

ADDENDUM #1

for

RFP – Exhibit Hall & Trainshed New Unit Substation Purchases – Design/Build (10/30/2024)

Attendance:

1) Attendance for the Virtual Pre-RFP meeting on 10/29/24 shown below:

Stephen Shepper	PCCA	215-418-4742	sshepper@paconvention.com
Lisa Dobbertin	PCCA	215-418-4769	ldobbertin@paconvention.com
Dominique Bonds	PCCA	215-418-2105	dbonds@paconvention.com
Chris Luciani	Siemens	215 416-8006	chris.luciani@siemens.com
LJ Petroni	Siemens	215-901-3057	louis.petroni_jr@siemens.com
Robert Jensen	Siemens		jensen.robert@siemens.com
Ryan Laska	Siemens		
Matt Strong	Siemens		matt.strong@siemens.com
Frank Reyes-Ochoa	Siemens		frank.reyes@siemens.com
Dan Casablanca	ABB		dan.casablanca@us.abb.com
Brian DeCesare	ABB		
Garrett Sullivan	United Electric Supply	850-499-1851	gsullivan@unitedelectric.com
John Simms	United Electric Supply	302-324-3268	jsimms@unitedelectric.com
Scott St. Pierre	Square D – Schneider		Scott.StPierre@se.com
Aaron Szura	Square D – Schneider		
Brion Martin	Manna Supply		

Attachments:

1) PACC One Line Diagrams – 4/24/24 – (26 pages)

REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
1	4/27/18	POWER FACTOR UPGRADE
2	4/30/21	ATS LOAD MOVED
3	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 East Pine Road
 West Chester, Pennsylvania
 19380-1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (IF OR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL: SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

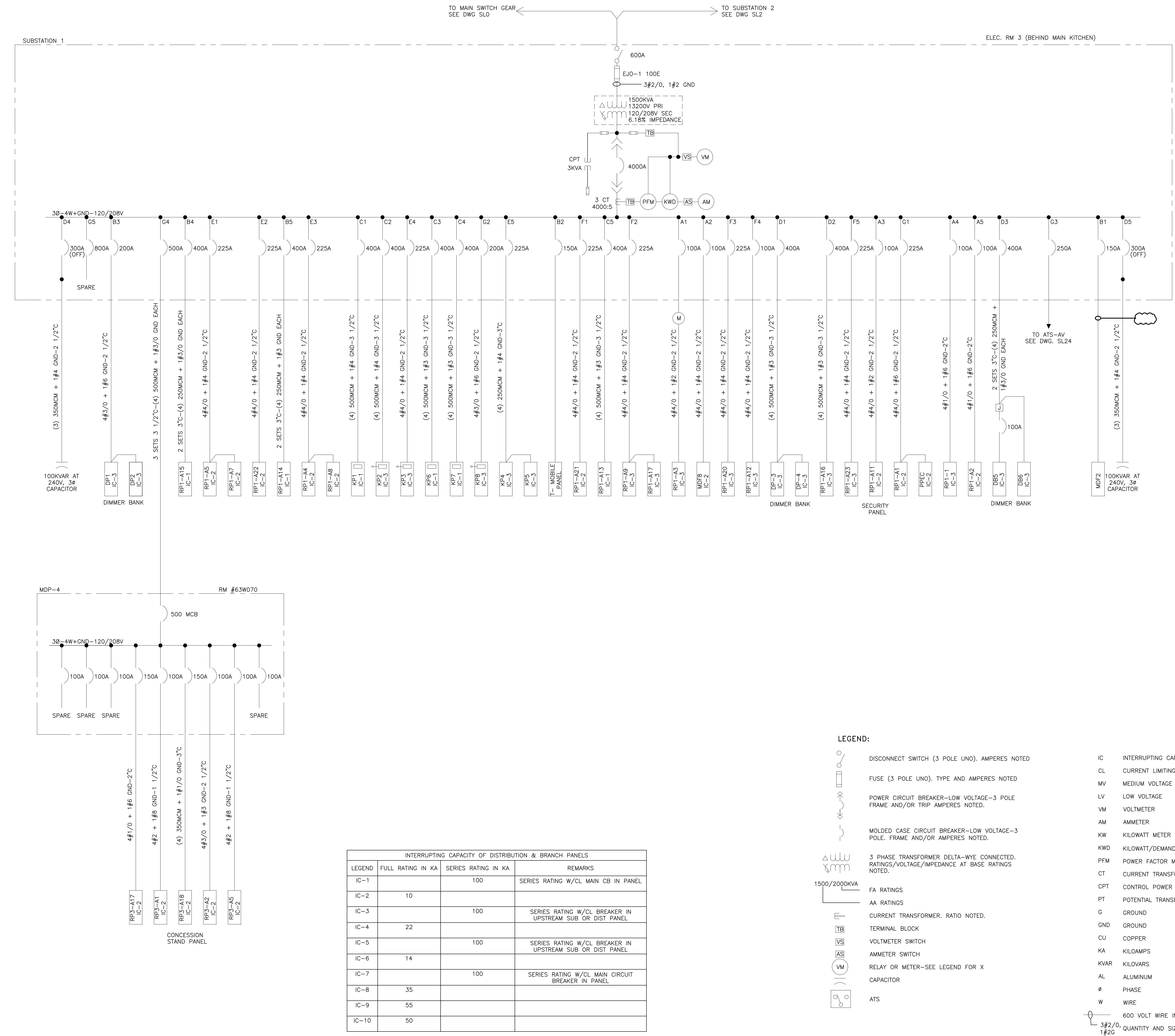
DRAWING TITLE: ATS UPGRADE PROJECT - PHASE 1
UNIT SUBSTATION 1
ELECTRICAL ROOM 3

PROJECT NO.: XX-XX-XXXX-XX

CONSULTANT PROJECT NO.: XXX
DATE: XXX
SCALE: NOT TO SCALE

DRAWN BY: XXX
CHECKED BY: XXX

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.



INTERRUPTING CAPACITY OF DISTRIBUTION & BRANCH PANELS			
LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7		100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
 - FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER-LOW VOLTAGE-3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER-LOW VOLTAGE-3 POLE, FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER, RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER-SEE LEGEND FOR X
 - CAPACITOR
 - ATS
 - IC INTERRUPTING CAPACITY-SEE TABLE
 - CL CURRENT LIMITING
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVARS
 - AL ALUMINUM
 - ∅ PHASE
 - W WIRE
 - 60 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES

SL1

REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
1	4/27/18	POWER FACTOR UPGRADE
2	4/24/24	GENERAL REVISION



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 Erie Plaz Bldg
 West 18th St, Philadelphia
 19103 - 1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL: SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: ATS UPGRADE PROJECT - PHASE 1
UNIT SUBSTATION 2
ELECTRICAL ROOM 3

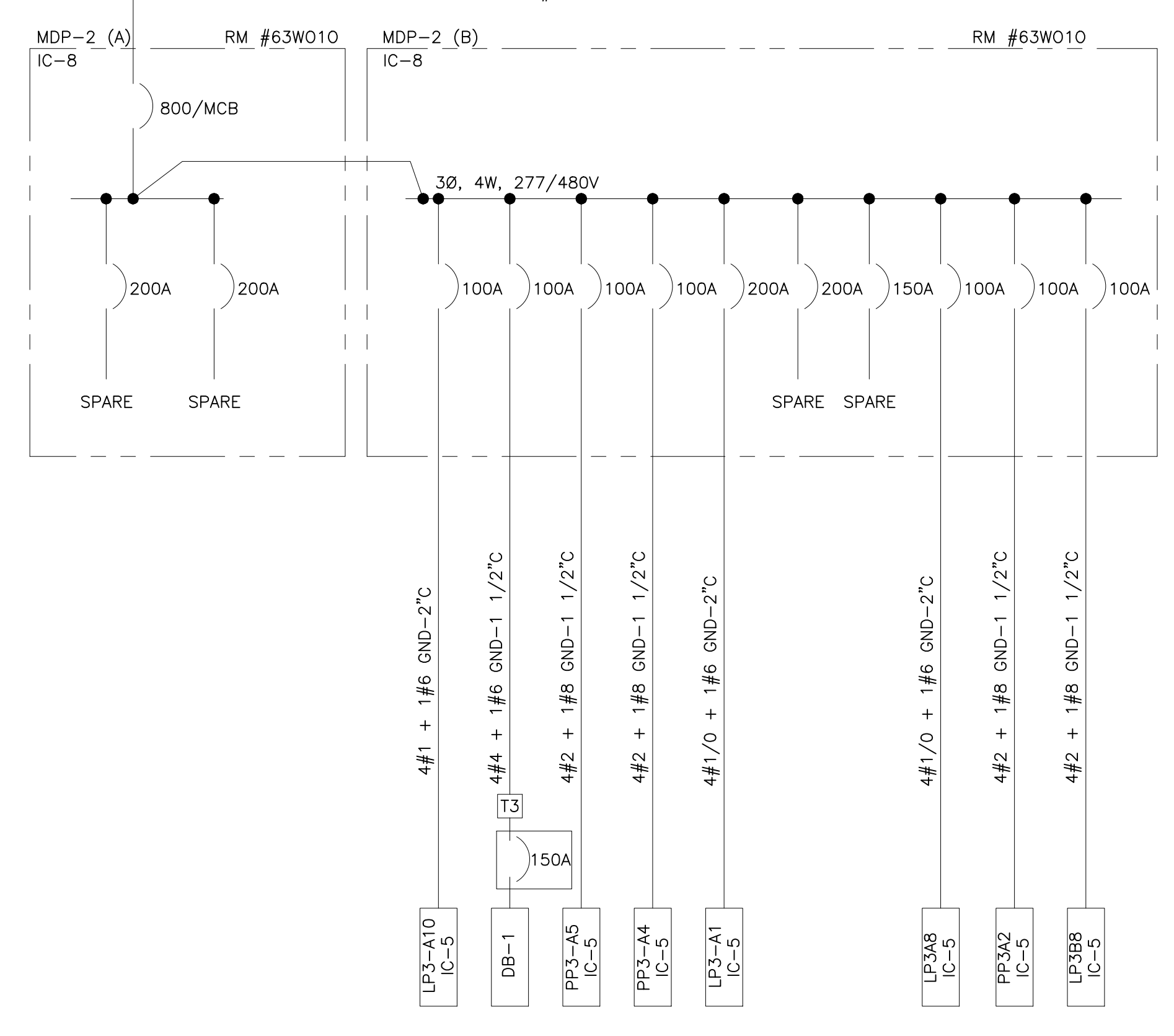
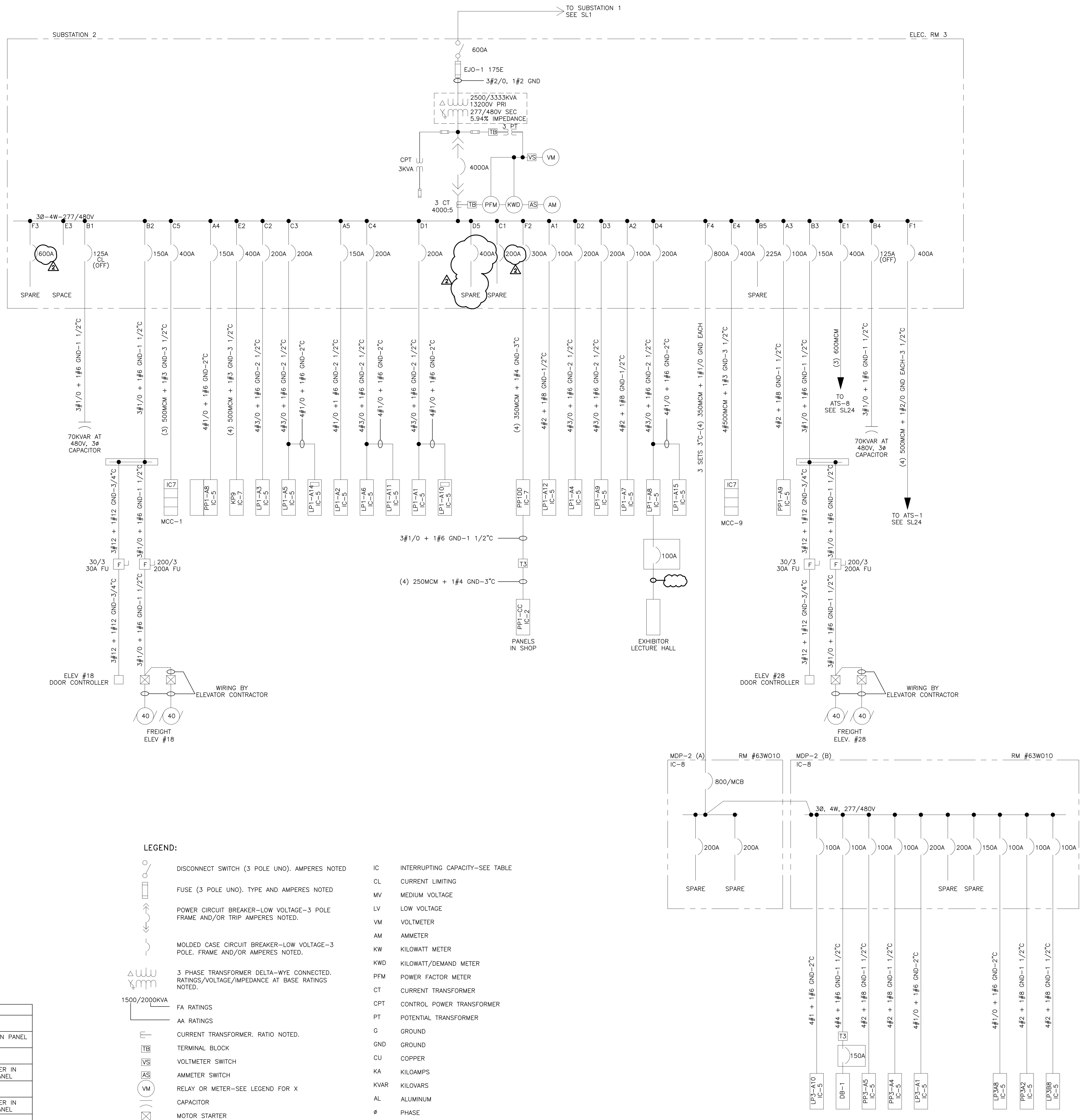
PAQC PROJECT NO.: XX-XX-XXXX-XX

CONSULTANT PROJECT NO.: XXX
DATE: XXX
SCALE: NOT TO SCALE

DRAWN BY: SL2

CHECKED BY:

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.



