

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN
PROJECT MANAGEMENT
AA 003420
CA 8660
604 COURTLAND STREET
SUITE 100
ORLANDO, FLORIDA 32804
PH 407.645.5008
FX 407.629.9124

SEAL:

FAULT CURRENT CALCULATION

Table with columns: TRANSFORMER SIZE (KVA), TRANSFORMER Z (%), NUMBER OF CONDUCTORS PER PHASE, LINE TO LINE VOLTAGE, LINE TO NEUTRAL VOLTAGE, LENGTH OF SERVICE. Includes calculations for I(sc) and I(sc) at service disconnect.

SERVICE EQUIPMENT RATING = 42,000
SERVICE EQUIPMENT RATING PER 7-ELEVEN REQUIREMENTS = 65,000

AVAILABLE SHORT CIRCUIT RATINGS FOR THE SERVICE DISTRIBUTION EQUIPMENT AND PANELS HAVE BEEN ESTIMATED BASED ON AN ASSUMED SERVICE TRANSFORMER SIZE AND IMPEDANCE. FAULT CURRENTS HAVE BEEN CALCULATED ASSUMING AN INFINITE BUS AT THE SERVICE TRANSFORMER PRIMARY. ACTUAL AVAILABLE SHORT CIRCUIT CURRENT AT THE SERVICE DISTRIBUTION EQUIPMENT WILL DEPEND UPON FINAL UTILITY COMPANY TRANSFORMER SELECTION AND PRIMARY FAULT CALCULATIONS. THE AVAILABLE SHORT CIRCUIT CURRENT MAY VARY FROM THE ENGINEER'S CALCULATED VALUES. THE CONTRACTOR SHALL OBTAIN THE ACTUAL TRANSFORMER AVAILABLE SHORT CIRCUIT INFORMATION FROM THE ELECTRICAL UTILITY PROVIDER AT THE TIME OF CONSTRUCTION AND PRIOR TO ORDERING DISTRIBUTION EQUIPMENT AND PANELS. THIS INFORMATION SHALL BE USED TO DETERMINE EXACT A.I.C. RATINGS NEEDED FOR THIS EQUIPMENT. THIS INFORMATION SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING EQUIPMENT.

Table for SQUARE D - SERIES RATING - 65,000 AIC. Columns: MAIN BREAKERS (2-POLE, 3-POLE), SUB PANEL BREAKERS (1-POLE, 2-POLE, 3-POLE). Includes a note about NEC 240.86(C) and breaker ratings.

IN ACCORDANCE WITH NEC 240.86(C), SUM OF MOTOR FULL-LOAD CURRENTS WITHIN EACH PANELBOARD DOES NOT EXCEED 125% OF THE LOWEST INTERRUPTING RATING OF THE BRANCH CIRCUIT'S BREAKERS WITHIN EACH PANELBOARD. BREAKERS RATED 10K AIC - 10,000 x .01 = 100A. BREAKERS RATED 22K AIC - 22,000 x .01 = 220A.

ELECTRICAL CONTRACTOR TO AFFIX A PERMANENT LABEL AT SERVICE ENTRANCE IN ACCORDANCE WITH NEC SECTION 110-22 (C), MARKING SHALL READ "CAUTION - SERIES COMBINATION SYSTEM RATED 65,000 AMPS, IDENTIFIED REPLACEMENT COMPONENTS REQUIRED."

ALL CIRCUIT BREAKERS IN PANELBOARDS "A", "B", "L", "S" SHALL BE SERIES RATED FOR THE AVAILABLE SHORT CIRCUIT CURRENT - 65,000 AMPS MINIMUM. DISTRIBUTION BREAKERS SHALL PROTECT ALL DOWNSTREAM PANELBOARD BREAKERS.

SYMBOL LEGEND table listing symbols for Breaker, Fuse, Switch, and Current Transformer (CT) with their corresponding text descriptions.

