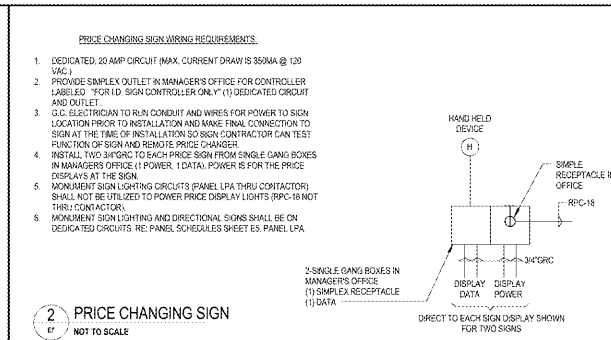
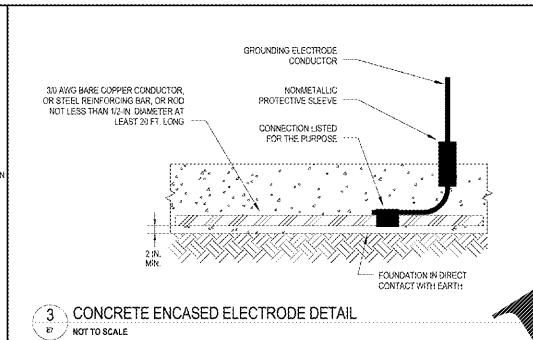


