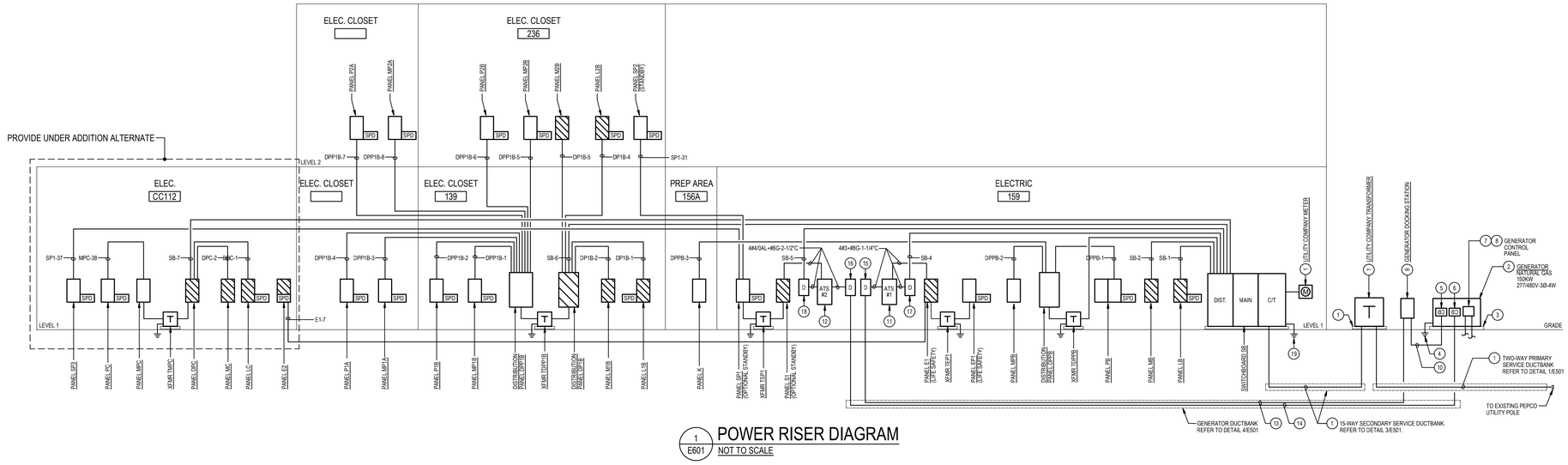


1 E601 **POWER RISER DIAGRAM**
NOT TO SCALE

SCHEDULE OF TRANSFORMERS

TRANSFORMER DESIG.	KVA	LOCATION	PRIMARY FEEDER	SECONDARY TAP WIRING & CONDUIT (NOTE A)	GROUNDING ELECTRODE CONDUCTOR	EQUIPMENT SERVED	NOTES
TDPPB	150	ELECTRIC 159	SB-3	2 SETS: (4 #350AL + #3/0AL G - 3"C)	#3/0AL	PANEL DPPB	1
TEP1	15	ELECTRIC 159	E1-13	4 #8 + #8G - 1"C	#8	PANEL EP1	1
TSP1	75	ELECTRIC 159	S1-25	4 #350AL + #1/0AL G - 3"C)	#1/0AL	PANEL SP1	1
TDPP1B	150	ELEC. CLOSET 139	DP1B-3	2 SETS: (4 #350AL + #3/0AL G - 3"C)	#3/0AL	PANEL DPP1B	1
TMPC	75	ELECTRIC CC112	DPC-3	4 #250AL + #1/0AL G - 2-1/2"C)	#1/0AL	PANEL MPC	1

TRANSFORMER GENERAL NOTES:
A. TRANSFORMER SECONDARY TAP: CONDUCTORS INDICATED REFLECT PHASE, NEUTRAL (IN WYE-CONFIGURATION), AND SUPPLY-SIDE BONDING JUMPER (SSBJ) IN ACCORDANCE WITH NEC ARTICLES 450, 240.21, AND 250.30.
B. TRANSFORMER SHALL HAVE 480-VOLT, 3-PHASE, DELTA PRIMARY AND 120/208-VOLT, 3-PHASE, WYE SECONDARY.

TRANSFORMER SPECIFIC NOTES:
1. PROVIDE ON 4" HIGH HOUSEKEEPING PAD.