GENERAL ONE-LINE NOTES

- 1. CLEARLY LABEL MAIN ELECTRICAL SERVICE DISCONNECT(S) PER NEC.
2. PROVIDE ARC FLASH LABELING AS REQUIRED PER NEC 110.16
3. AMPACITY OF ALL CONDUCTOR SIZES SHOWN IS BASED ON 75°C RATED TERMINATIONS AND CONDUCTORS WITH 75°C TYPE INSULATION. CONTRACTOR SHALL FIELD VERIFY TERMINATION RATINGS OF ELECTRICAL EQUIPMENT AND ADJUST CONDUCTOR SIZES AS REQUIRED PER NEC 110.14(C)
4. ALL NEW OVERCURRENT DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE SERIES RATING TABLE OF IDENTIFIED COMPONENTS.
5. ALL NEW PANELS ARE PROVIDED BY 7-ELEVEN, INSTALLED BY GC. ALL PANELBOARD FEEDERS TO BE PROVIDED AND INSTALLED BY GC.
6. G.C. TO PROVIDE AND INSTALL UTILITY METER AND NEW ELECTRICAL SERVICE ENTRANCE. COORDINATE EXACT REQUIREMENTS WITH POWER UTILITY PRIOR TO COMMENCEMENT OF WORK.
7. ELECTRICAL CONTRACTOR TO COORDINATE ALL FUEL REQUIREMENTS WITH FUELING GC. THE ELECTRICAL CONTRACTOR WILL PROVIDE ALL NECESSARY CONDUITS, SEAL-OFFS, TROUGHS AND RACEWAYS FROM THE ELECTRICAL ROOM OR PANEL AREA TO THE EXTERIOR OF THE BUILDING, BUT NOT TO EXCEED 10 FEET FROM THE EXTERIOR BUILDING EDGE. ALL OTHER EQUIPMENT, WIRE, LABOR FOR THE COMPLETION OF THE FUEL SYSTEM TO BE PROVIDED BY THE FUELING GC.

1. 06.21.17 REEVIEW COMMENTS
NO. DATE: REMARKS

REVISIONS

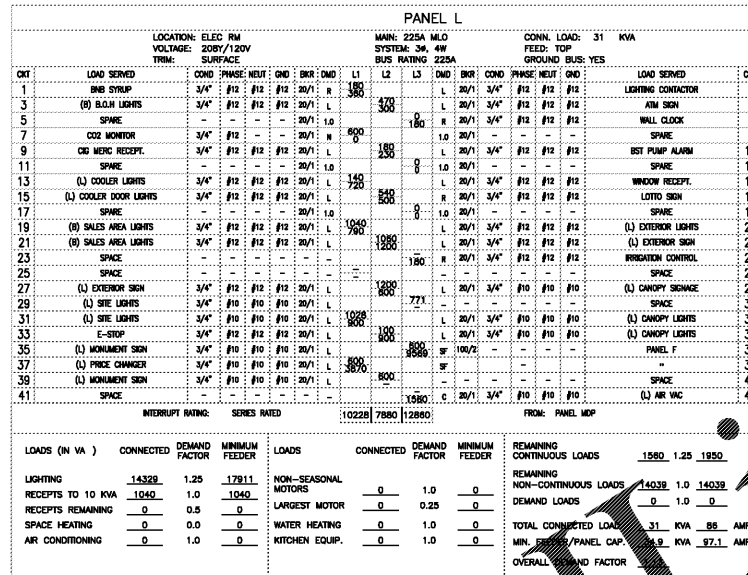


BID SET
JANUARY 8, 2018
7-ELEVEN
STORE #32810
5544 RONALD REAGAN PARKWAY
DAVENPORT, FL
33896

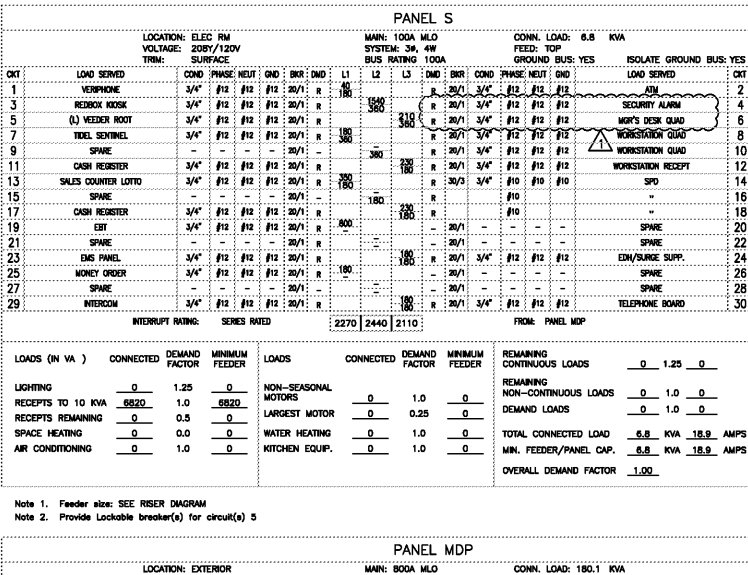
PROJECT NO: 2016.0305
DATE: MAY 31, 2017

