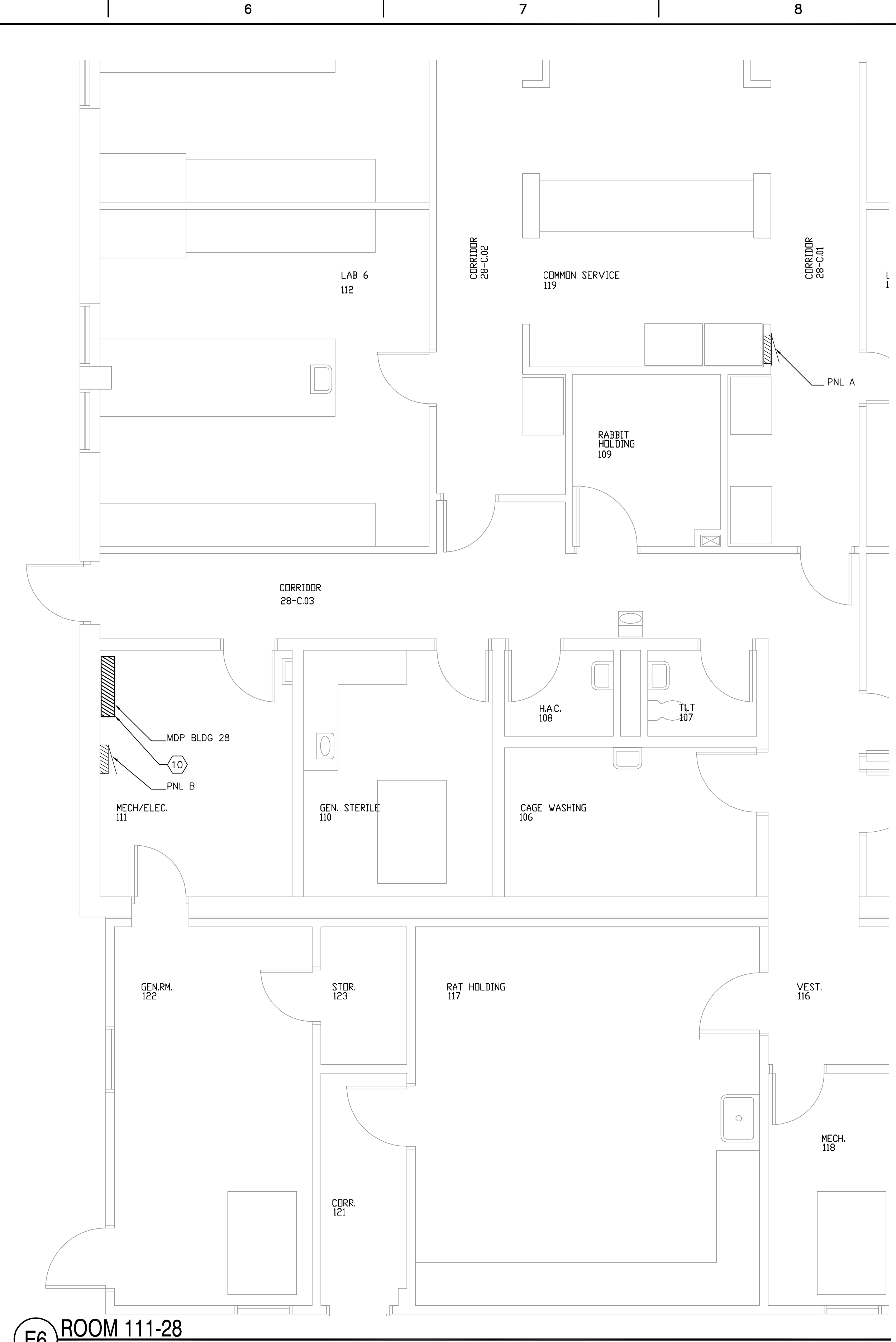
100% CONSTRUCTION DOCUMENTS

CONSULTANTS:			ARCHITECT/ENGINEERS:		Drawing Title ELECTRICAL SITE PLAN		Project Title Install New Transformers for Buildings 28 and 38		Project Number 438-13-103		Office of Construction and Facilities Management Department of Veterans Affairs				
			 TSP, Inc. 1112 N. West Ave. Sioux Falls, SD 57104 phone: (605) 