SCHEDULE OF ENERGY METER READINGS

ITEM	DESCRIPTION	METER NUMBER(S)
A	TOTAL BUILDING LOAD	1
B	TOTAL KITCHEN LOADS	13
C	TOTAL MECHANICAL LOADS	3 + 6 + 7 + 8 + 9 + 10 + 12 + 15 + 17 + 18 + 20 + 22 + 25 + 27 + 28
D	TOTAL LIGHTING LOADS	2 + 4 + 14 + 16 + 26
E	TOTAL PLUG LOADS	5 + 11 + 19 + 21 + 23 + 24 + 29
F	TOTAL GENERATOR LOADS	4 + 5

SCHEDULE OF ENERGY METERS

NUMBER	LOAD(S) TO BE MEASURED	CT VOLTAGE	CT RATING (AMPS)	METER SERIES	NOTES
1	SWITCHBOARD SB	480V-3Ø	2000	8000	1
2	PANEL LB	480V-3Ø	100	8000	1
3	PANEL MB	480V-3Ø	100	8000	1
4	PANEL E1 (VIA ATS-1)	480V-3Ø	100	8000	1
5	PANEL S1 (VIA ATS-2)	480V-3Ø	200	8000	1
6	DOAS-2	480V-3Ø	200	8000	2
7	DOAS-3	480V-3Ø	200	8000	2
8	DWH-1	480V-3Ø	100	8000	2
9	DWH-2	480V-3Ø	100	8000	2
10	RHPU-3	480V-3Ø	100	8000	2
11	PANEL PB	208V-3Ø	400	4100	3
12	PANEL MPB	208V-3Ø	100	4100	3
13	PANEL K	208V-3Ø	200	4100	3
14	PANEL L1B	480V-3Ø	100	8000	4
15	PANEL M1B	480V-3Ø	100	8000	4
16	PANEL L2B	480V-3Ø	100	8000	4
17	PANEL M2B	480V-3Ø	400	8000	4
18	PANEL MP1B	208V-3Ø	100	8000	5
19	PANEL P1B	208V-3Ø	200	8000	5
20	PANEL MP1A	208V-3Ø	100	8000	5
21	PANEL P1A	208V-3Ø	200	8000	5
22	PANEL MP2B	208V-3Ø	200	8000	5
23	PANEL P2B	208V-3Ø	200	8000	5
24	PANEL P2A	208V-3Ø	200	8000	5
25	PANEL MP2A	208V-3Ø	100	8000	5
26	PANEL LC	480V-3Ø	100	4100	6
27	PANEL MC	480V-3Ø	200	4100	6
28	PANEL MPC	208V-3Ø	400	4100	7
29	PANEL PC	208V-3Ø	100	4100	7

NOTES:
1. LOCATE METER NEAR SWITCHBOARD SB. PROVIDE CT CONNECTIONS WITHIN SWITCHBOARD SB.
2. LOCATE METER NEAR SWITCHBOARD SB. PROVIDE CT CONNECTIONS WITHIN SWITCHBOARD SB.
3. LOCATE METER NEAR DISTRIBUTION PANEL DPPB. PROVIDE CT CONNECTIONS WITHIN DISTRIBUTION PANEL DPPB.
4. LOCATE METER NEAR DISTRIBUTION PANEL DP1B. PROVIDE CT CONNECTIONS WITHIN DISTRIBUTION PANEL DP1B.
5. LOCATE METER NEAR DISTRIBUTION PANEL DPP1B. PROVIDE CT CONNECTIONS WITHIN DISTRIBUTION PANEL DPP1B.
6. LOCATE METER NEAR DISTRIBUTION PANEL DPC. PROVIDE CT CONNECTIONS WITHIN DISTRIBUTION PANEL DPC.
7. LOCATE METER NEAR PANEL MPC. PROVIDE CT CONNECTIONS WITHIN DISTRIBUTION PANEL MPC.

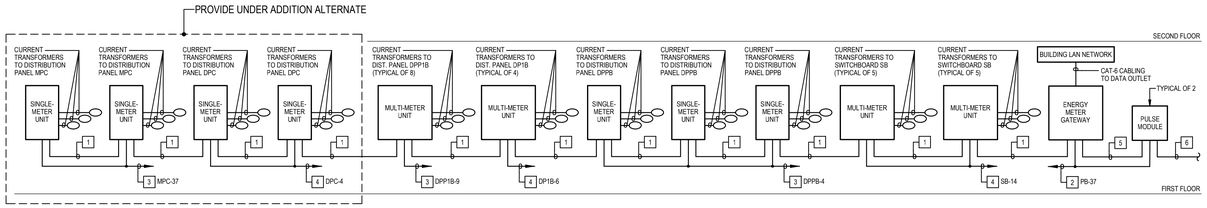
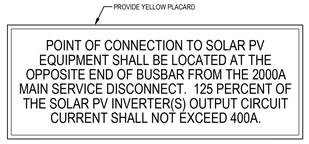
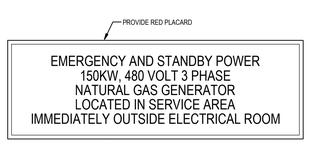