TRANSFORMER SCHEDULE				
TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	Ø	WIRE
T-0	6	480V DELTA/120/208V WYE	3Ø	4W
T-1	15	480V DELTA/120/208V WYE	3Ø	4W
T-2	30	480V DELTA/120/208V WYE	3Ø	4W
T-3	45	480V DELTA/120/208V WYE	3Ø	4W
T-4	75	480V DELTA/120/208V WYE	3Ø	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3Ø	4W
T-6	150	480V DELTA/120/208V WYE	3Ø	4W
T-7	225	480V DELTA/120/208V WYE	3Ø	4W
T-8	300	480V DELTA/120/208V WYE	3Ø	4W
T-9	500	480V DELTA/120/208V WYE	3Ø	4W

INTERRUPTING CAPACITY OF DISTRIBUTION & BRANCH PANELS			
LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7		100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
 - FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE, FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED, RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER, RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - CAPACITOR
 - MOTOR STARTER
 - MOTOR STARTER
 - HP
 - HP
 - F
 - F
 - TX
 - DISCONNECT SWITCH—3 POLE
 - DISCONNECT SWITCH—3 POLE
 - TRANSFORMER—SEE SCHEDULE FOR X
 - IC INTERRUPTING CAPACITY—SEE TABLE
 - CL CURRENT LIMITING
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOWATTS
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES

REVISIONS

ISSUE	DATE	REVISIONS
1	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 Erie Plaz Road
 West Chester, Pennsylvania
 19380 - 1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS
 NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: ATS UPGRADE PROJECT - PHASE 1 UNIT SUBSTATION 3 ELECTRICAL ROOM 5

PAQC PROJECT NO: XX-XX-XXXX-XX

CONSULTANT PROJECT NO: XXX

DATE: XXX

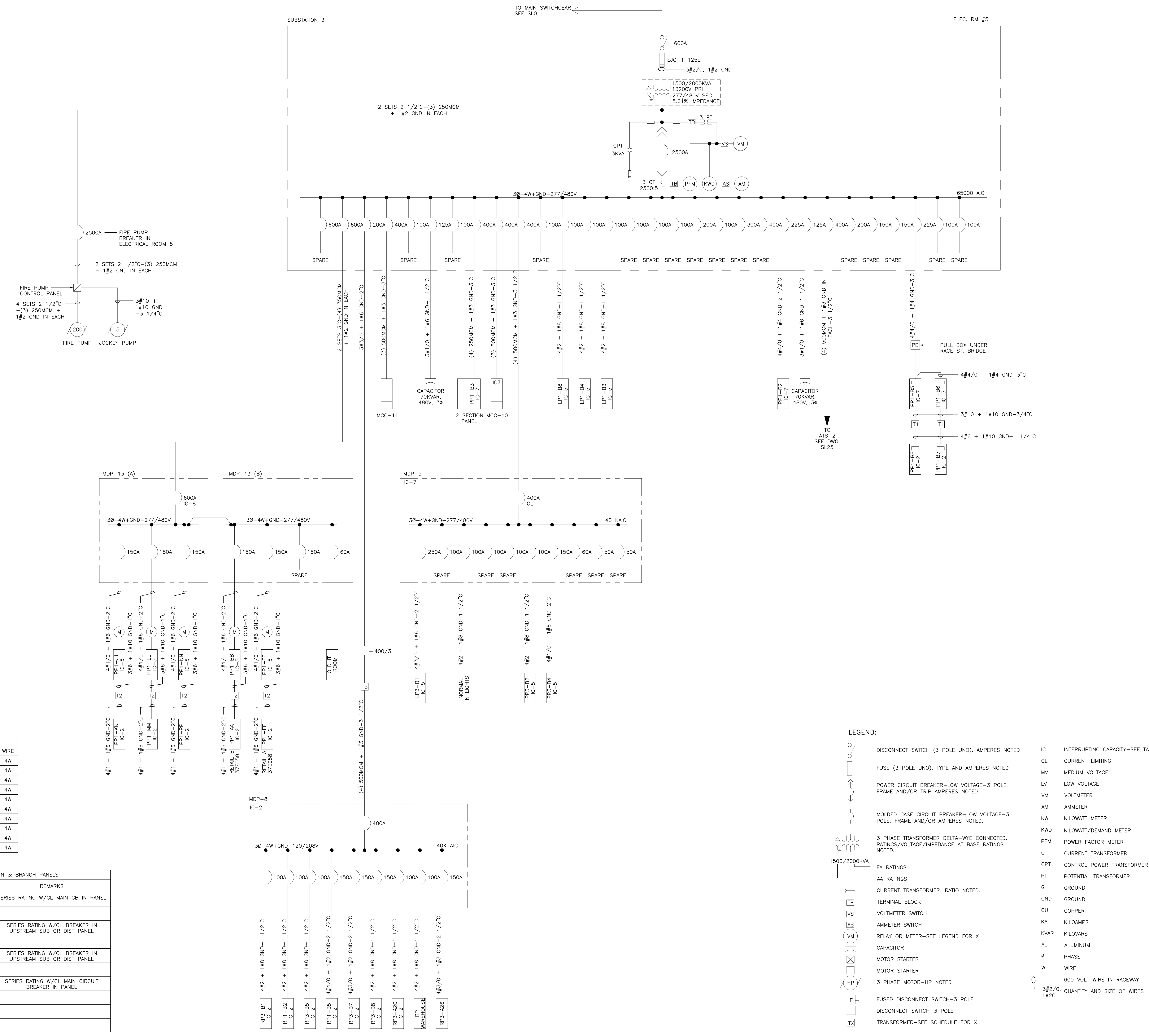
SCALE: NOT TO SCALE

DRAWN BY:

CHECKED BY:

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

SL3



TRANSFORMER SCHEDULE

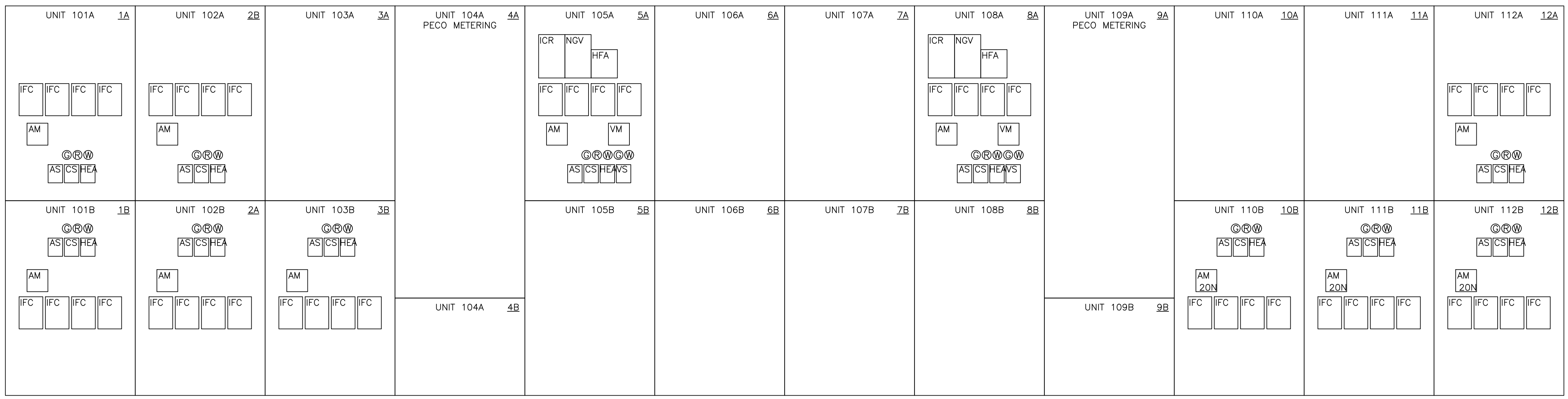
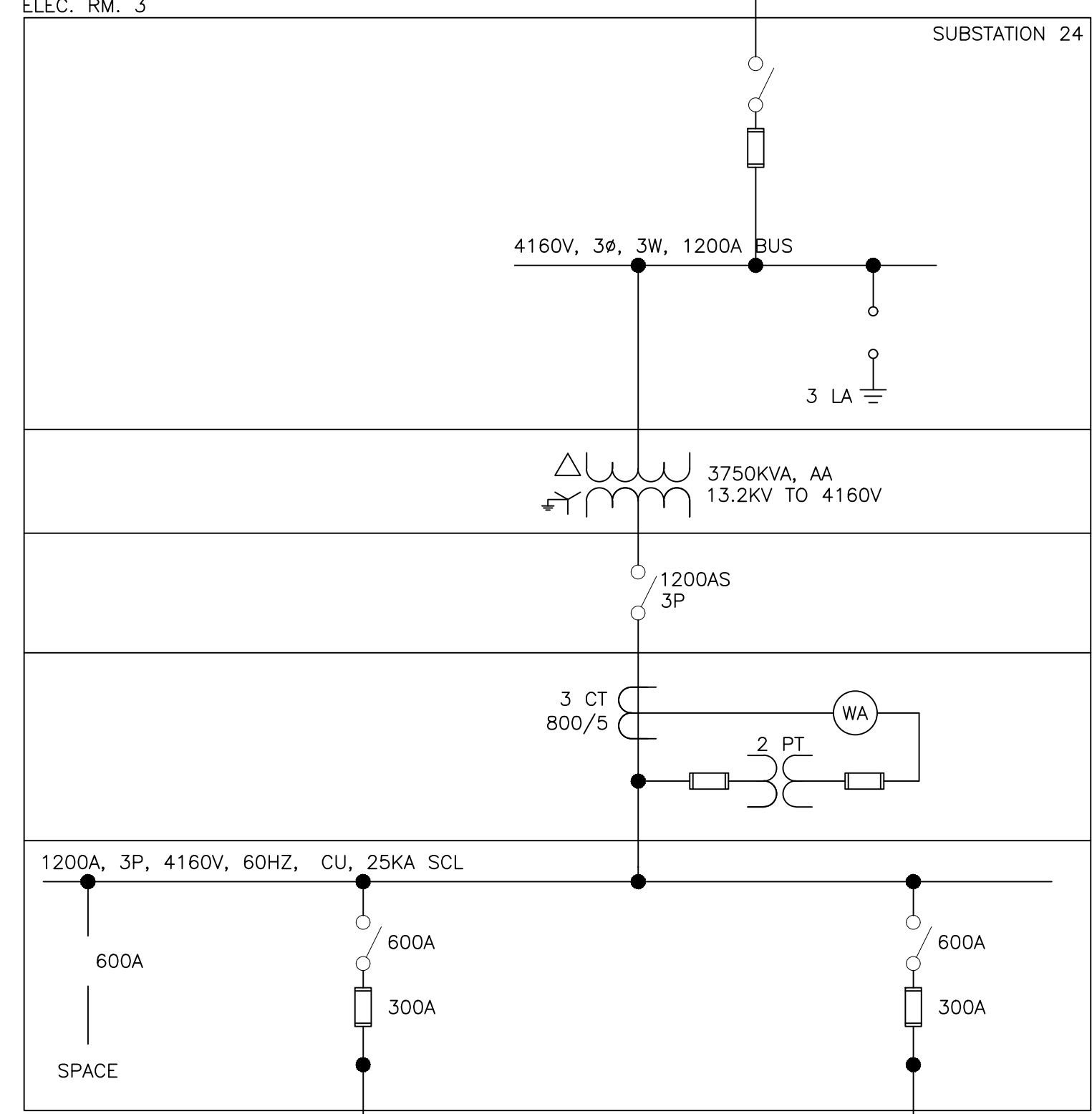
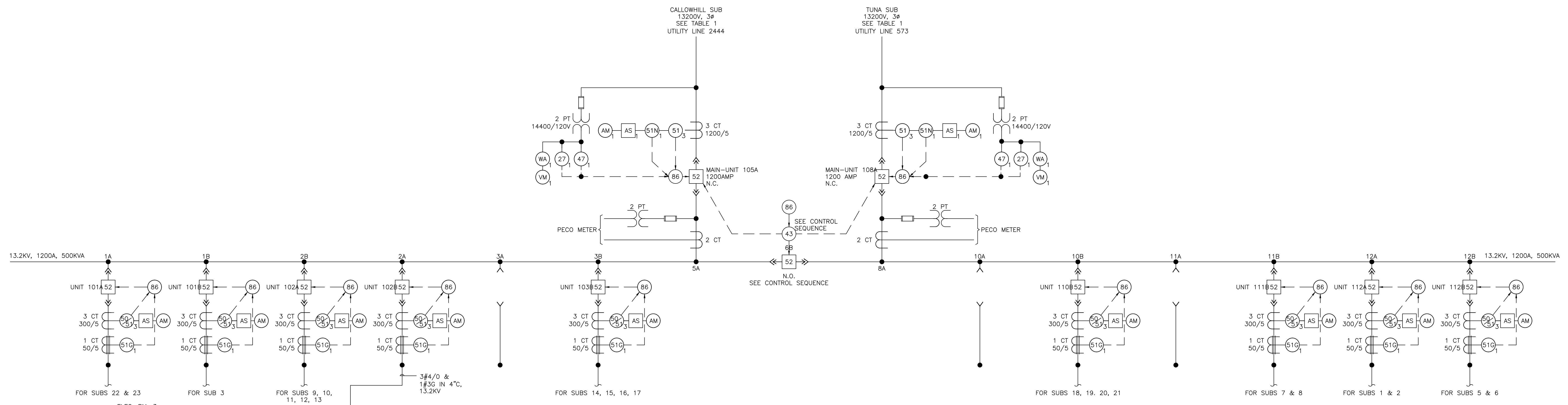
TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	φ	WIRE
T-0	6	480V DELTA/120/208V WYE	3φ	4W
T-1	15	480V DELTA/120/208V WYE	3φ	4W
T-2	30	480V DELTA/120/208V WYE	3φ	4W
T-3	45	480V DELTA/120/208V WYE	3φ	4W
T-4	75	480V DELTA/120/208V WYE	3φ	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3φ	4W
T-6	150	480V DELTA/120/208V WYE	3φ	4W
T-7	225	480V DELTA/120/208V WYE	3φ	4W
T-8	300	480V DELTA/120/208V WYE	3φ	4W
T-9	500	480V DELTA/120/208V WYE	3φ	4W

INTERRUPTING CAPACITY OF DISTRIBUTION & BRANCH PANELS

LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7		100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

LEGEND:

	DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED	IC	INTERRUPTING CAPACITY--SEE TABLE
	FUSE (3 POLE UNO), TYPE AND AMPERES NOTED	CL	CURRENT LIMITING
	POWER CIRCUIT BREAKER--LOW VOLTAGE--3 POLE FRAME AND/OR TRIP AMPERES NOTED.	MV	MEDIUM VOLTAGE
	MOLDED CASE CIRCUIT BREAKER--LOW VOLTAGE--3 POLE. FRAME AND/OR AMPERES NOTED.	LV	LOW VOLTAGE
	3 PHASE TRANSFORMER DELTA--WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.	VM	VOLTMETER
	FA RATINGS	AM	AMMETER
	AA RATINGS	KW	KILOWATT METER
	CURRENT TRANSFORMER. RATIO NOTED.	KWD	KILOWATT/DEMAND METER
	TERMINAL BLOCK	PFM	POWER FACTOR METER
	VOLTMETER SWITCH	CT	CURRENT TRANSFORMER
	AMMETER SWITCH	CPT	CONTROL POWER TRANSFORMER
	RELAY OR METER--SEE LEGEND FOR X	PT	POTENTIAL TRANSFORMER
	CAPACITOR	G	GROUND
	MOTOR STARTER	GND	GROUND
	MOTOR STARTER	CU	COPPER
	3 PHASE MOTOR--HP NOTED	KA	KILOAMPS
	FUSED DISCONNECT SWITCH--3 POLE	KVAR	KILOVARS
	DISCONNECT SWITCH--3 POLE	AL	ALUMINUM
	TRANSFORMER--SEE SCHEDULE FOR X	φ	PHASE
		W	WIRE
			600 VOLT WIRE IN RACEWAY
			3#2/0, 1#2G QUANTITY AND SIZE OF WIRES