336-1160 fax: (605) 336-7926 www.teamtsp.com TSP PROJECT #04121073 - PRIORITY 1		Approved: Project Director		Building Numbers 5, 11, 24, 28		Drawing Number ES101						
Revisions		Date				Location Sioux Falls, South Dakota		Date 12/31/2012		Checked DLB		Drawn JWN		Dwg 2 of 7	

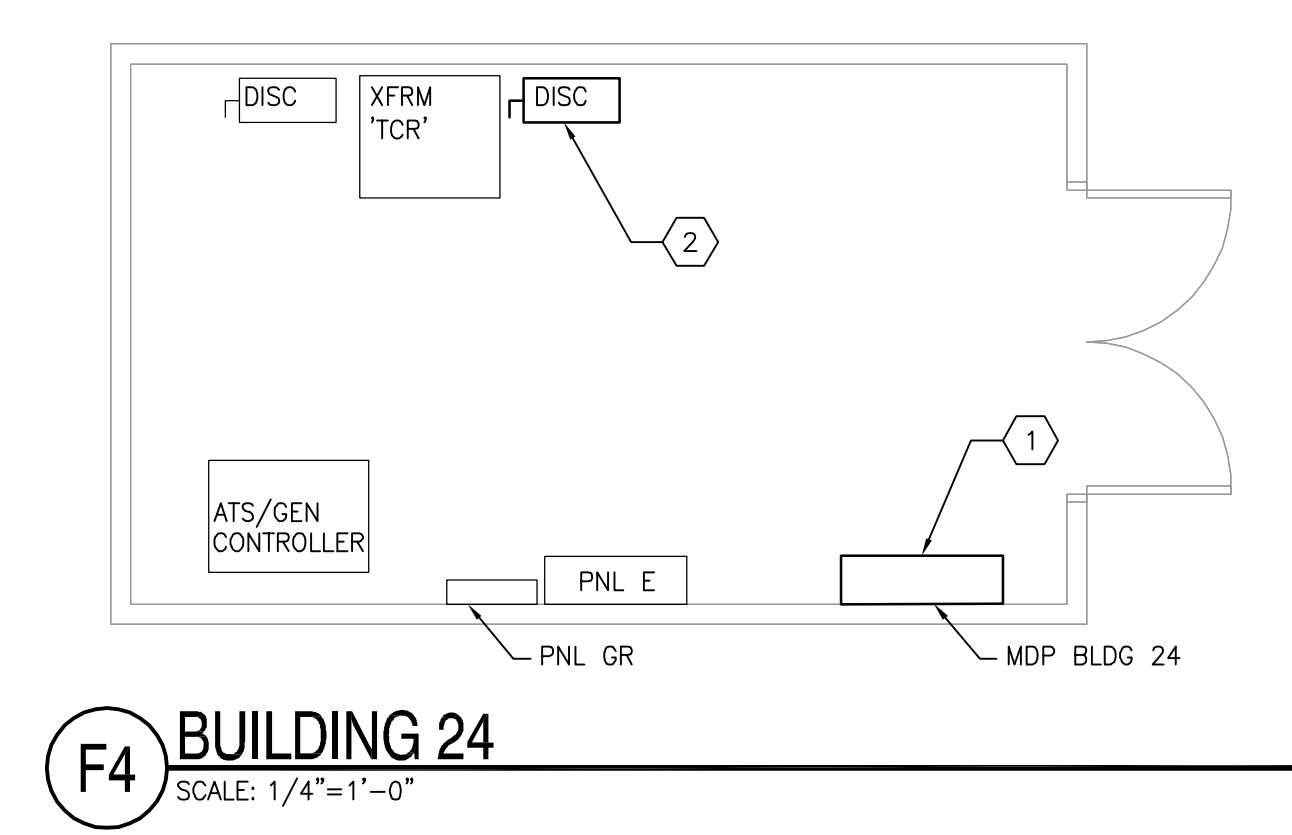
three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot



E1 ROOM 102-11
SCALE: 1/4"=1'-0"



E6 ROOM 111-28
SCALE: 1/4"=1'-0"



F4 BUILDING 24
SCALE: 1/4"=1'-0"

SHEET GENERAL NOTES

A. SEE ES101 FOR ADDITIONAL GENERAL SHEET NOTES.

SHEET KEYNOTES

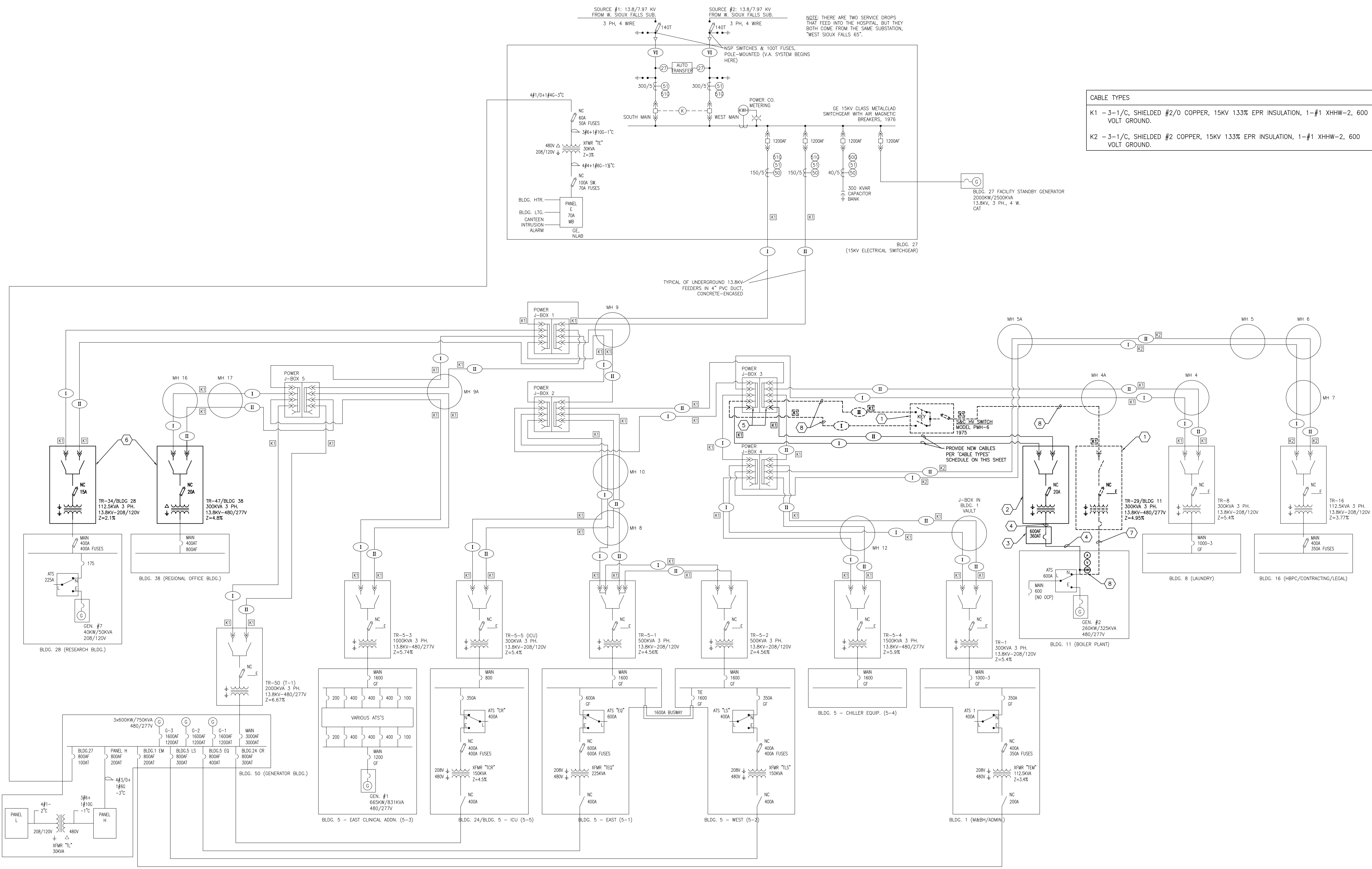
- REPLACE MDP. REMOVE AND DISPOSE OF EXISTING 800A, 208V, 3P, 4W WALL MOUNTED MDP. REMOVE AND DISPOSE OF METER. PROVIDE A NEW SERVICE ENTRANCE RATED 800A, 208V, 3P, 4W 22KAC WALL MOUNTED MDP. SEE SCHEDULE ON SHEET E-501. DISCONNECT FEEDER AND (2) BRANCH CIRCUITS FEEDING INTO AND OUT OF MDP AND CONNECT TO NEW MDP. CONTRACTOR SHALL EXTEND CONDUIT AND CONDUCTORS AS REQUIRED TO NEW MDP. PROVIDE MULTIFUNCTION DIGITAL-METERING MONITOR FOR MAIN CIRCUIT BREAKER. SEE RISER.
- RUN GENERATOR AT BLDG 50 DURING CONSTRUCTION. SWITCH OVER ATS SO THAT DIST PNL E IS FED VIA BLDG 50 GENERATOR. SEE RISER. REFILL FUEL TO FULL LEVEL.
- PROVIDE 2 WEEKS NOTICE FOR SHUTDOWN OF MDP. MDP SHALL BE REPLACED AFTER 4PM ON A FRIDAY.
- ALTERNATE BID #1: INTERCONNECT DIGITAL-METERING MONITOR WITH CAMPUS METASYS. PROVIDE CABLEING TO CAMPUS NETWORK TO INTERFACE WITH METASYS AS REQUIRED. ELECTRICAL CONTRACTOR SHALL HIRE JCI TO PERFORM THE INTERCONNECTION WORK AND COORDINATE WHERE NETWORK CABLEING NEEDS TO TERMINATE. SEE SPECIFICATION 262411.
- AFTER REPLACEMENT OF MDP IS COMPLETED, REMOVE AND DISPOSE OF EXISTING 400A, 480V, 3P, NON-FUSED WALL MOUNTED DISCONNECT SWITCH THAT FEEDS TRANSFORMER 'TCR'. PROVIDE A NEW 400A, 480V, 3P, FUSED 100KAC WALL MOUNTED DISCONNECT SWITCH. DISCONNECT LINE AND LOAD FEEDER FROM DEMOLISHED DISCONNECT SWITCH AND CONNECT TO NEW DISCONNECT SWITCH. CONTRACTOR SHALL VERIFY CABLE LENGTHS/HEIGHTS TO EXISTING DISCONNECT SWITCH TERMINATIONS AND ORDER NEW DISCONNECT SWITCH WITH SAME DIMENSIONS SO EXISTING CABLEING IS REUSED (OTHERWISE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NEW CABLEING FROM PREVIOUS TERMINATION POINTS). ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING NEW COORDINATION STUDY AND ENSURING PROPER COORDINATION BETWEEN FUSED DISCONNECT AND PANEL E CIRCUIT BREAKERS. CONTACT TSP ARCHITECTS AND ENGINEERS FOR EXISTING COORDINATION STUDY.
- PROVIDE A 350A, 480V, 3P, 4W, 10KAC NEMA 3R EXTERIOR WALL MOUNTED SERVICE ENTRANCE RATED MAIN CIRCUIT BREAKER.
- ALTERNATE BID #2: INTERCONNECT DIGITAL-METERING MONITOR WITH CAMPUS METASYS. PROVIDE CABLEING TO CAMPUS NETWORK TO INTERFACE WITH METASYS AS REQUIRED. ELECTRICAL CONTRACTOR SHALL HIRE JCI TO PERFORM THE INTERCONNECTION WORK AND COORDINATE WHERE NETWORK CABLEING NEEDS TO TERMINATE. SEE SPECIFICATION 262411.
- PROVIDE A MULTI-FUNCTION DIGITAL METER INSTALLED AT LOCATION SHOWN FOR BLDG 11 MAIN CIRCUIT BREAKER METERING. PROVIDE A 20A, 3PH, 480V CONNECTION FROM MDP. PROVIDE INTEGRATORS AS REQUIRED FOR USE WITH BACNET OVER IP PROTOCOL.
- PROVIDE A NEW PAD MOUNTED 300KVA, 13,800V-480Y/277 VOLT ONAN TRANSFORMER. PROVIDE 2 SETS OF (2) 0 AWG, COPPER, 3-1/2" C, MW, ERP) FROM J-BOX #3 TO TRANSFORMER TR-29/BLDG 11. 1 SET SHALL BE FOR EACH CAMPUS FEEDER. SEE ES101 FOR LOCATION OF J-BOX #3. INSTALL PRIMARY CONDUITS IN A 2-WAY DUCT BANK CONFIGURATION. SEE DETAIL F2/E-602.
- PROVIDE NEW TRANSFORMER PAD. SEE DETAIL F4/E-602.
- PROVIDE NEW LIS (LOAD BREAK SWITCH) INTERNAL TO TRANSFORMER MENTIONED ABOVE. (GE BREAKMASTER LIS - 600A FRAME, 25KA INTERRUPTING RATING AND GE 9F62 EJO-1, 15.5KV, E-RATED, 20A TRIP/FRAME, 50KA INTERRUPTING RATING) OR EQUIVALENT. LIS SHALL BE INSTALLED ON PRIMARY SIDE OF TRANSFORMER. LIS SHALL BE CAPABLE OF FEEDING TRANSFORMER FROM EITHER PRIMARY FEEDER I, PRIMARY FEEDER II, OR NEITHER. LIS SHALL NOT ALLOW BOTH FEEDERS TO BE CONNECTED TO TRANSFORMER.