1 EMERGENCY SHUT-OFF (CHECKOUT/CANOPY COLUMN/KIOSK)
NOT TO SCALE

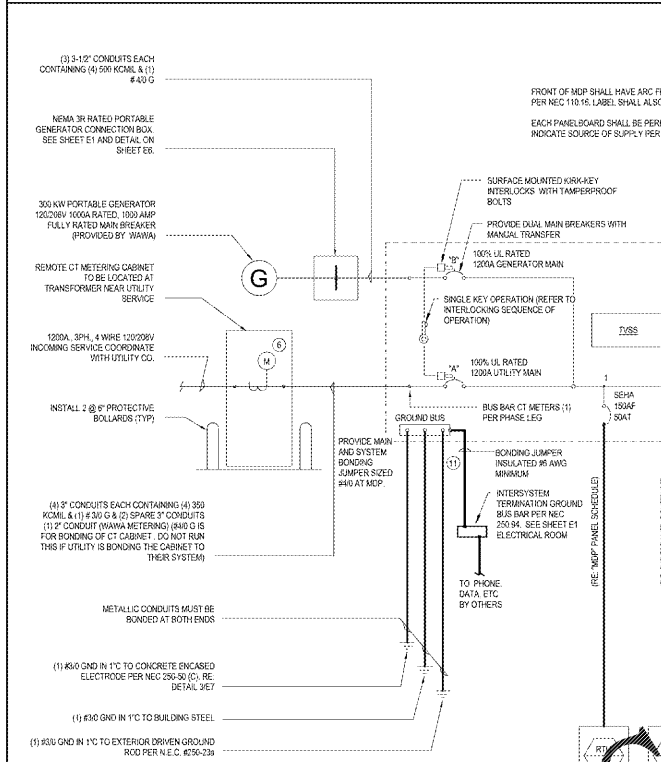


- PRICE CHANGING SIGN WIRING REQUIREMENTS:**
1. DEDICATED 20 AMP CIRCUIT (MAX. CURRENT DRAW IS 850MA @ 120 VAC).
 2. PROVIDE SIMPLEX OUTLET IN MANAGER'S OFFICE FOR CONTROLLER LABELLED "FOR I.D. SIGN CONTROLLER ONLY" (1) DEDICATED CIRCUIT AND OUTLET.
 3. C.C. ELECTRICIAN TO RUA CONDUIT AND WIRES FOR POWER TO SIGN LOCATION PRIOR TO INSTALLATION AND MAKE FINAL CONNECTION TO SIGN AT THE TIME OF INSTALLATION SO SIGN CONTRACTOR CAN TEST FUNCTION OF SIGN AND REMOTE PRICE CHANGER.
 4. INSTALL TWO 3/8" RC TO EACH PRICE SIGN FROM SINGLE GANG BOXES IN MANAGER'S OFFICE (1 POWER, 1 DATA, POWER IS FOR THE PRICE DISPLAYS AT THE SIGN).
 5. MOMENTARY SIGN LIGHTING CIRCUITS (PANEL LPA THRU CONTACTOR) SHALL NOT BE UTILIZED TO POWER PRICE DISPLAY LIGHTS (RPC-18 NOT THRU CONTACTOR).
 6. MOMENTARY SIGN LIGHTING AND DIRECTIONAL SIGNS SHALL BE ON DEPARTED CIRCUITS. SEE PANEL SCHEDULES SHEETS ES-PANEL LPA.

2 PRICE CHANGING SIGN
NOT TO SCALE



3 CONCRETE ENCASED ELECTRODE DETAIL
NOT TO SCALE



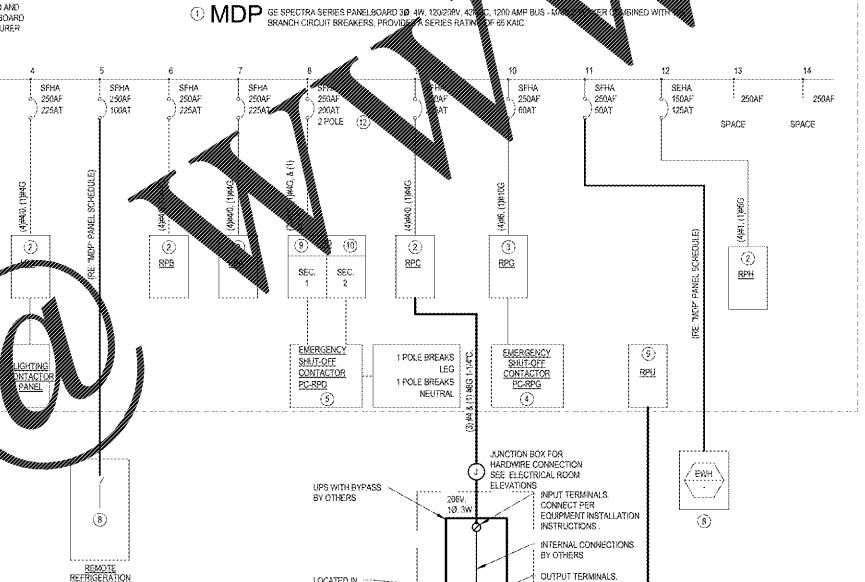
SINGLE LINE NOTES:

1. PANEL MDP SHALL BE GE SPECTRA SERIES PANELBOARD 300-4W, 1200/208V, 40K/40A, 120/208V, 3-PHASE, 4-WIRE, MAIN CIRCUIT BREAKER.
2. PANELS LPA, RPA, RPB, RPD AND RPH SHALL BE GE TYPE AD PANELBOARDS AS NOTED (TOP FEED, MAIN LUG ONLY).
3. PANEL RPIG SHALL BE GE TYPE AD FEED THROUGH PANELBOARD BY 100 AMP MAIN LUGS (TOP FEED) NOTED.
4. PDRPG SHALL BE SQUARE D, 100 AMP, 3 POLE CONTACTOR, TYPE 8903S, DISCONNECTS OF EQUIPMENT FEEDING EQUIPMENT SHALL COMPLY WITH NEC 514.11.
5. PCRPD SHALL BE SQUARE D, 200 AMP, 2 POLE CONTACTOR, TYPE 8903S, DISCONNECTS OF EQUIPMENT FEEDING EQUIPMENT SHALL COMPLY WITH NEC 514.11.
6. VERIFY ALL SHORT CIRCUIT RATING REQUIREMENTS WITH UTILITY PANELS TO BE INSTALLED.
7. VERIFY ALL NAMEPLATE DATA AND INSTALLATION NOTIFY PROJECT MANUAL FOR ANY DISCREPANCIES.
8. COORDINATE CIRCUIT PROTECTION REQUIREMENTS WITH CONTRACTOR SUPPLYING EQUIPMENT.
9. ALL EQUIPMENT FEED FROM THIS PANEL SHALL BE SUPPLIED WITH AN INSULATED, ISOLATED EQUIPMENT SAFETY GROUND. THE INSULATED GROUND SHALL BE CONTINUOUS AND UNBROKEN FROM EQUIPMENT TO THE PANEL. PANEL RPD SHALL BE EQUIPPED WITH ISOLATED GROUND BUS BAR, PLUS AN EQUIPMENT GROUND BUS BAR. THE ISOLATED GROUND BUS SHALL BE CONNECTED TO MAIN DISTRIBUTION PANEL GROUND BUS WITH INSULATED GROUND WIRE.
10. PANEL RPD SHALL BE TYPE AD FEED THROUGH SINGLE PHASE PANELBOARD (WIRED AS TWO WIRE) WITH 225A DUAL MAIN LUGS (TOP FEED) AS NOTED. ELECTRICAL CONTRACTOR SHALL INSTALL A JUMPER BETWEEN BOTH PHASE BUSES. PROVIDE SINGLE PHASE AND NEUTRAL FEEDER FROM MAIN DISTRIBUTION PANEL. ALL CIRCUITS FROM PANEL RPD SHALL BE DISCONNECTED BY EMERGENCY STOP EQUIPMENT PER METHOD GIVEN BY NEC 514.11 ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATE DATA AND NOTIFY PROJECT MANUAL FOR ANY DISCREPANCIES.
11. CAUTION: DISCONNECTING EQUIPMENT ONLY. DO NOT INSTALL ANY ADDITIONAL CIRCUITS.
12. BONDING AND GROUNDING NEUTRAL CONDUCTORS, EQUIPMENT GROUNDING CONDUCTORS, GROUNDING ELECTRODE AND BONDING JUMPERS SHALL PERFORM THE MAIN DISTRIBUTION PANEL AS REQUIRED FOR SERVICE EQUIPMENT BY ARTICLE 250 OF THE NEC.
13. CIRCUIT BREAKER INSTALLED: ONLY 1 POLE OF THE 2 POLE BREAKER REQUIRED TO BE WIRED. RE: PANEL SCHEDULES SHEETS ES FOR WIRING CONNECTIONS OF PANEL RPD.

KIRK-KEY INTERLOCKING SEQUENCE OF OPERATION

SINGLE KEY OPERATION PROHIBITS THE TWO LOCKING DEVICES FROM BEING DISENGAGED AT THE SAME TIME. WITH THE KEY REMOVED BOTH DEVICES ARE IN THE LOCKED POSITION. TO CLOSE THE UTILITY MAIN CIRCUIT BREAKER THE KEY MUST BE INSERTED INTO LOCK 'A' AND ROTATED TO RETRACT THE INTERLOCK BOLT. THIS WILL ALLOW THE CIRCUIT BREAKER TO BE MOVED TO THE CLOSED POSITION. THE KEY IS CAPTIVE AND CANNOT BE REMOVED FROM THE LOCK UNTIL THE CIRCUIT BREAKER IS MOVED BACK TO THE OPEN POSITION AND THE KEY IS ROTATED TO EXTEND THE INTERLOCK BOLT. ONCE THE INTERLOCK BOLT HAS BEEN EXTENDED, THE KEY CAN BE RELOCATED TO LOCK 'B'. THE SAME PROCEDURE CAN THEN BE IMPLEMENTED TO CLOSE THE PORTABLE GENERATOR MAIN BREAKER.