SWITCHGEAR FRONT VIEW
NOT TO SCALE

CONTROL SEQUENCES

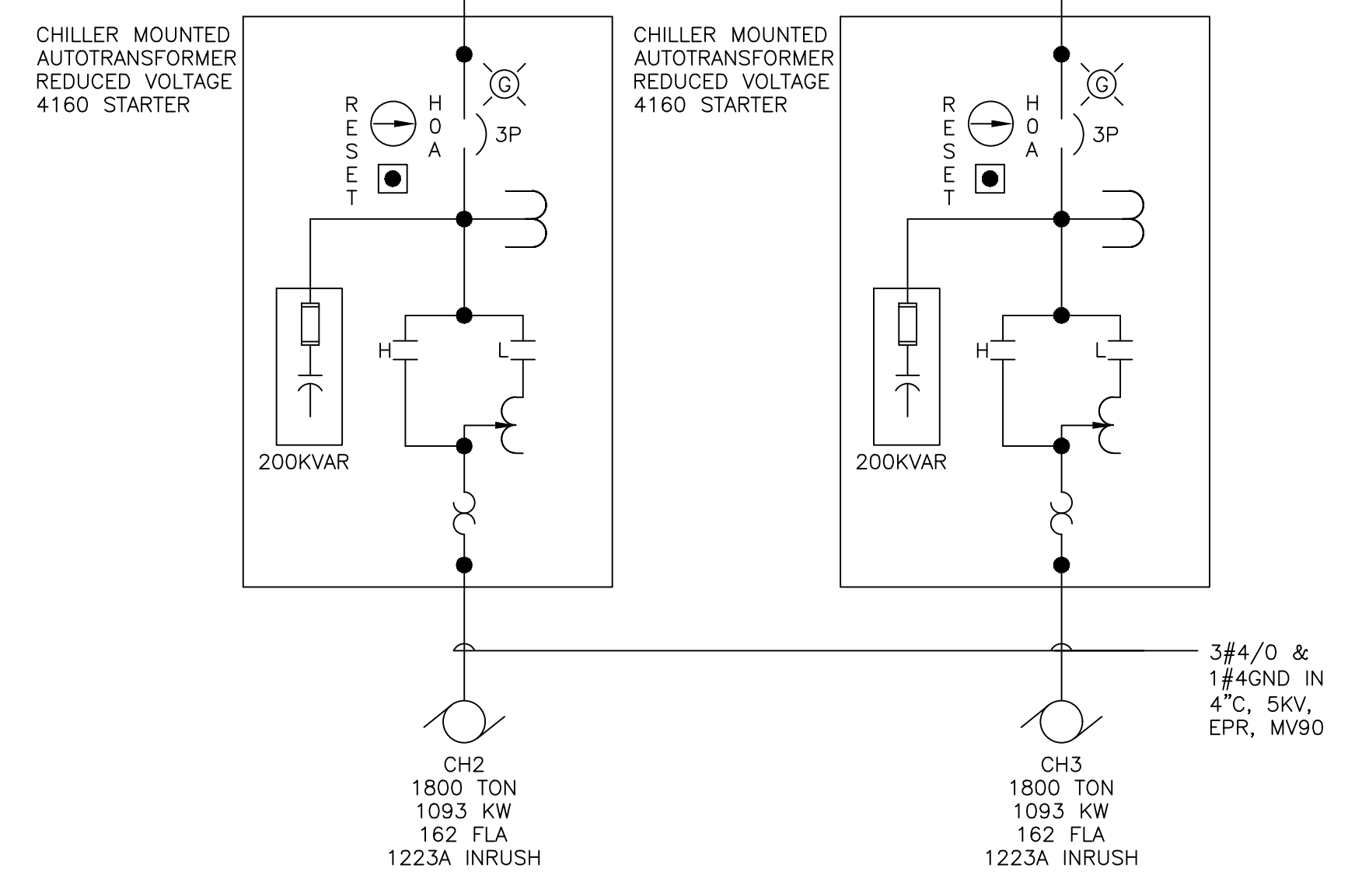
MANUAL 4.3M
THE MAINS CAN BE CLOSED. THE TIE CAN ALSO BE CLOSED, PARALLELING THE MAINS, PROVIDED THERE IS NOT AN 86 LOCKOUT. THE TIE WILL TRIP WHEN 43 SWITCH IS TURNED TO AUTO. IF THE MAINS ARE PARALLELED.

AUTO 4.3A
IF THERE IS A LOSS OF VOLTAGE ON EITHER LINE AND THERE IS VOLTAGE PRESENT ON THE OTHER LINE, A TRANSFER WILL TAKE PLACE, PROVIDING THERE IS NOT AN 86 LOCKOUT. THE MAIN BREAKER WILL TRIP AND THE TIE BREAKER WILL CLOSE. IF THERE IS A LOSS OF VOLTAGE ON THE SECOND LINE AND LINE ONE HAS VOLTAGE BACK, A TRANSFER TAKES PLACE. THE TIE REMAINS CLOSED.

TEST
A PUSH BUTTON IS AVAILABLE ON EACH INCOMING LINE TO TEST THE THROWOVER (TRANSFER) CIRCUITS BY SIMULATING A LOSS OF VOLTAGE ON THE SELECTED LINE.

	LINE #2444-CALLOWHILL SUB	LINE #573-TUNA SUB
MAX FAULT AMPS @ 13.8KV	6300 SYM AMPS X/R = 20.0	9000 SYM AMPS X/R = 25.0
3 PHASE AMPS @ 13.8KV	5086 SYM AMPS X/R = 9.3	5018 SYM AMPS X/R = 3.2
1 PHASE AMPS @ 13.8KV	4922 SYM AMPS X/R = 7.2	4213 SYM AMPS X/R = 2.5
APPROX. LINE LENGTH	3319 FEET	14255 FEET

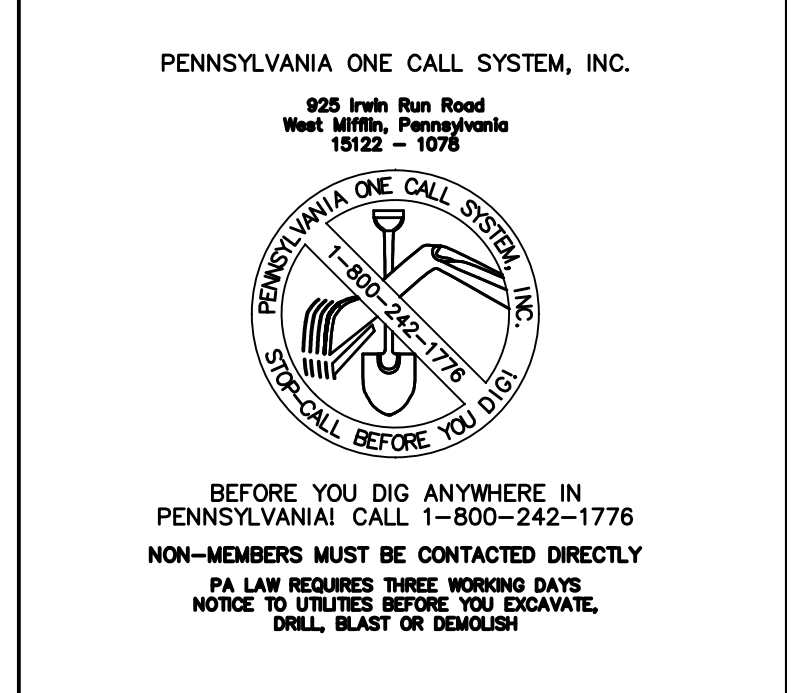
TABLE 1



LEGEND:

- ⏏ DRAW-OUT CIRCUIT BREAKER-MEDIUM VOLTAGE 1200A, 3 POLE
- ⏏ DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
- ⏏ FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
- ⏏ MOLDED CASE CIRCUIT BREAKER-LOW VOLTAGE-3 POLE. FRAME AND/OR TRIP AMPERES NOTED.
- ⏏ SINGLE PHASE TRANSFORMER
- ⏏ CURRENT TRANSFORMER. RATIO NOTED.
- ⏏ ZERO SEQUENCE TRANSFORMER
- ⏏ VOLTMETER SWITCH
- ⏏ AMMETER SWITCH
- ⏏ RELAY OR METER-SEE LEGEND FOR X
- ⏏ CAPACITOR
- ⏏ 3 PHASE MOTOR-HP NOTED
- ⏏ MEDIUM VOLTAGE
- ⏏ LOW VOLTAGE
- ⏏ VOLTMETER
- ⏏ AMMETER
- ⏏ KILOWATT METER
- ⏏ KILOWATT/DEMAND METER
- ⏏ POWER FACTOR METER
- ⏏ CURRENT TRANSFORMER
- ⏏ CONTROL POWER TRANSFORMER
- ⏏ POTENTIAL TRANSFORMER
- ⏏ GROUND
- ⏏ GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOWARS
- AL ALUMINUM
- Φ PHASE
- W WIRE
- IFC OVERCURRENT RELAY
- CS CONTROL SWITCH (OPEN/CLOSE/TRIP)
- HEA 86 RELAY
- Ⓢ GREEN LIGHT
- Ⓢ RED LIGHT
- Ⓢ WHITE LIGHT
- Ⓢ 600 VOLT WIRE IN RACEWAY
- 3#2/0 1#2G QUANTITY AND SIZE OF WIRES
- 27 UNDERVOLTAGE RELAY
- 32 DIRECTIONAL POWER RELAY
- 46 REVERSE PHASE BALANCE CURRENT RELAY
- 47 PHASE SEQUENCE VOLTAGE RELAY
- 50 INSTANTANEOUS OVERCURRENT RELAY
- 51 AC TIME OVERCURRENT RELAY
- 52 AC CIRCUIT BREAKER
- 55 POWER FACTOR RELAY
- 59 OVERVOLTAGE RELAY
- 60 VOLTAGE BALANCE RELAY
- 61 CURRENT BALANCE RELAY
- 64 GROUND DETECTOR RELAY
- 67 AC DIRECTIONAL OVERCURRENT RELAY
- 81 FREQUENCY RELAY
- 83 AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY
- 86 LOCKOUT RELAY
- 50G INSTANTANEOUS OVERCURRENT, GROUND
- 50/51 INSTANTANEOUS & TIMED OVERCURRENT
- 51N TIMED OVERCURRENT, NEUTRAL

REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
1	4/24/24	RE-ISSUED



PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL
DRAWING REPRESENTS THE POWER SYSTEM AS OBSERVED DURING FIELD SURVEYS FOR THE POWER SYSTEM STUDY PROJECT

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE:
BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
MAIN MV SERVICE ENTRANCE
SWITCHGEAR & MV SUB 24

PACC PROJECT NO.: XX-XX-XXXX-XX DRAWING NO.:

CONSULTANT PROJECT NO.: E40005

DATE: 09-24-2017

SCALE: NOT TO SCALE

SL4

CHECKED BY:

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE
2	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 First Run Road
 West Chester, Pennsylvania
 19380-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU DIG. DATE, DEPTH, DIAL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL: SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL
 DRAWING REPRESENTS THE POWER SYSTEM AS OBSERVED DURING FIELD SURVEYS FOR THE POWER SYSTEM STUDY PROJECT

DPP PROJECT NUMBER: XX-XX-XXXX-XX
 PROJECT TITLE:

POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

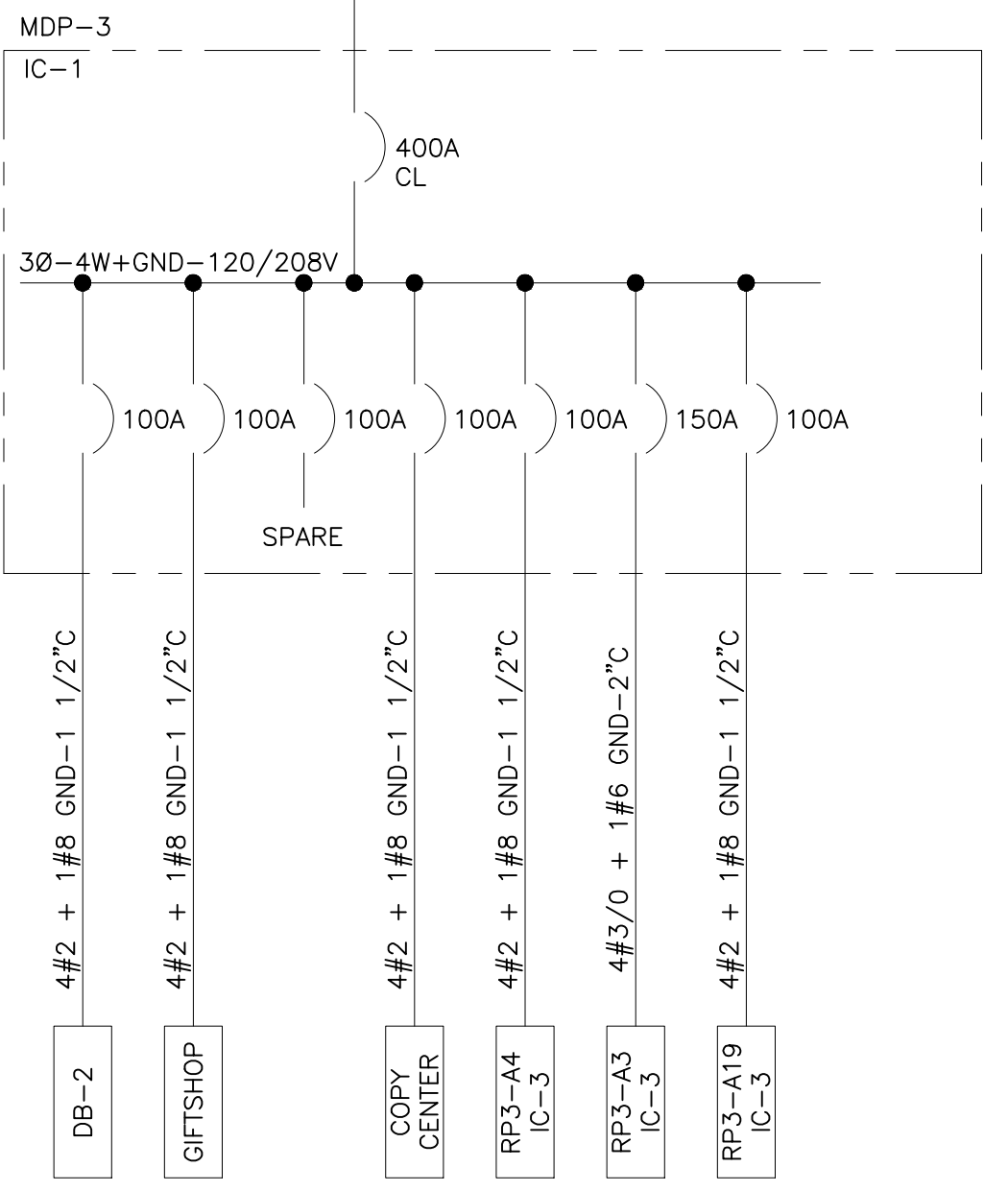
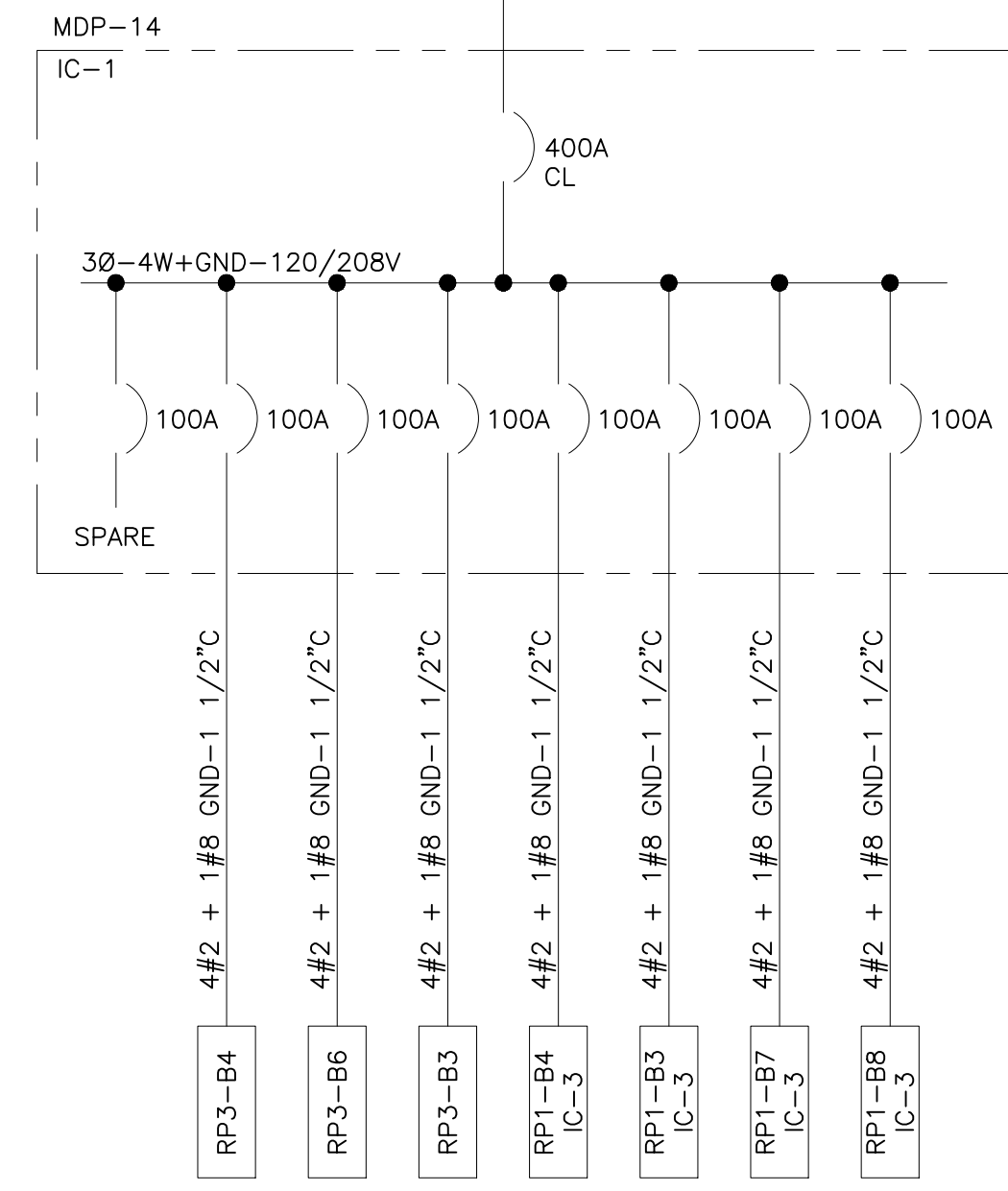
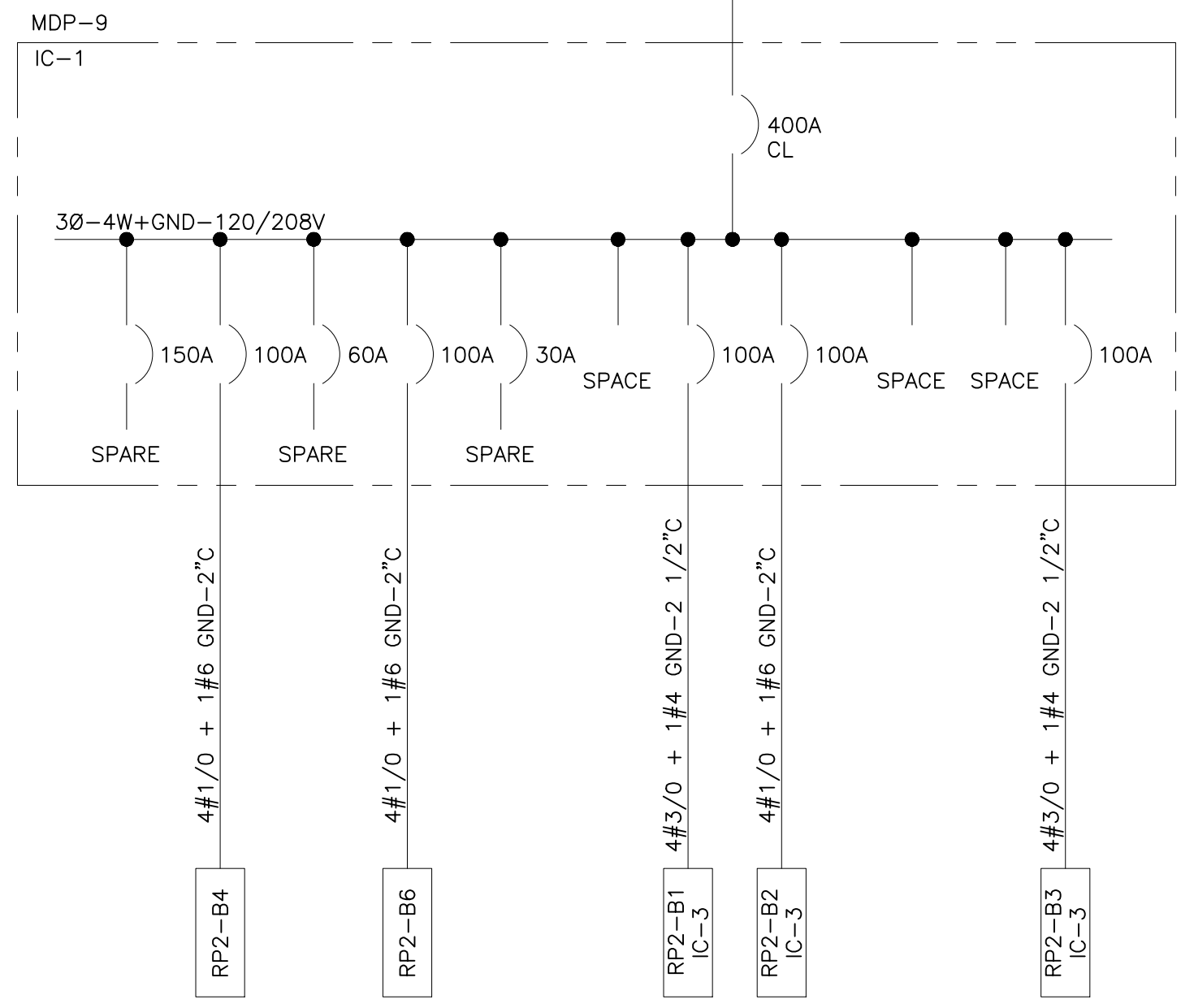
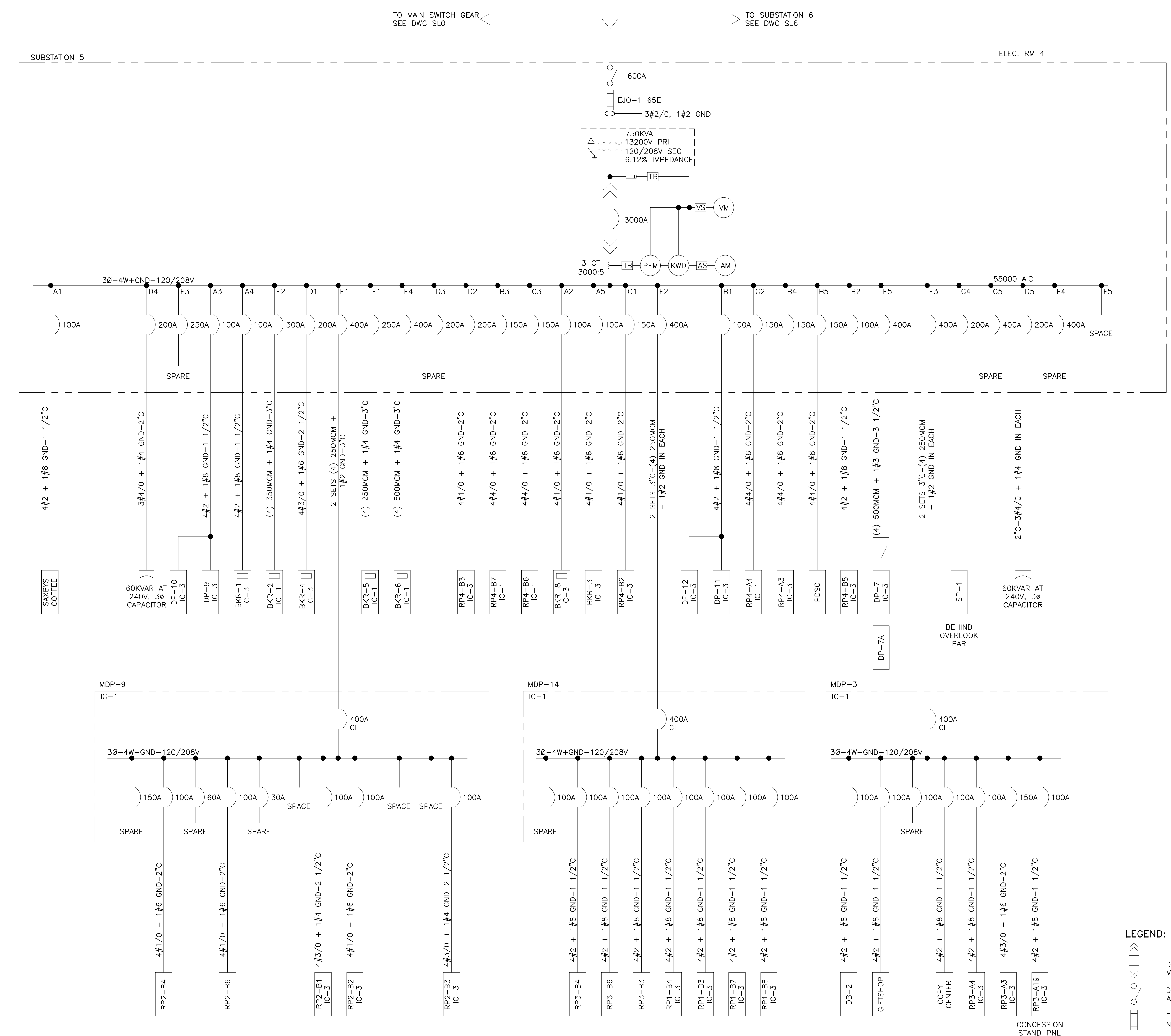
PHASE:
 BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
 UNIT SUBSTATION 5
 ELECTRICAL ROOM 4

PAQC PROJECT NO.: XX-XX-XXXX-XX
 CONSULTANT PROJECT NO.: E40006
 DATE: 09-24-2017

SCALE: NOT TO SCALE
 DRAWN BY:
 CHECKED BY:

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.



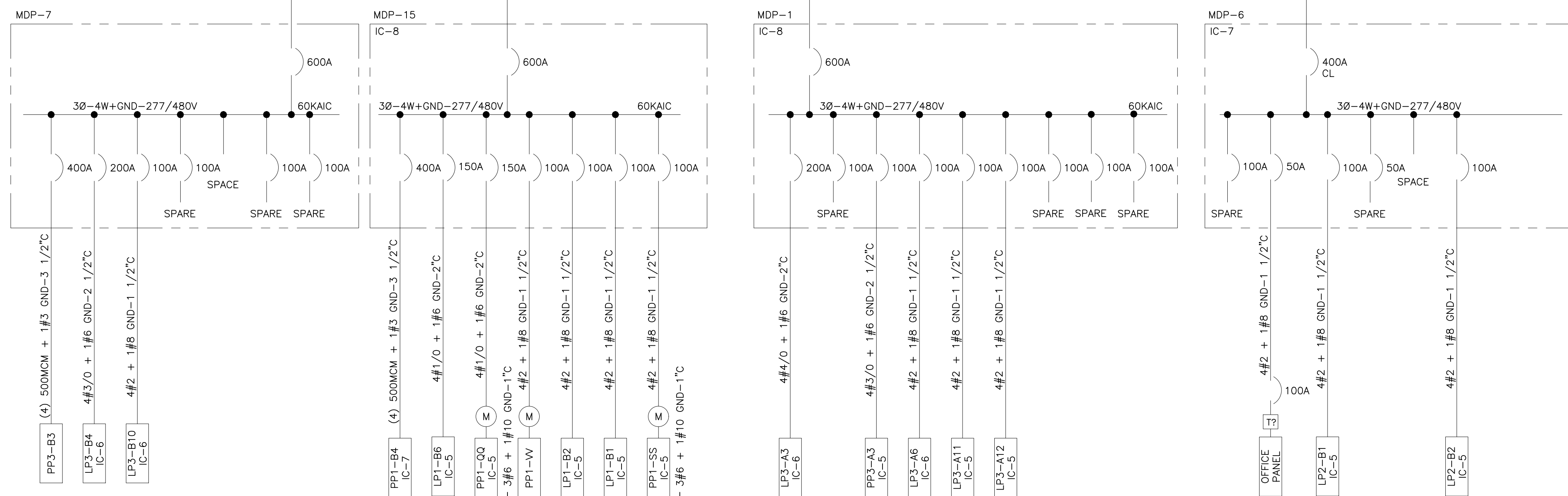
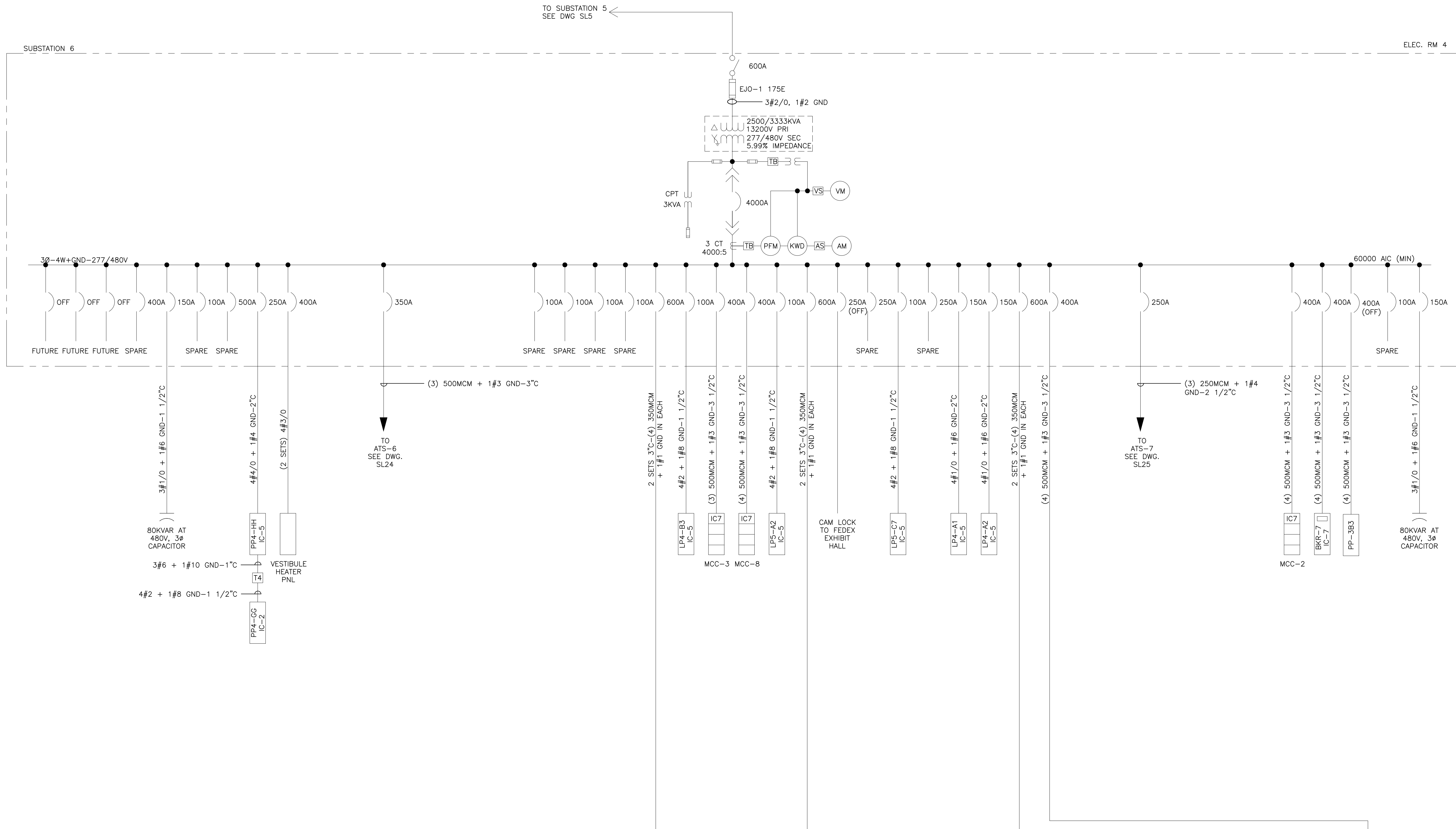
LEGEND:

- DRAW-OUT CIRCUIT BREAKER—MEDIUM VOLTAGE 1200A, 3 POLE
- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
- FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE, FRAME AND/OR TRIP AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- SINGLE PHASE TRANSFORMER
- CURRENT TRANSFORMER, RATIO NOTED.
- ZERO SEQUENCE TRANSFORMER
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- CAPACITOR
- 3 PHASE MOTOR—HP NOTED
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOVARS
- AL ALUMINUM
- Ø PHASE
- W WIRE
- IFC OVERCURRENT RELAY
- CS CONTROL SWITCH (OPEN/CLOSE/TRIP)
- HEA B6 RELAY
- Ⓢ GREEN LIGHT
- Ⓡ RED LIGHT
- Ⓢ WHITE LIGHT
- 3#2/0, 1#2#6 QUANTITY AND SIZE OF WIRES

LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7		100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	Ø	WIRE
T-0	6	480V DELTA/120/208V WYE	3Ø	4W
T-1	15	480V DELTA/120/208V WYE	3Ø	4W
T-2	30	480V DELTA/120/208V WYE	3Ø	4W
T-3	45	480V DELTA/120/208V WYE	3Ø	4W
T-4	75	480V DELTA/120/208V WYE	3Ø	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3Ø	4W
T-6	150	480V DELTA/120/208V WYE	3Ø	4W
T-7	225	480V DELTA/120/208V WYE	3Ø	4W
T-8	300	480V DELTA/120/208V WYE	3Ø	4W
T-9	500	480V DELTA/120/208V WYE	3Ø	4W

SL5



INTERRUPTING CAPACITY OF DISTRIBUTION & BRANCH PANELS			
LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7		100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

TRANSFORMER SCHEDULE				
TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	#	WIRE
T-0	6	480V DELTA/120/208V WYE	3#	4W
T-1	15	480V DELTA/120/208V WYE	3#	4W
T-2	30	480V DELTA/120/208V WYE	3#	4W
T-3	45	480V DELTA/120/208V WYE	3#	4W
T-4	75	480V DELTA/120/208V WYE	3#	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3#	4W
T-6	150	480V DELTA/120/208V WYE	3#	4W
T-7	225	480V DELTA/120/208V WYE	3#	4W
T-8	300	480V DELTA/120/208V WYE	3#	4W
T-9	500	480V DELTA/120/208V WYE	3#	4W

- LEGEND:**
- DRAW-OUT CIRCUIT BREAKER-MEDIUM VOLTAGE 1200A, 3 POLE
 - DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
 - FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
 - MOLDED CASE CIRCUIT BREAKER-LOW VOLTAGE-3 POLE. FRAME AND/OR TRIP AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - SINGLE PHASE TRANSFORMER
 - CURRENT TRANSFORMER. RATIO NOTED.
 - ZERO SEQUENCE TRANSFORMER
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER-SEE LEGEND FOR X
 - CAPACITOR
 - 3 PHASE MOTOR-HP NOTED
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVAR
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE
 - IFC OVERCURRENT RELAY
 - CS CONTROL SWITCH (OPEN/CLOSE/TRIP)
 - HEA 86 RELAY
 - Ⓢ GREEN LIGHT
 - Ⓢ RED LIGHT
 - Ⓢ WHITE LIGHT
 - Ⓢ 600 VOLT WIRE IN RACEWAY
 - Ⓢ 3#2/0, 1#2G QUANTITY AND SIZE OF WIRES

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/27/18	POWER FACTOR UPGRADE
2	4/30/21	ATS LOADS MOVED
3	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 Erie Plaz Road
 West Chester, Pennsylvania
 19380-1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS
 NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
 DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL
 DRAWING REPRESENTS THE POWER SYSTEM AS OBSERVED DURING FIELD SURVEYS FOR THE POWER SYSTEM STUDY PROJECT

DPP PROJECT NUMBER: XX-XX-XXXX-XX
 PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

PHASE
 BASE AND ALTERNATE 2
 UNIT SUBSTATION 6
 ELECTRICAL ROOM 4

DRAWING TITLE
 ATS UPGRADE PROJECT - PHASE 1
 UNIT SUBSTATION 6
 ELECTRICAL ROOM 4

DATE: XXX
 SCALE: XXX
 DRAWN BY: NOT TO SCALE
 CHECKED BY: SL6

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

REVISIONS

ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE
2	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 Erie Plaz Road
 West Chester, Pennsylvania
 19380-1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL: SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 7 ELECTRICAL ROOM 6

PAQC PROJECT NO.: XX-XX-XXXX-XX

CONSULTANT PROJECT NO.: E40006

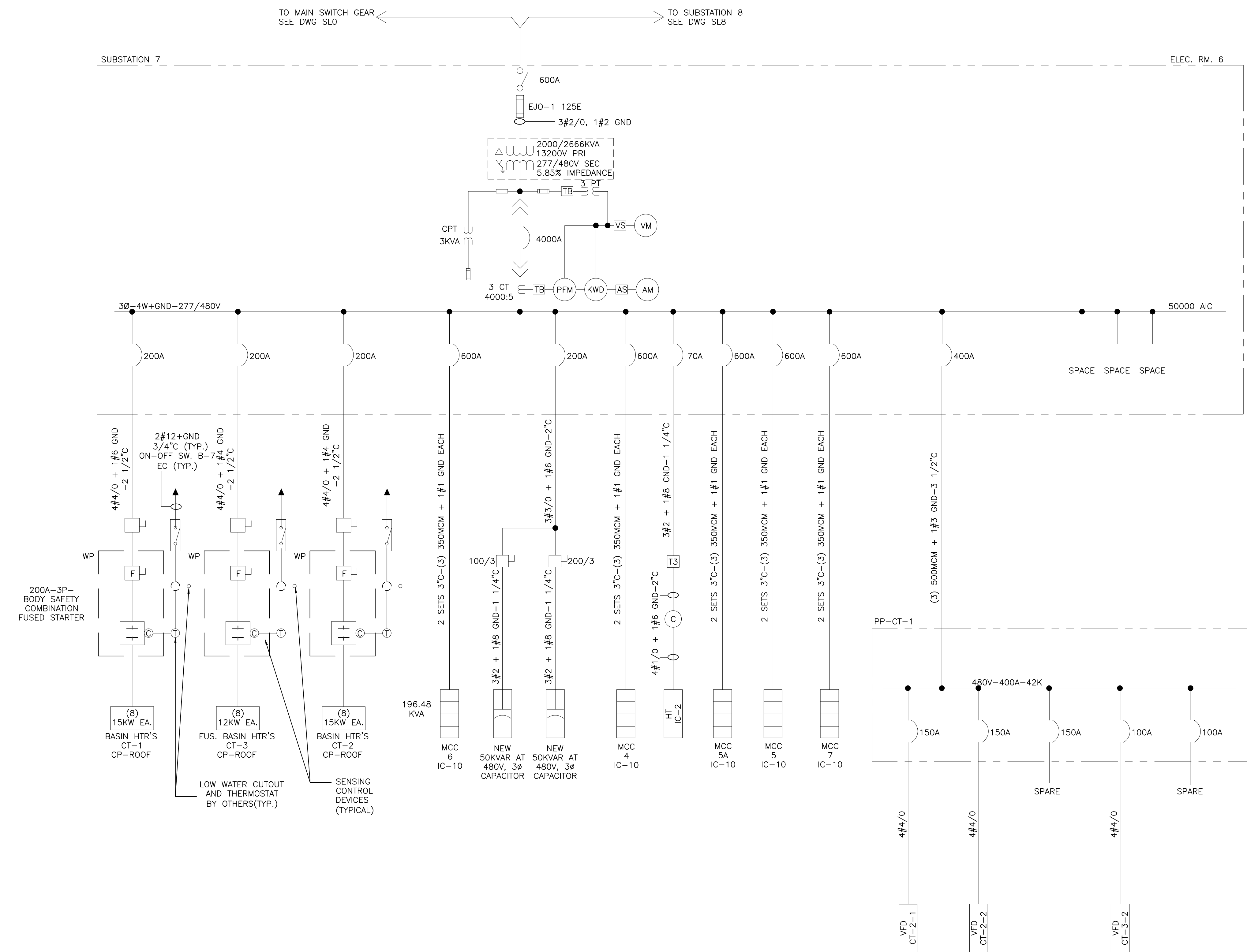
DATE: 09-24-2017

SCALE: NOT TO SCALE

DRAWN BY:

CHECKED BY:

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.



LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1	100	100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3	100	100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5	100	100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7	100	100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1	100	100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3	100	100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5	100	100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7	100	100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

SL7

REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE
2	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 Erie Plaz Road
 West Chester, Pennsylvania
 19380-1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL: SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

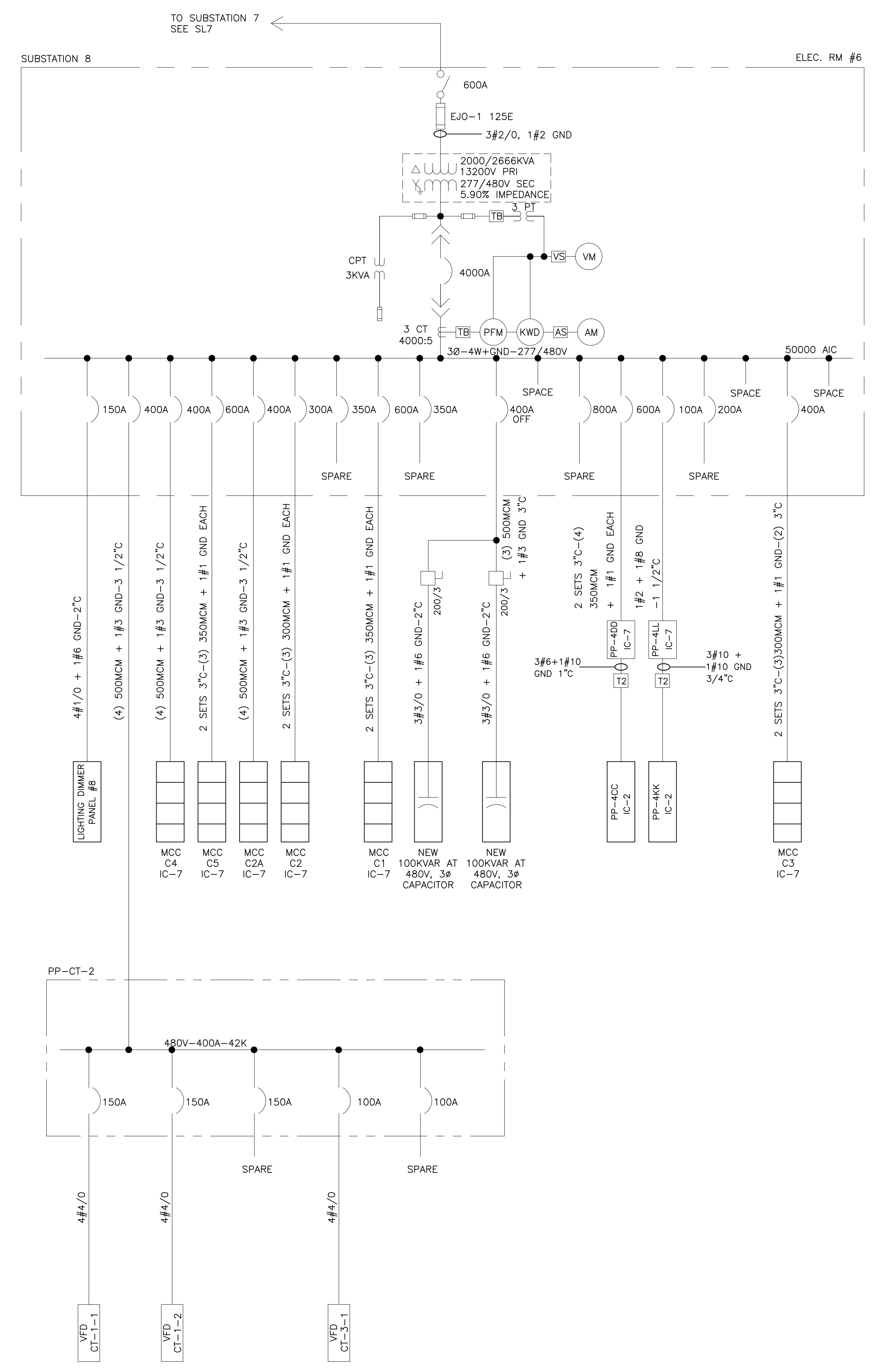
DRAWING TITLE: UNIT SUBSTATION 8
ELECTRICAL ROOM 6

PA/C PROJECT NO.: XX-XX-XXXX-XX DRAWING NO.:
CONSULTANT PROJECT NO.: E40006

DATE: 09-24-2017
SCALE: NOT TO SCALE

DRAWN BY:
CHECKED BY:

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

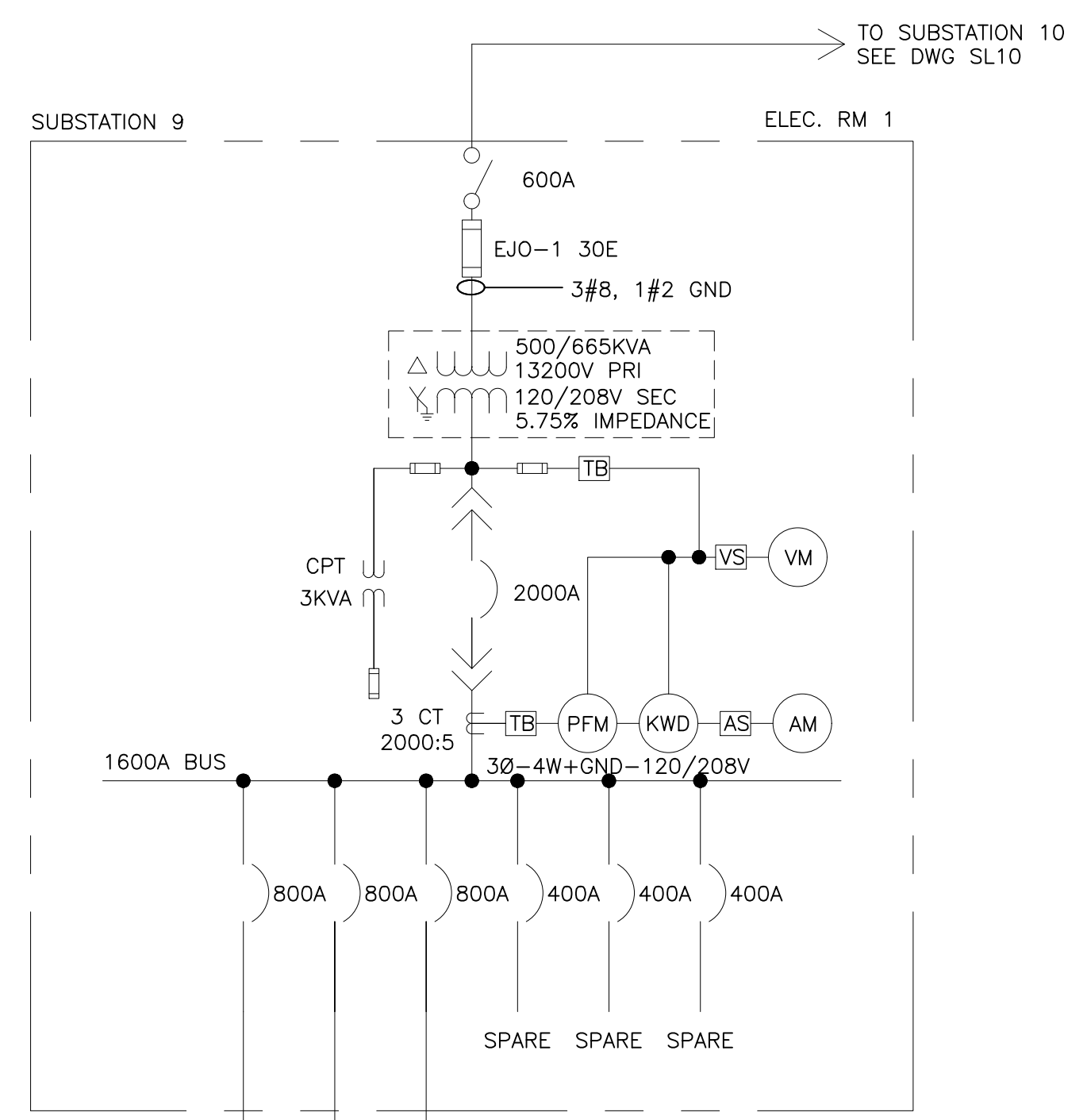


TRANSFORMER SCHEDULE				
TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	Ø	WIRE
T-0	6	480V DELTA/120/208V WYE	3Ø	4W
T-1	15	480V DELTA/120/208V WYE	3Ø	4W
T-2	30	480V DELTA/120/208V WYE	3Ø	4W
T-3	45	480V DELTA/120/208V WYE	3Ø	4W
T-4	75	480V DELTA/120/208V WYE	3Ø	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3Ø	4W
T-6	150	480V DELTA/120/208V WYE	3Ø	4W
T-7	225	480V DELTA/120/208V WYE	3Ø	4W
T-8	300	480V DELTA/120/208V WYE	3Ø	4W
T-9	500	480V DELTA/120/208V WYE	3Ø	4W

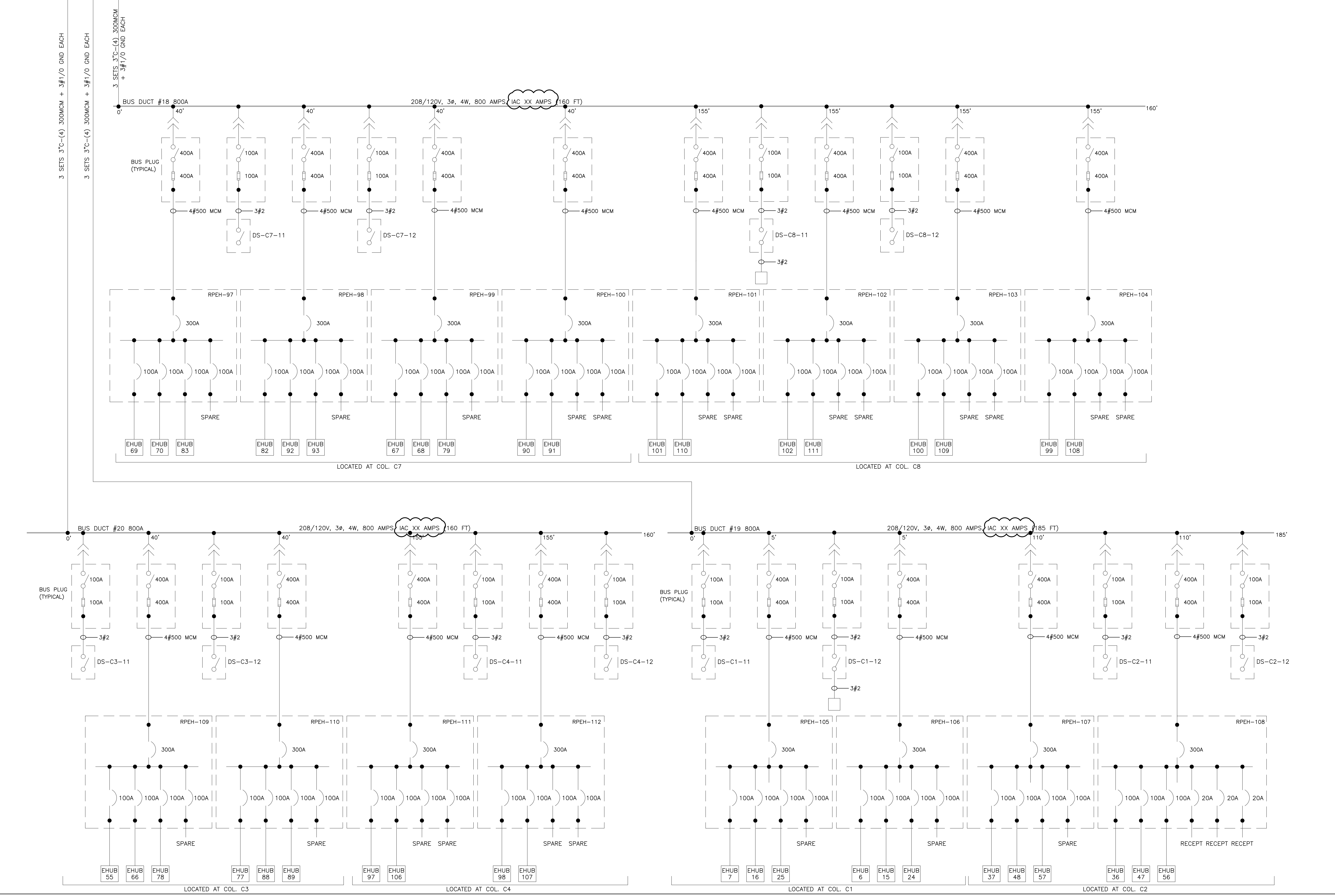
INTERRUPTING CAPACITY OF DISTRIBUTION & BRANCH PANELS			
LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7		100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
 - FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER. RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - CAPACITOR
 - MOTOR STARTER
 - MOTOR STARTER
 - 3 PHASE MOTOR—HP NOTED
 - FUSED DISCONNECT SWITCH—3 POLE
 - DISCONNECT SWITCH—3 POLE
 - TRANSFORMER—SEE SCHEDULE FOR X
 - IC INTERRUPTING CAPACITY—SEE TABLE
 - CL CURRENT LIMITING
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - NG GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVARS
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES

SL8



- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
 - FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE, FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER, RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KV KILOVOLTS
 - AL ALUMINUM
 - # PHASE
 - W WIRE



REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
625 Erie Plaz Road
West Chester, Pennsylvania
19380-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX
PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

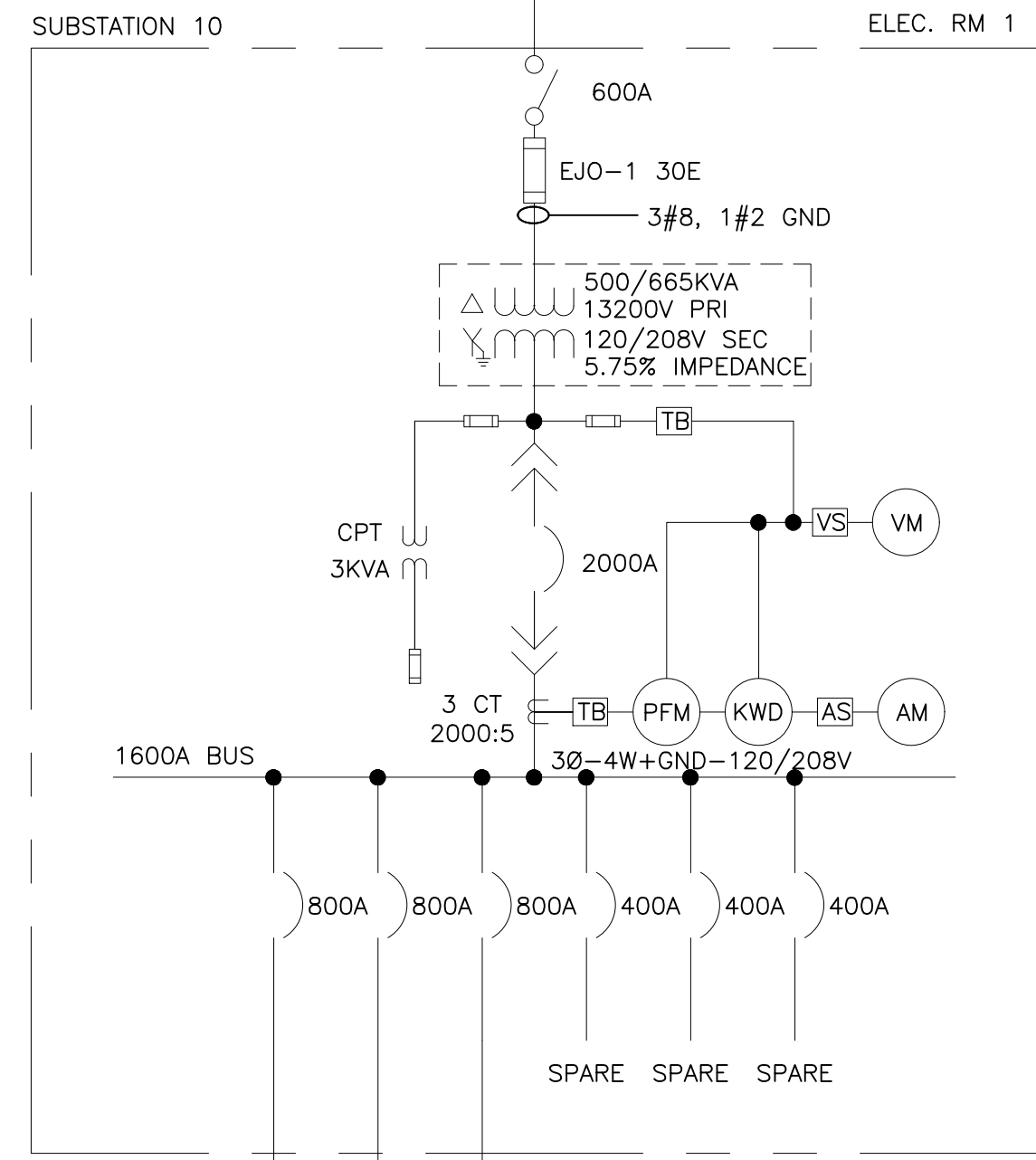
PHASE: BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 9 ELECTRICAL ROOM 1

PAQC PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:
NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

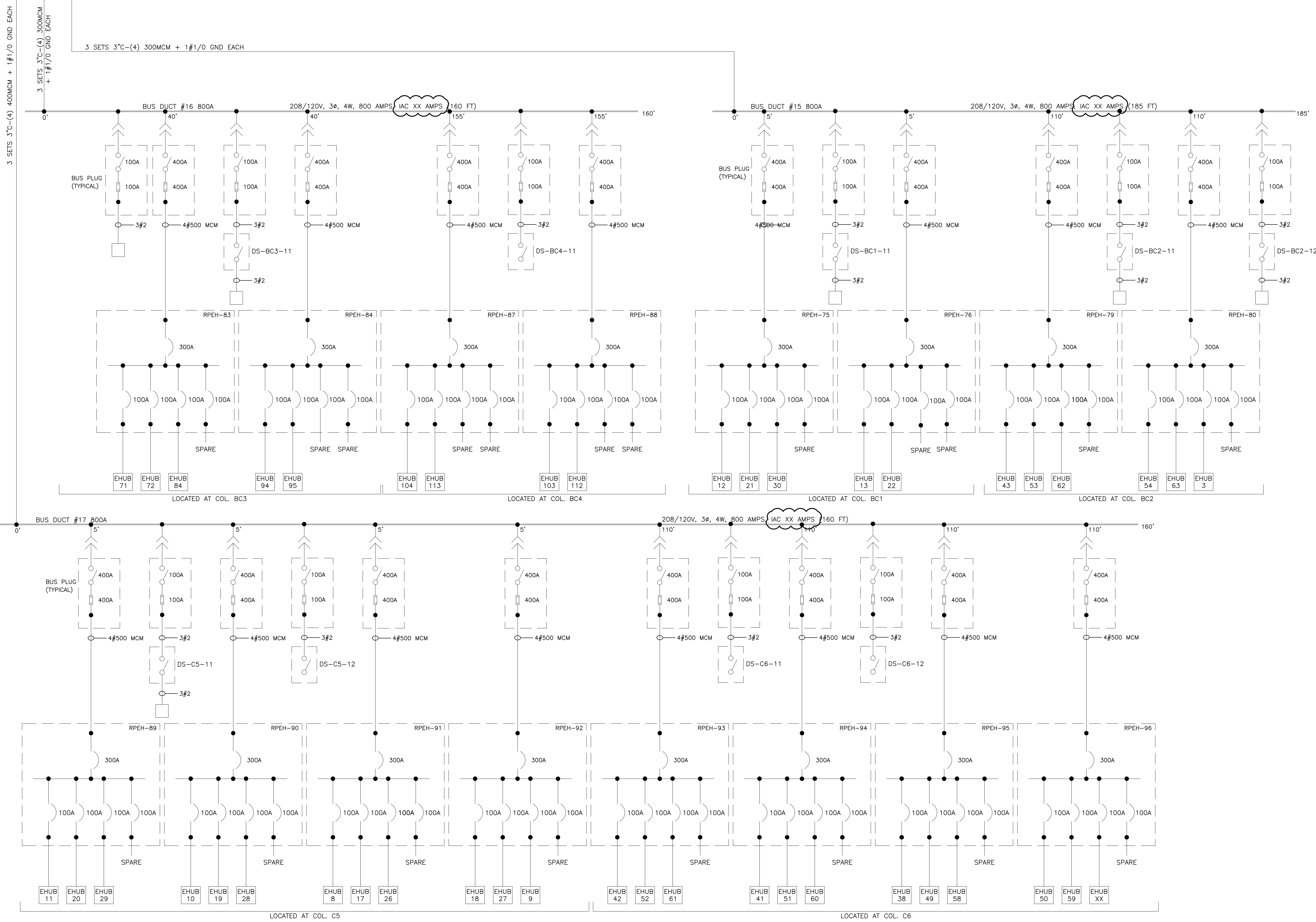
SL9

TO SUBSTATION 9 SEE DWG SL9
TO SUBSTATION 11 SEE DWG SL11



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
- FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER. RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOVAR
- AL ALUMINUM
- Ø PHASE
- W WIRE