- PROVIDE NEW SECONDARY FEEDER TO NEW WALL MOUNTED MAIN CIRCUIT BREAKER. SEE ES101 FOR ADDITIONAL INFORMATION. BORE UNDER CONCRETE AS REQUIRED FOR INSTALLATION OF NEW FEEDER. SEE SHEET E-601 FOR ADDITIONAL INFORMATION.
- PROVIDE LB FROM WALL MOUNTED MAIN CIRCUIT BREAKER INTO BACK OF EXISTING WIRING GUTTER IN BLDG 11. GENERATOR ROOM. CORE DRILL THROUGH EXISTING EXTERIOR WALL AS REQUIRED. SEAL EXTERIOR WALL PENETRATIONS.
- REMOVE EXISTING METER AND ASSOCIATED CT'S. PROVIDE NEW CT'S ON NORMAL FEEDER CONDUCTORS WITHIN EXISTING ATS. EXISTING METER IS MOUNTED ON SIDE OF EXISTING ATS.
- PROVIDE A 20A-3P CIRCUIT BREAKER IN EXISTING PANEL FOR METERING. PROVIDE 3#12 AWG + 1#12 GRND, 1/2" C FROM MDP TO METER. EXISTING PANEL IS MANUFACTURED BY GE, MATCH EXISTING AIC RATING.
- REPLACE MDP. REMOVE AND DISPOSE OF EXISTING 400A, 208V, 3P, 4W WALL MOUNTED MDP. PROVIDE A NEW SERVICE ENTRANCE RATED 400A, 208V, 3P, 4W 22KAC WALL MOUNTED MDP. DISCONNECT FEEDER AND BRANCH CIRCUITS FEEDING INTO AND OUT OF MDP AND CONNECT TO NEW MDP. CONTRACTOR SHALL EXTEND CONDUIT AND CONDUCTORS AS REQUIRED TO NEW MDP. CONNECT NEW MDP INTO EXISTING SQUARE D POWER LOGIC METERING SYSTEM. INTERFACE SQUARE D POWER LOGIC WITH BUILDING 28 METASYS SYSTEM. ELECTRICAL CONTRACTOR SHALL HIRE JCI TO PERFORM THE INTERFACE WORK. SEE RISER E2/E-602 FOR ADDITIONAL INFORMATION.
- RUN GENERATOR AT BLDG 28 DURING CONSTRUCTION. SWITCH OVER ATS SO THAT PNLS 28-E1 AND 28-E2 ARE FED VIA BLDG 28 GENERATOR. SEE RISER. REFILL FUEL TO FULL LEVEL. REPLACE MDP AT SAME TIME AS TRANSFORMER TR-34/BLDG 28 IS REPLACED. REPLACEMENT OF MDP AND TRANSFORMER SHALL OCCUR OVER A SINGLE WEEKEND PERIOD.
- PROVIDE TAG ON END OF CONDUIT. TAG SHALL STATE: "ABANDONED". NOTE ON AS-BUILTS THAT CONDUIT IS ABANDONED.