E1.1
PANEL SCHEDULES AND
ONE-LINE DIAGRAM

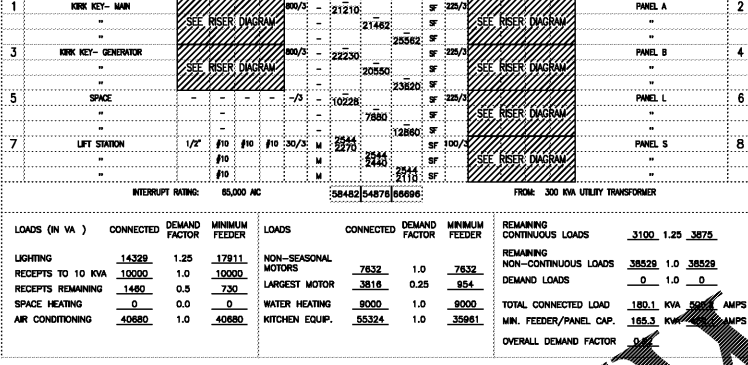
CHECKED: SN DRAWN: VLD



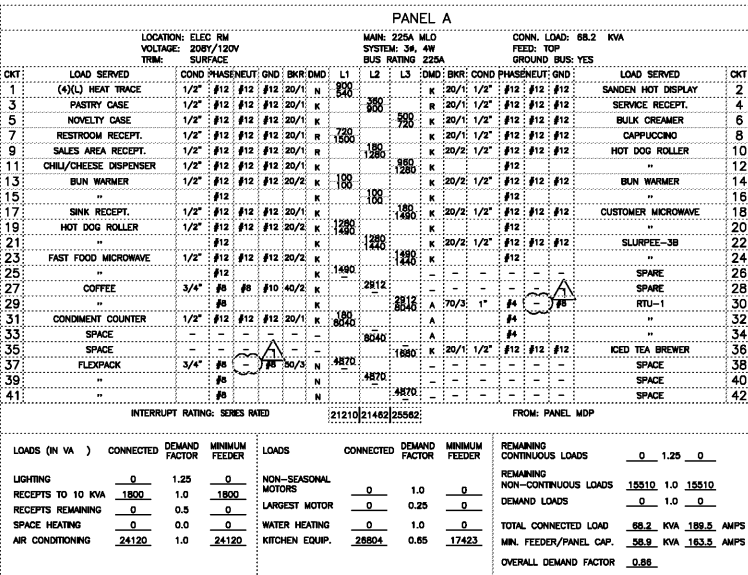
Note 1. Feeder size: SEE RISER DIAGRAM
Note 2. Provide Lockable breaker(s) for circuit(s) 13, 15, 20, 22, 27, 28, 29, 31, 32, 35, 37.



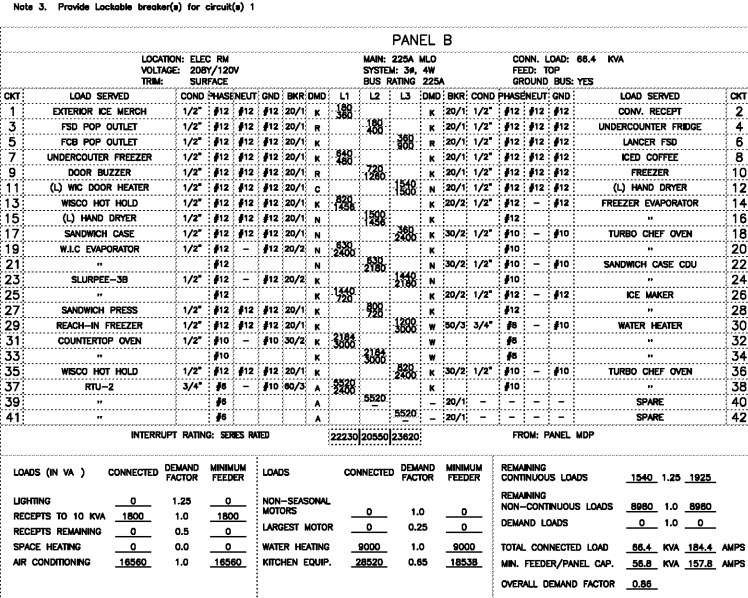
Note 1. Feeder size: SEE RISER DIAGRAM
Note 2. Provide Lockable breaker(s) for circuit(s) 5



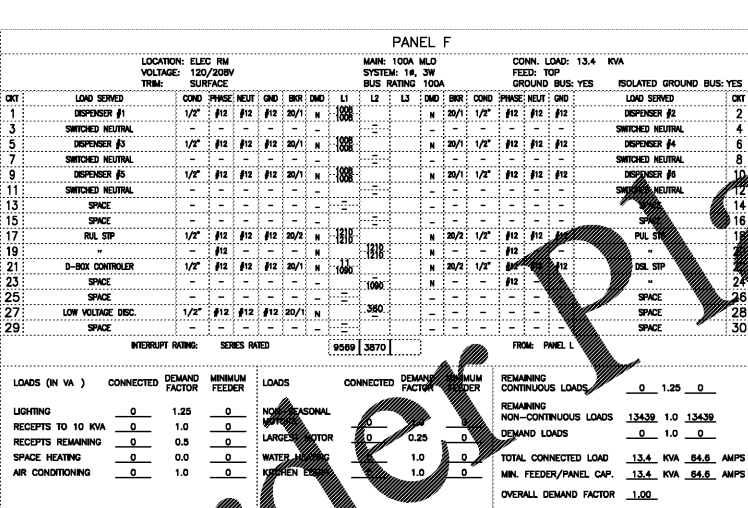
Note 1. Feeder size: SEE RISER DIAGRAM



Note 1. Feeder size: SEE RISER DIAGRAM
Note 2. Provide GFCI rated breaker(s) for circuit(s) 1
Note 3. Provide Lockable breaker(s) for circuit(s) 1