POWERPLUS INTEGRATED ELECTRICAL DISTRIBUTION SYSTEM



5 SINGLE LINE DIAGRAM
NOT TO SCALE

LEGEND

- PRE-WIRED BY PANEL MANUFACTURER
- INSTALLED BY ELECTRICAL CONTRACTOR

ELECTRICAL CONTRACTOR SHALL PURCHASE POWERPLUS INTEGRATED ELECTRICAL DISTRIBUTION SYSTEM AND FROM HILL PHOENIX CONTACT OTIS SMITH @ 800-518-6630 X3232 FAX #770-285-3252 FOR PRICING, DELIVERY AND INSTALLATION REQUIREMENTS.

GENERAL ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR SHALL FURNISH ALL LICENSES, PERMITS, ETC. REQUIRED TO PERFORM THE WORK. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE LANDLORD, LOCAL AUTHORITIES, THE UTILITY COMPANY, THE NATIONAL ELECTRICAL CODE AND ALL OTHER AUTHORITIES HAVING JURISDICTION. UPON COMPLETION OF WORK, ELECTRICAL CONTRACTOR SHALL FURNISH TO OWNER A CERTIFICATE OF APPROVAL, ISSUED BY LOCAL AUTHORITIES OR BY AN AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS. ALL ELECTRICAL WORK SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR SHALL BE UNCONDITIONALLY GUARANTEED FOR BOTH PARTS AND LABOR FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER. LIGHT BULBS AND LAMPS SHALL BE EXEMPT FROM THIS WARRANTY. HOWEVER, ON THE DATE OF FINAL ACCEPTANCE BY OWNER, ALL LIGHT BULBS AND LAMPS SHALL BE IN ORDER. WHERE AN ITEM HAS BEEN FURNISHED BY OTHERS AND INSTALLED BY ELECTRICAL CONTRACTOR, ONLY THE INSTALLATION AND WIRING SHALL BE GUARANTEED BY ELECTRICAL CONTRACTOR. GUARANTEE ON THE ITEM SHALL BE PROVIDED BY THE PARTY FURNISHING THE ITEM.
2. GENERALLY ALL WIRING SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT). SET SCREW FITTINGS MAY BE USED IN AREAS NOT SUBJECT TO MOISTURE. USE HEAT RESISTANT COMPRESSION FITTINGS IN ALL LOCATIONS SUBJECT TO MOISTURE. FINAL CONNECTIONS TO RECESSED LIGHTING FIXTURES, VIBRATING EQUIPMENT, ETC. SHALL BE MADE WITH FLEXIBLE METALLIC CONDUIT (GREENBELLY) IN LENGTHS NOT TO EXCEED 5 FEET. WHERE SUCH CONNECTIONS ARE MADE IN LOCATIONS SUBJECT TO MOISTURE, USE WEATHERPROOF FLOORING METALLIC CONDUIT (SEA TITE) IN LENGTHS NOT TO EXCEED 5 FEET. IF PERMITTED BY LANDLORD AND LOCAL AUTHORITIES, CONCEALED BRANCH CIRCUIT WIRING MAY BE INSTALLED IN METALLIC CABLE (MC) MC CABLE SHALL BE INSTALLED IN A NON-FLAMMABLE MANHOLE. NO SUCH CABLE SHALL BE INSTALLED IN FRONT OF WALL OR PARTITION FROM CEILING SPACE DOWN INTO PANEL. SUCH CABLES SHALL BE INSTALLED WITHIN WALL OR PARTITION IF POSSIBLE. IF SUCH CABLES ARE INSTALLED IN FRONT OF WALL OR PARTITION, USE CONDUIT SLEEVES OR ENTER CABLES INTO A JUNCTION BOX INSTALLED ABOVE CEILING AND BRACE AND WIRING INSTALLED IN CONDUIT DOWN INTO PANEL. IF LATTER METHOD IS USED, INSTALLATION MUST BE IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE AMPHIQUAT TABLES (NOTE RA) FOR THIS PURPOSE. #12 AWG TYPE THHN WIRE SHALL BE RATED AT NOT MORE THAN 25 AMPERES. ALL EXPOSED WIRING, PANEL FEEDERS, HVAC EQUIPMENT FEEDERS, ETC. SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT). NO EXPOSED NON-METALLIC CABLE SHALL BE PERMITTED.