DIAGRAM NOTES:
1. SERIAL PORT, RS-485 2-WIRE MODBUS/RTU COMMUNICATIONS CABLING IN 3/4" CONDUIT (NOT SHOWN ON PLANS).
2. 120V POWER SUPPLY CONNECTION.
3. 208V CONNECTION FOR POWER SUPPLY CONNECTION AND POTENTIAL TRANSFORMERS.
4. 480V CONNECTION FOR POWER SUPPLY CONNECTION AND POTENTIAL TRANSFORMERS.
5. COMMUNICATIONS WIRING, PER MANUFACTURER'S REQUIREMENTS, IN 3/4" CONDUIT.
6. 2#18AWG IN 3/4" CONDUIT TO WATER/GAS METER LOCATION. COORDINATE WATER/GAS METER LOCATION WITH DIVISION 22/23 CONTRACTOR.

2 E601 **RISER DIAGRAM**
ENERGY METER NETWORK
SCALE: NOT TO SCALE



3A E601 **DETAIL**
PLACARD AT SWITCHBOARD
NOT TO SCALE



3B E601 **DETAIL**
PLACARD AT SWITCHBOARD
NOT TO SCALE

GENERAL NOTES:
A. FEEDER SIZES #2 THROUGH #750KCMIL ARE BASED ON ALUMINUM CONDUCTORS. PROVIDE COPPER CONDUCTORS UNDER ALTERNATE.
B. GROUND CONDUCTORS SMALLER THAN #2 SHALL BE COPPER.
C. REFER TO TRANSFORMER SCHEDULE ON THIS DRAWING FOR ADDITIONAL INFORMATION ON TRANSFORMERS INDICATED AND FOR NUMBER AND SIZE OF WIRE AND CONDUIT OF PRIMARY AND SECONDARY FEEDERS FOR TRANSFORMERS INDICATED.
D. REFER TO DETAIL 4/E503 FOR TRANSFORMER GROUNDING.