100% CONSTRUCTION DOCUMENTS

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Drawing Number E-102	Department of Veterans Affairs
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three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one eighth inch = one foot
one quarter inch = one foot
one eighth inch = one foot



F1 EXISTING DISTRIBUTION RISER DIAGRAM
SCALE: NO SCALE

SHEET GENERAL NOTES

A. SEE ES101 FOR ADDITIONAL GENERAL NOTES.

SHEET KEYNOTES

1. REMOVE AND DISPOSE OF TRANSFORMER TR-29/BLDG 11 AND S&C SWITCH.
2. PROVIDE NEW PAD MOUNTED TRANSFORMER TR-29/BLDG 11. INSTALL PAD, TRANSFORMER, PRIMARY AND SECONDARY FEEDERS PRIOR TO DEMOLITION OF EXISTING TRANSFORMER TR-11/BLDG 29 AND S&C SWITCH. SEE ES101 AND E-102 FOR ADDITIONAL INFORMATION.
3. PROVIDE NEW EXTERIOR SERVICE ENTRANCE RATED MAIN CIRCUIT BREAKER WITH METER. INSTALL CIRCUIT BREAKER AND FEEDER PRIOR TO DEMOLITION OF EXISTING TRANSFORMER TR-29/BLDG 11 AND S&C SWITCH. SEE ES101 AND E-102 FOR ADDITIONAL INFORMATION.
4. PROVIDE 2 SETS OF (4) #350KCMIL + (1) #2/0 AWG GND, 4".
5. CONNECT NEW PRIMARY FEEDERS FROM EXISTING JUNCTION BOX #3 TO TR-29. INSTALL FEEDERS PRIOR TO DEMOLITION OF EXISTING TRANSFORMER TR-29/BLDG 11 AND S&C SWITCH. SEE ES101 AND E-102FOR ADDITIONAL INFORMATION.
6. REPLACE TRANSFORMER. SEE ES101 AND E-102 FOR ADDITIONAL INFORMATION.
7. REMOVE EXISTING SECONDARY CONDUCTORS. CONDUIT SHALL REMAIN. CUT, CAP, AND LABEL CONDUIT BELOW GRADE.
8. REMOVE PRIMARY CONDUIT, CONDUCTORS, AND DUCT BANK IN ITS ENTIRETY. (EXCEPT BELOW CONCRETE DRIVE).
9. PROVIDE MULTI-FUNCTION DIGITAL METERING MONITOR FOR BLDG 11. SEE E-102 FOR ADDITIONAL INFORMATION.

100% CONSTRUCTION DOCUMENTS

CONSULTANTS:			ARCHITECT/ENGINEERS:		Drawing Title ELECTRICAL RISER DIAGRAM - SITE	Project Title Install New Transformers for Buildings 28 and 38		Project Number 438-13-103	Office of Construction and Facilities Management Department of Veterans Affairs
					Approved: Project Director	Location Sioux Falls, South Dakota		Building Numbers 5, 11, 24, 28	
Revisions						Date 12/31/2012	Checked DLB	Drawn JWN	Drawing Number E-601 Dwg 6 of 7