3. WIRING IN 4" EMT OR CONDUIT SHALL BE INSTALLED IN GRC CONDUIT, MC CONDUIT OR PVC CONDUIT (SCHEDULE 40), EACH CONDUIT RUNNING OUT TO OR THRU THE GAS CANOPY OR TANKS AREA SHALL BE GRC FOR THE ENTIRE RUN OF CONDUIT. WHERE PVC CONDUIT IS USED, AN ADDITIONAL GROUND WIRE SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRICAL CODE. THERE SHALL BE NO EXPOSED PVC CONDUIT. ALL STEEL PIPE EXTENSIONS ABOVE GRADE, ETC. SHALL BE IN METAL RATHER THAN GRC CONDUIT. MC CONDUIT OR EMT, THERE SHALL BE NO EMT INSTALLED IN CONTACT WITH EARTH OR CONCRETE; ALL UNDERGROUND CABLE SHALL BE INSTALLED IN RACEWAY. NO DIRECT BURIAL CABLE OF ANY KIND SHALL BE USED UNLESS SPECIFICALLY NOTED. ALL UNDERGROUND WIRING SHALL BE INSTALLED AS DIRECTED BY THE NATIONAL ELECTRICAL CODE. WHERE REQUIRED BY THE N.E.C. INSTALL A CONCRETE ENVELOPE AROUND CONDUITS. FOR UNDERGROUND WIRING IN EXCESS OF 400 VOLTS, A CONTINUOUS WARNING RIBBON SHALL BE INSTALLED 2" ABOVE CONDUITS STATING 'CAUTION BURIED HIGH VOLTAGE LINE BELOW'. RIBBON SHALL BE DETECTABLE TYPE AND SHALL BE 1/8" PRODUCTS (SEE NEC OR EQUAL). ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING OF FINISHED SURFACES, EXCAVATION, CONCRETE ENVELOPES, TAPPING, BENCHING, ETC. REQUIRED FOR INSTALLATION OF UNDERGROUND WIRING. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO DETERMINE THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES, FACTORIES, ETC. PRIOR TO STARTING ANY EXCAVATION. ELECTRICAL CONTRACTOR SHALL HAVE TOTAL RESPONSIBILITY FOR ANY DAMAGE DONE TO ANY EXISTING UNDERGROUND UTILITIES OR OTHER FACILITIES BY HIS WORK. COLORS AND FINISHES OF ALL SWITCHES, RECEPTACLES, DIMMERS, COVER PLATES, ETC. WILL BE SELECTED BY ARCHITECT. VERIFY ALL SUCH COLORS AND FINISHES PRIOR TO INSTALLING ANY WIRING DEVICES.
4. SWITCHES AND RECEPTACLES SHALL BE SPECIFICATION GRADE (NOT "COMMERCIAL GRADE"). ALL WIRING DEVICES SHALL BE RATED AT 20 AMPERES AT THE VOLTAGE AT WHICH THEY WILL BE USED. WIRING DEVICES SHALL UTILIZE CLAMP TYPE TERMINALS. BACK WIRE TYPE TERMINALS ARE NOT ACCEPTABLE. SINGLE POLE SWITCHES SHALL BE HUBBELL #221 SERIES (OR EQUAL). 3 WAY SWITCHES SHALL BE HUBBELL #223 SERIES (OR EQUAL). FOUR WAY SWITCHES SHALL BE HUBBELL #124 SERIES (OR EQUAL). DUPLEX RECEPTACLES SHALL BE HUBBELL HOME SERIES (OR EQUAL). DIMMERS SHALL BE AS SPECIFIED ON DRAWINGS. WHERE SWITCHES AND DIMMERS ARE SHOWN GANGED TO EACH OTHER, DO NOT INSTALL IN COMMON GROUND BOXES. SWITCHES MAY BE IN COMMON BOXES AND DIMMERS MAY BE IN COMMON BOXES. HOWEVER, IF SWITCHES AND DIMMERS ARE INSTALLED IN SAME COMMON BOX, COVER PLATES WILL NOT ALIGN PROPERLY. ALLOW 1" SPACE BETWEEN SWITCH BOXES AND DIMMER BOXES. CAUTION: USE SEPARATE NEUTRALS FOR EACH DIMMER CIRCUIT. USE OF A COMMON NEUTRAL MAY CAUSE DIMMERS TO MALFUNCTION. WHERE SWITCHES ARE SHOWN GANGED TOGETHER, LOCATIONS ARE DIAGRAMMATIC ONLY. AIRWAYS SWITCHES IN ROOMS AS FIELD CONDITIONS dictate.
5. ISOLATED GROUND CIRCUITS SHALL CONTAIN FULL SIZE, INSULATED, ISOLATED GROUND WIRE WHICH SHALL RUN DIRECTLY FROM RECEPTACLE GROUND TERMINAL TO THE SERVICE ENTRANCE EQUIPMENT GROUND BUS. IT SHALL BE CONNECTED AT NO OTHER POINT. WIRING FOR SUCH CIRCUITS SHALL NOT SHARE A NEUTRAL. WIRING TO BE IN THE SAME CABLE OR RACEWAY WITH WIRING FOR ANY OTHER CIRCUIT. AT EACH LOCATION SHOWN, FURNISH AND INSTALL A 20 AMP, DUPLEX, ISOLATED GROUND RECEPTACLE IN PRECISE LOCATION AS DIRECTED IN FIELD. ISOLATED GROUND RECEPTACLES SHALL BE HUBBELL #H382 OR EQUAL. WHERE SUCH CIRCUITS ARE CLOSE TOGETHER, ONE COMMON ISOLATED GROUND WIRE MAY BE INSTALLED TO SERVE TWO SUCH RECEPTACLES. HOWEVER, EACH RECEPTACLE SHALL CONTINUE TO BE SERVED BY A SEPARATE CIRCUIT AS SHOWN.
6. ALL WIRE CONDUCTORS FOR THIS PROJECT SHALL BE COPPER REGARDLESS OF WIRING METHOD.