REVISIONS

ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
625 Erie Plaz Road
West Chester, Pennsylvania
19380-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE:
BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
UNIT SUBSTATION 10
ELECTRICAL ROOM 1

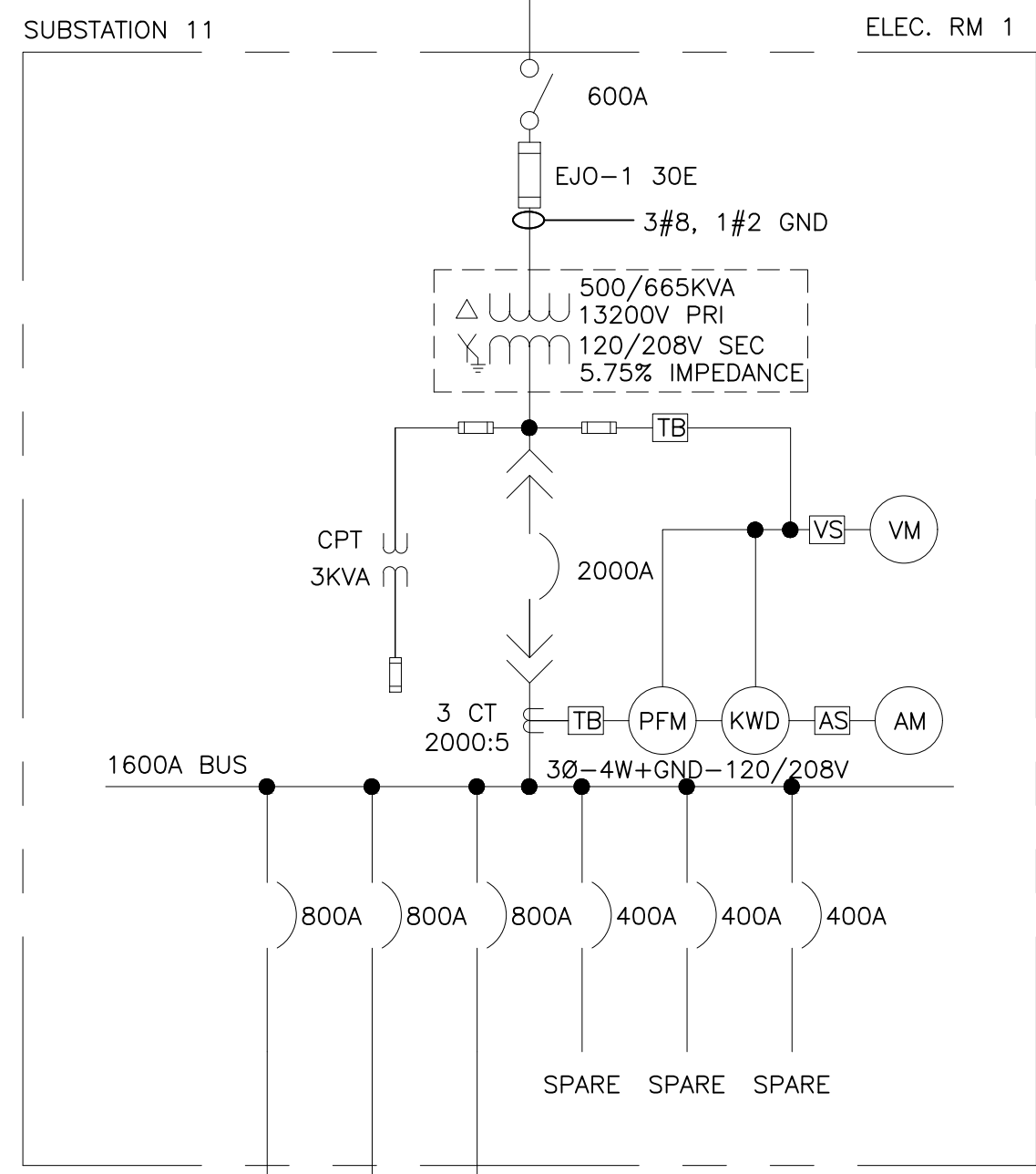
PACC PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL10

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

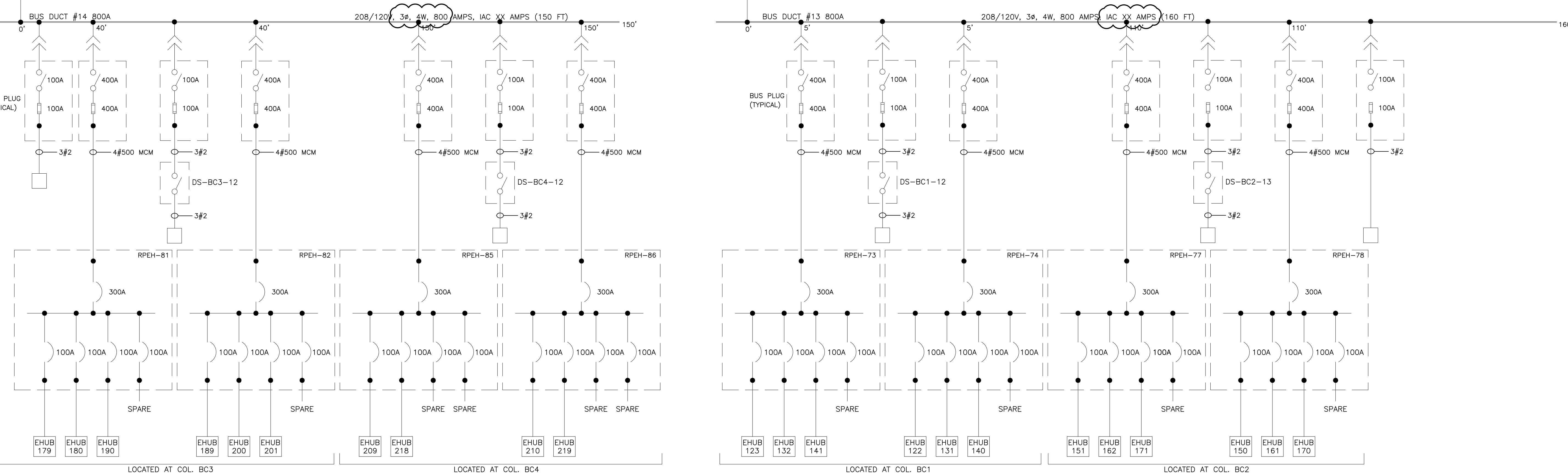
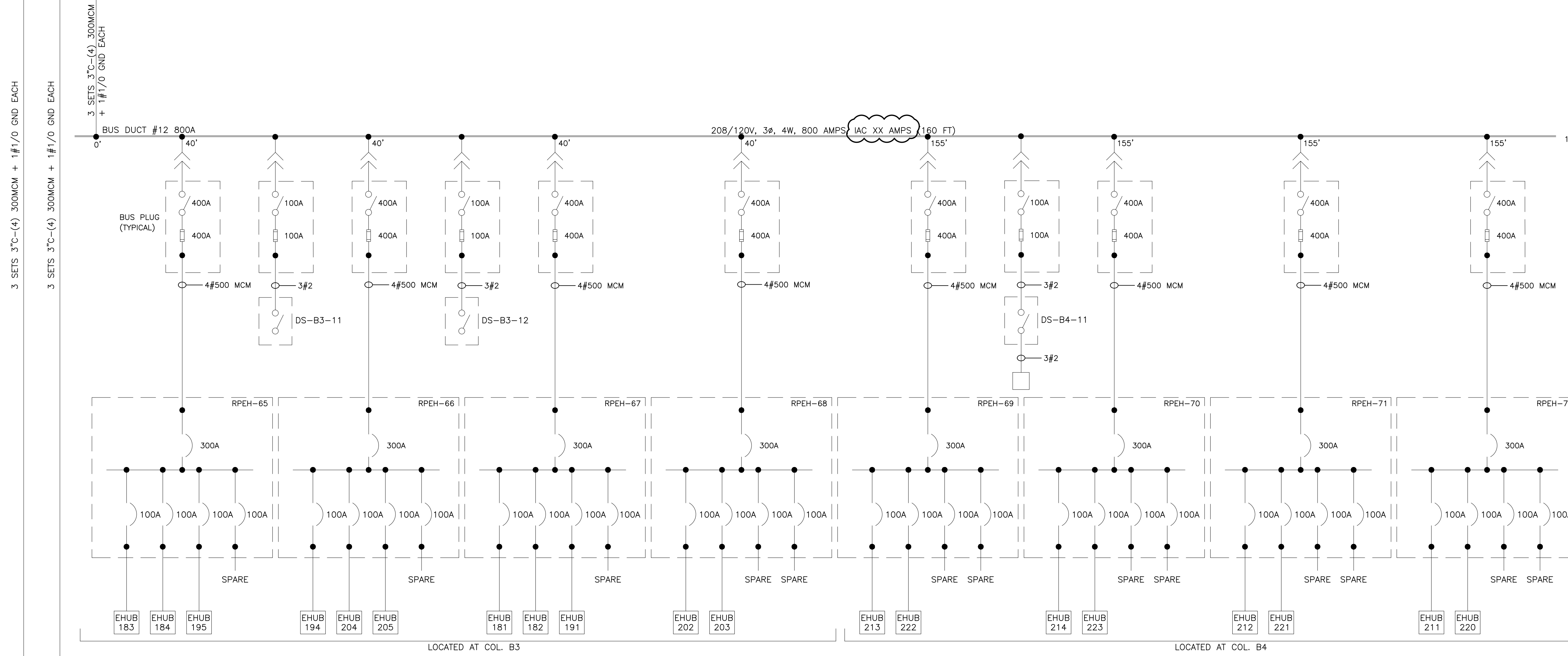
TO SUBSTATION 10
SEE DWG SL10

TO SUBSTATION 12
SEE SL12



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
- FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER-LOW VOLTAGE-3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER-LOW VOLTAGE-3 POLE. FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER. RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER-SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOVARS
- AL ALUMINUM
- # PHASE
- W WIRE



REVISIONS

ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
633 Erie River Road
West Chester, Pennsylvania
19380-1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU DIG. WASTE, DRILL, BLAST OR DEMOLISH
NON-MEMBERS MUST BE CONTACTED DIRECTLY

PA ONE-CALL NUMBER (IF FOR DESIGN ONLY): XXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE:
BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
UNIT SUBSTATION 11
ELECTRICAL ROOM 1

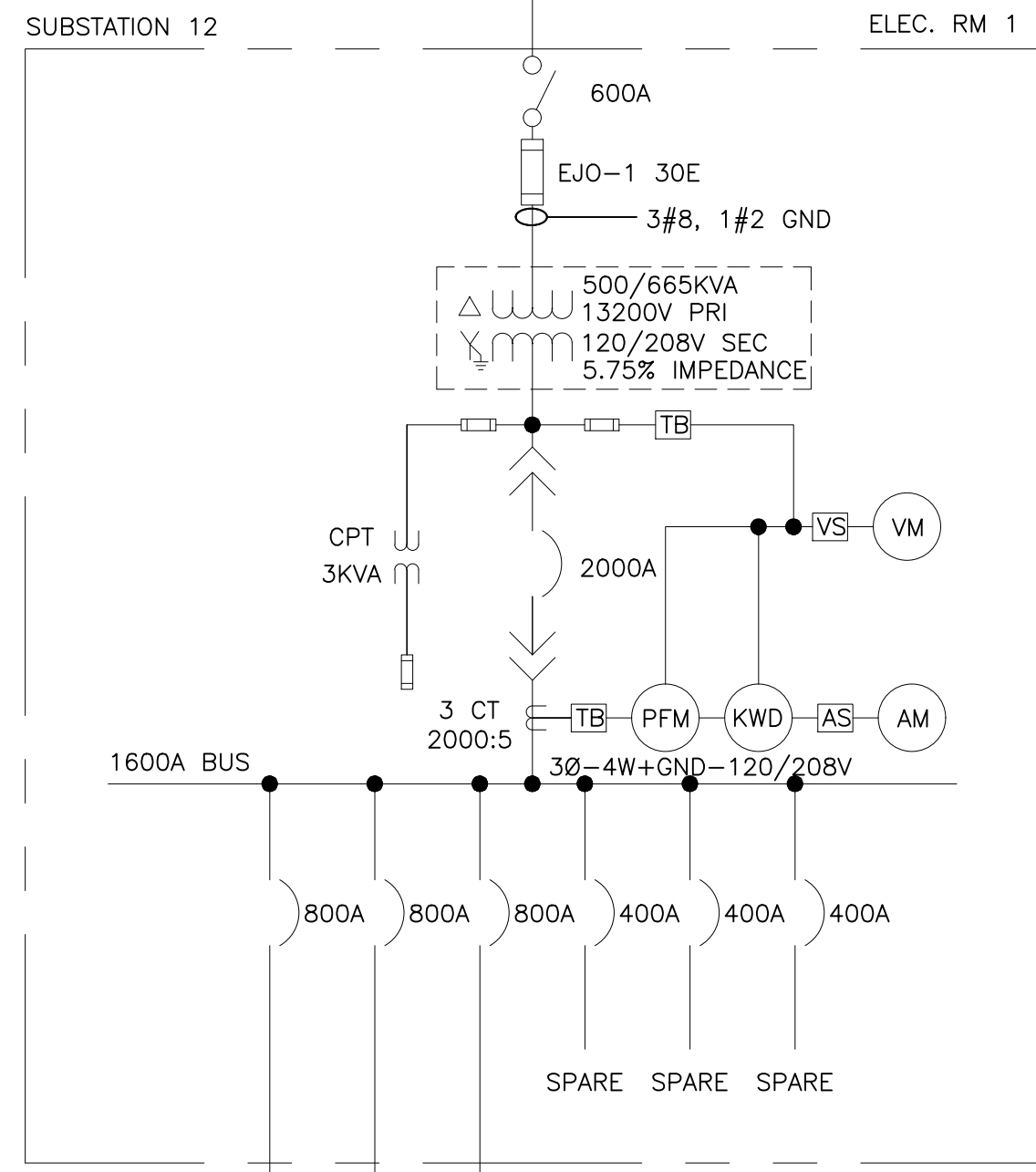
PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL11