SPECIFIC NOTES:
1. COORDINATE WITH PEPCO FOR INSTALLATION OF PRIMARY FEEDERS, UTILITY TRANSFORMER, TRANSFORMER PAD, SECONDARY FEEDERS AND UTILITY METER.
2. PROVIDE TYPE 10 GENERATOR, PER NFPA 110. THE GENERATOR SHALL BE ABLE TO PROVIDE GENERATOR POWER TO THE SCHOOL WITHIN 10 SECONDS AFTER A UTILITY POWER OUTAGE.
3. PROVIDE GENERATOR CONCRETE PAD. REFER TO DETAIL 9/E501 FOR ADDITIONAL INFORMATION.
4. REFER TO DETAIL 6/E503 FOR GENERATOR GROUNDING.
5. PROVIDE 3P-250A ELECTRONIC TRIP CIRCUIT BREAKER TO SERVE GENERATOR EMERGENCY (LIFE SAFETY) LOADS. MOUNT CIRCUIT BREAKER WITHIN GENERATOR ENCLOSURE AND MAKE CONNECTIONS. COORDINATE LOCATION OF CIRCUIT BREAKER WITH GENERATOR MANUFACTURER.
6. PROVIDE 3P-200A CIRCUIT BREAKER TO SERVE GENERATOR STANDBY LOADS. MOUNT CIRCUIT BREAKER WITHIN GENERATOR ENCLOSURE AND MAKE ALL CONNECTIONS. COORDINATE LOCATION OF CIRCUIT BREAKER WITH GENERATOR MANUFACTURER.
7. PROVIDE GENERATOR CONTROL WIRING IN CONDUIT BETWEEN GENERATOR CONTROL PANEL AND ASSOCIATED AUTOMATIC TRANSFER SWITCHES. MAKE CONNECTIONS NECESSARY FOR COMPLETE INSTALLATION. GENERATOR CONTROL WIRING SHALL BE AS PER GENERATOR MANUFACTURER'S RECOMMENDATIONS.
8. PROVIDE WIRING IN CONDUIT FROM GENERATOR CONTROL PANEL TO GENERATOR REMOTE ALARM ANNUNCIATOR PANEL. WIRING SHALL BE AS PER GENERATOR MANUFACTURER'S RECOMMENDATIONS. LOCATE GENERATOR REMOTE ALARM ANNUNCIATOR PANEL IN BUILDING SERVICE OFFICE 158.
9. PROVIDE 250A GENERATOR DOCKING STATION IN NEMA TYPE 3R ENCLOSURE, EQUAL TO TRYSTAR DBDS-5 WITH 3P-100A CIRCUIT BREAKERS, KIRK KEY INTERLOCKED, FOR CONNECTIONS TO ATS-1 AND PORTABLE MOBILE GENERATOR. FEEDER FOR LOAD BANK CONNECTION SHALL BE SIZED FOR 250A. PROVIDE SIGN ON FRONT OF GENERATOR DOCKING STATION TO READ AS FOLLOWS "SERVING EMERGENCY TRANSFER SWITCH (ATS-1) IN ELECTRICAL ROOM, 277/480V, 3-PHASE, 4-WIRE".
10. PROVIDE 4 #350AL + #4 GROUND IN 3" CONDUIT BETWEEN 3P-250A ELECTRONIC TRIP CIRCUIT BREAKER AT GENERATOR SERVING EMERGENCY (LIFE SAFETY) LOADS AND GENERATOR DOCKING STATION, SIZED FOR LOAD BANK CONNECTION.
11. PROVIDE 4P-100A AUTOMATIC TRANSFER SWITCH (ATS) TO SERVE EMERGENCY (LIFE SAFETY) LOADS. ATS SHALL HAVE A MINIMUM UL 1008 WITHSTAND AND CLOSING RATING OF 65KAIC. PROVIDE NAMEPLATE ON FRONT OF ATS TO READ "EMERGENCY ATS".
12. PROVIDE 4P-200A AUTOMATIC TRANSFER SWITCH (ATS) TO SERVE STAND-BY LOADS. ATS SHALL HAVE A MINIMUM UL 1008 WITHSTAND AND CLOSING RATING OF 65KAIC. PROVIDE NAMEPLATE ON FRONT OF ATS TO READ "STANDBY ATS".
13. PROVIDE 4 #3 + #8 GROUND IN 3" CONDUIT. REFER TO DETAIL 4/E501 FOR GENERATOR DUCTBANK.
14. PROVIDE 4 #4/0AL + #6 GROUND IN 3" CONDUIT. REFER TO DETAIL 4/E501 FOR GENERATOR DUCTBANK.
15. PROVIDE 3P-100A-600V NON-FUSED ENCLOSED SWITCH WITH NEUTRAL IN NEMA TYPE 1 ENCLOSURE TO SERVE GENERATOR EMERGENCY / LIFE SAFETY LOADS.
16. PROVIDE 3P-200A-600V NON-FUSED ENCLOSED SWITCH WITH NEUTRAL IN NEMA TYPE 1 ENCLOSURE TO SERVE GENERATOR STAND-BY LOADS.
17. PROVIDE 3P-100A-600V FUSED ENCLOSED SWITCH WITH NEUTRAL IN NEMA TYPE 1 ENCLOSURE. PROVIDE WITH 100A CURRENT-LIMITING FUSES.
18. PROVIDE 3P-200A-600V FUSED ENCLOSED SWITCH WITH NEUTRAL IN NEMA TYPE 1 ENCLOSURE. PROVIDE WITH 200A CURRENT-LIMITING FUSES.
19. REFER TO DETAIL 1/E503 FOR GROUNDING CONNECTIONS AT SWITCHBOARD.

PROJECT NAME
WOODLIN ELEMENTARY SCHOOL
PROJECT ADDRESS
2101 LUZERNE AVE
SILVER SPRING MD 20910

DC Project No. 219-20-00
Owner Project No. XXX

OWNER / DEVELOPER
Montgomery County Public Schools

NUMBER	ISSUED FOR	DATE
1	SCHEMATIC DESIGN	10/06/20
2	35% DESIGN DEVELOPEMENT	02/22/21
3	65% CON. DOCUMENTS	06/22/21
4	BID SET	10/01/21

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KEY PLAN

SEAL
STATE OF MARYLAND · PATRICK J. MAYOCK · No. 24861 · PROFESSIONAL ENGINEER
JPA Project No.: 7324-20

AFFIRMATION
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 24861, Expiration date: 02-24-2022.

SHEET TITLE
POWER DIAGRAMS

SCALE

SHEET NUMBER
E261