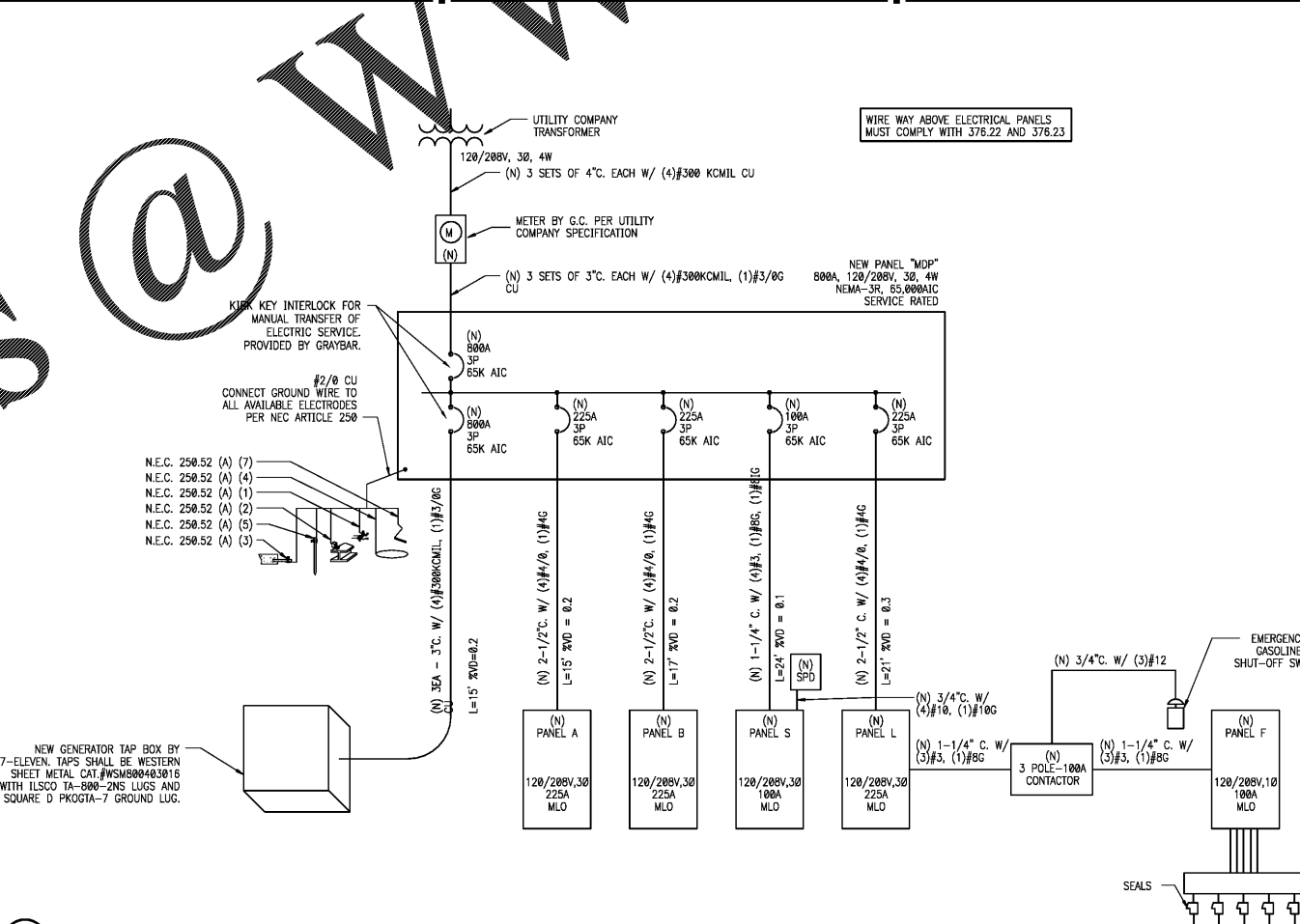
Note 1. Feeder size: SEE RISER DIAGRAM
Note 2. Provide Lockable breaker(s) for circuit(s) 11, 12, 15



Note 1. Feeder size: SEE RISER DIAGRAM

ONE-LINE DIAGRAM

2 ONE-LINE DIAGRAM NTS



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