6 JUNCTION BOX FOR HARDWARE CONNECTION
SEE ELECTRICAL ROOM ELEVATIONS

INPUT TERMINALS CONNECT PER EQUIPMENT INSTALLATION INSTRUCTIONS.
INTERNAL CONNECTIONS BY OTHERS.
OUTPUT TERMINALS CONNECT PER EQUIPMENT INSTALLATION INSTRUCTIONS.

GROUND PER NEC AND INSTALLATION INSTRUCTIONS.
(1) #6G
TO COLD WATER PIPE
TO BUILDING STEEL
TO BUILDING STEEL

LEAVE 8 FEET OF SLACK IN ALL CONDUCTORS AND FLEX TO AND FROM THE UPS RACK SO THAT THE RACK MAY BE ROLLED OUT TO BE WORKED ON. PROVIDE HOOKS ON WALL ABOVE J-BOXES TO COIL UP EXTRA CABLEING.



WAWA & Peterson
Engineers, Architects,
Planners, Inc.
Professional Corporation
1000 West 12th Street
Wawa, PA 18080
Tel: 610-866-7777
Fax: 610-866-7778

CLIENT NAME
WAWA
260 WEST BALTIMORE PIKE
WAWA, PENNSYLVANIA 19083

PROJECT NAME
WAWA F85FB 2018.01 STORE #5275-LIT
9021 STATE ROAD 52
HUDDSON, FL 34689

SHEET TITLE
SINGLE LINE DIAGRAMS, DETAILS AND NOTES

Revision Schedule	
No.	Description
1	PRELIMINARY SET 01/27/2018
2	PRELIMINARY REVIEW SET 09/20/2018
3	REVISED SET 09/20/2018
4	REVISED SET 09/20/2018
5	REVISED SET 09/20/2018