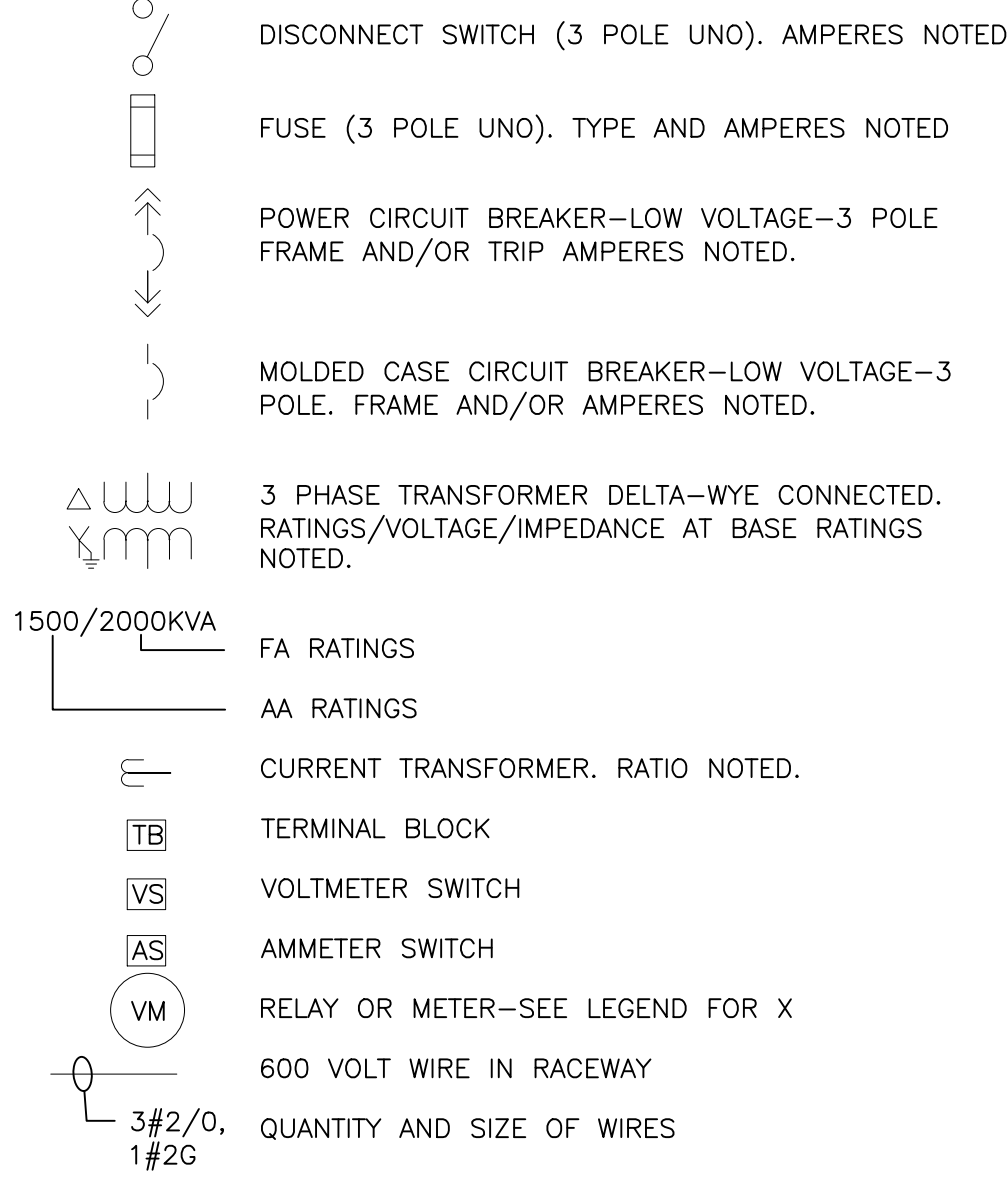
NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

TO SUBSTATION 11
SEE SL11

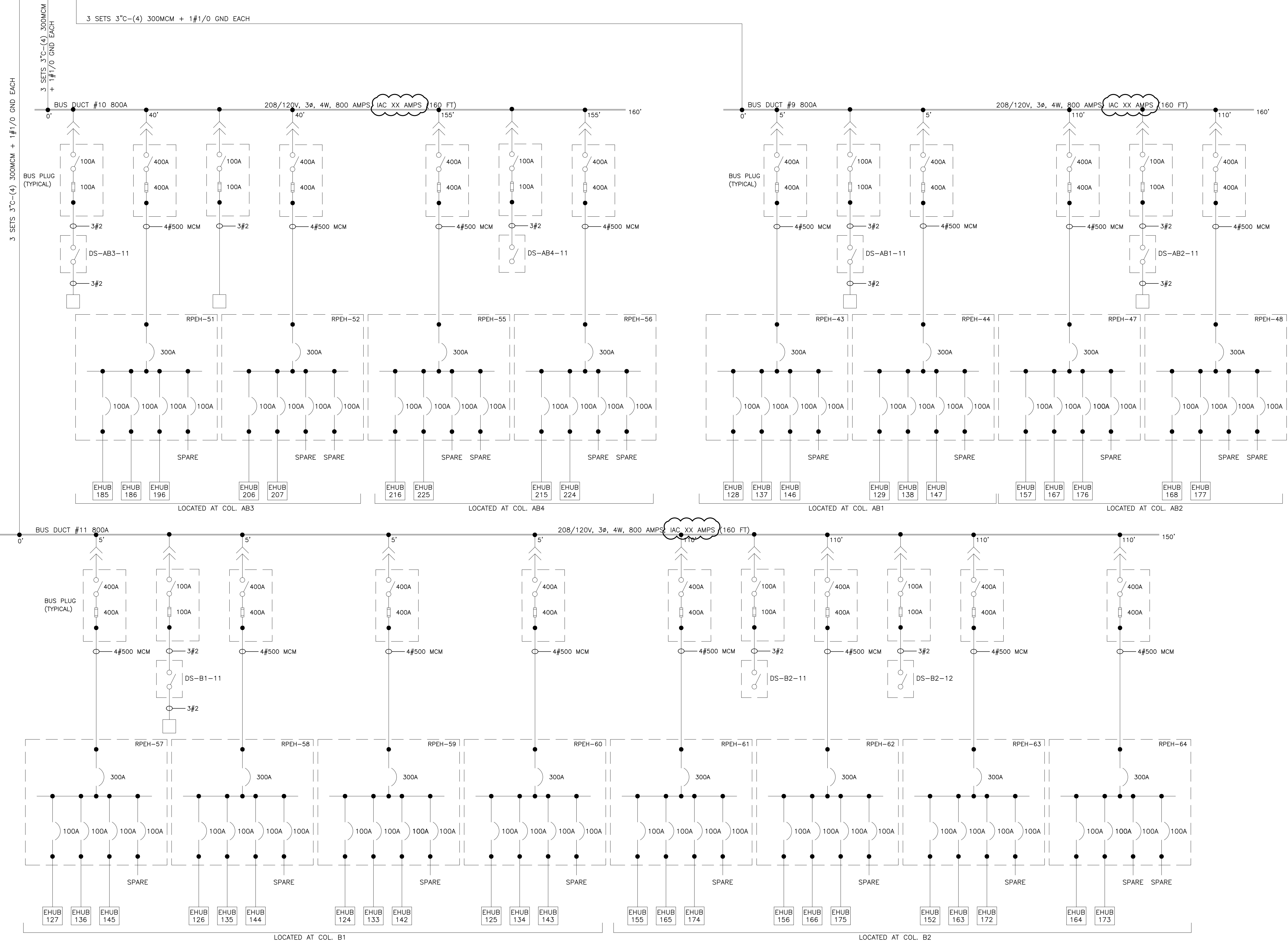
TO SUBSTATION 13
SEE DWG SL13



LEGEND:



- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOVARS
- AL ALUMINUM
- Ø PHASE
- W WIRE

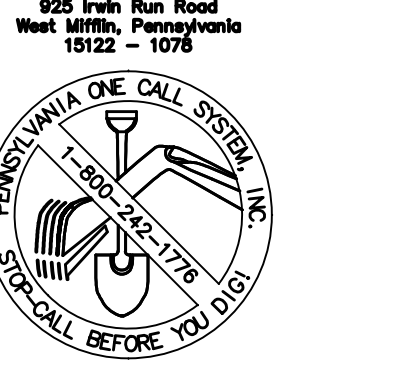


REVISIONS

ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.



BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 12 ELECTRICAL ROOM 1

PACC PROJECT NO.: XX-XX-XXXX-XX

CONSULTANT PROJECT NO.: E40006

DATE: 09-24-2017

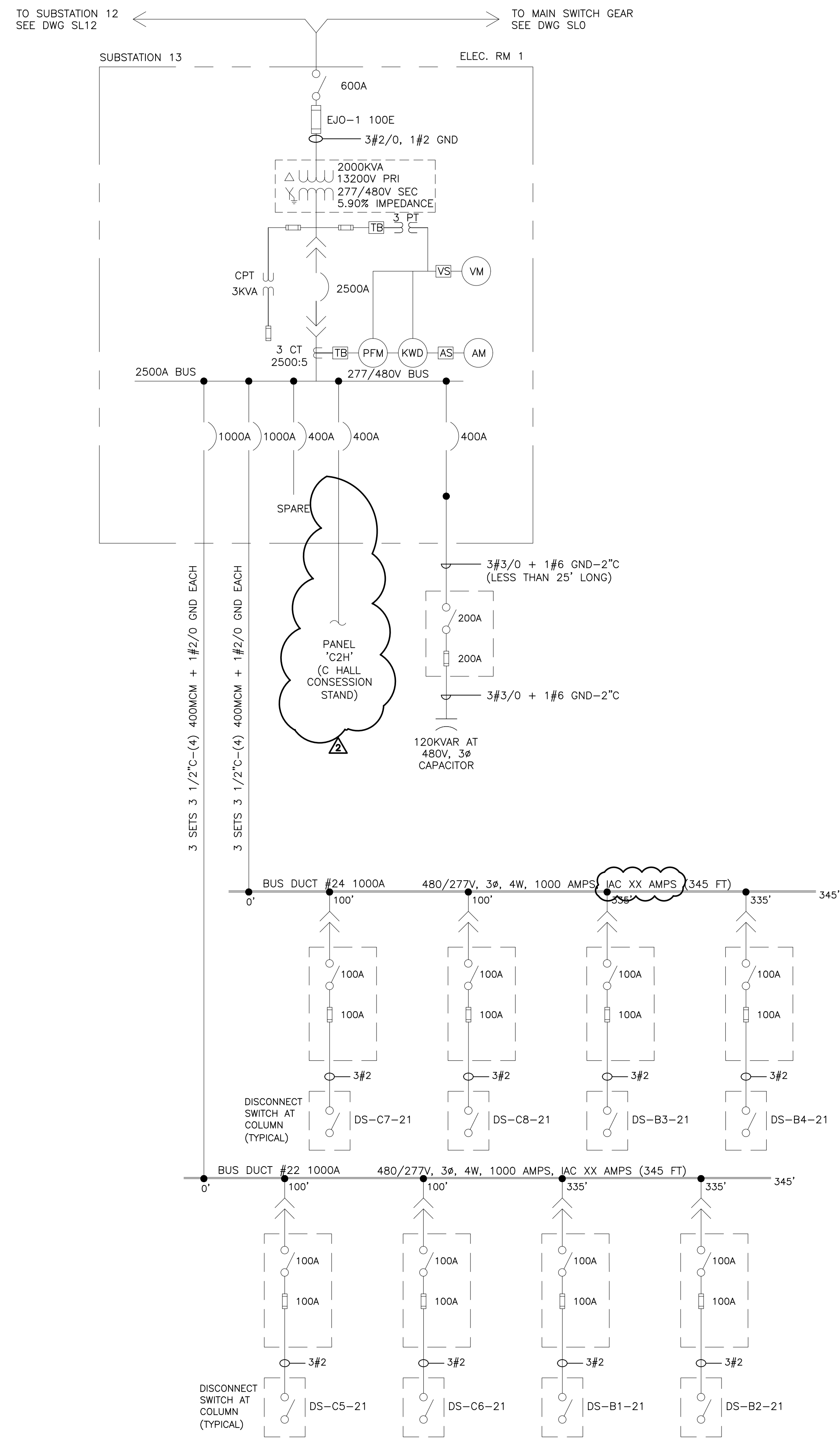
SCALE: NOT TO SCALE

DRAWN BY:

CHECKED BY:

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

SL12



- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
 - FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER. RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVARS
 - AL ALUMINUM
 - ∅ PHASE
 - W WIRE

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/27/18	POWER FACTOR UPGRADE
2	4/24/24	GENERAL REVISION



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 Erie Plaz Road
 West Chester, Pennsylvania
 19380 - 1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL: SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
 POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

PHASE:
 BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

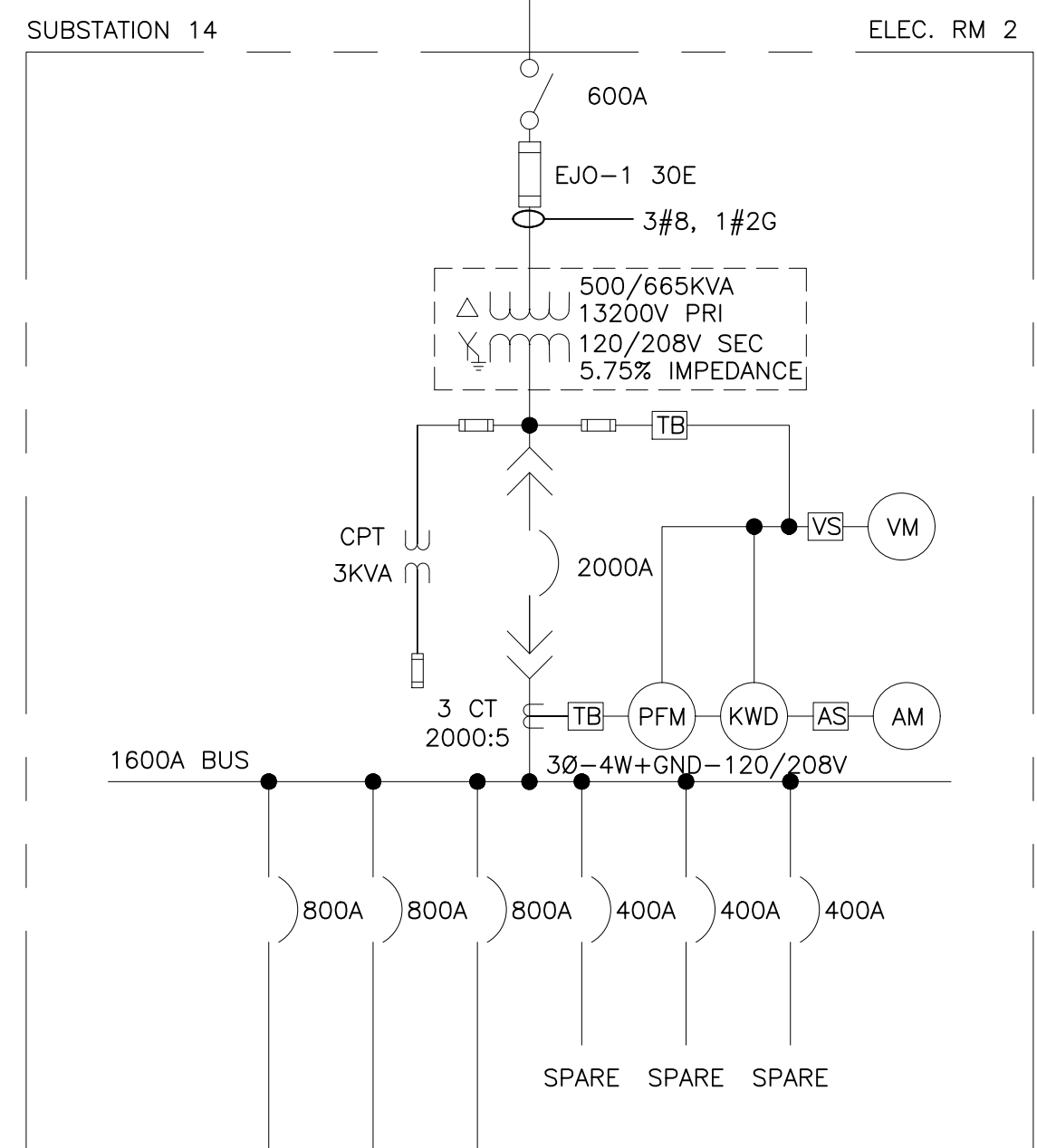
DRAWING TITLE:
 UNIT SUBSTATION 13
 ELECTRICAL ROOM 1

PROJECT NO.: XX-XX-XXXX-XX
 CONSULTANT PROJECT NO.: E40006
 DATE: 09-24-2017
 SCALE: NOT TO SCALE
 DRAWN BY:
 CHECKED BY:

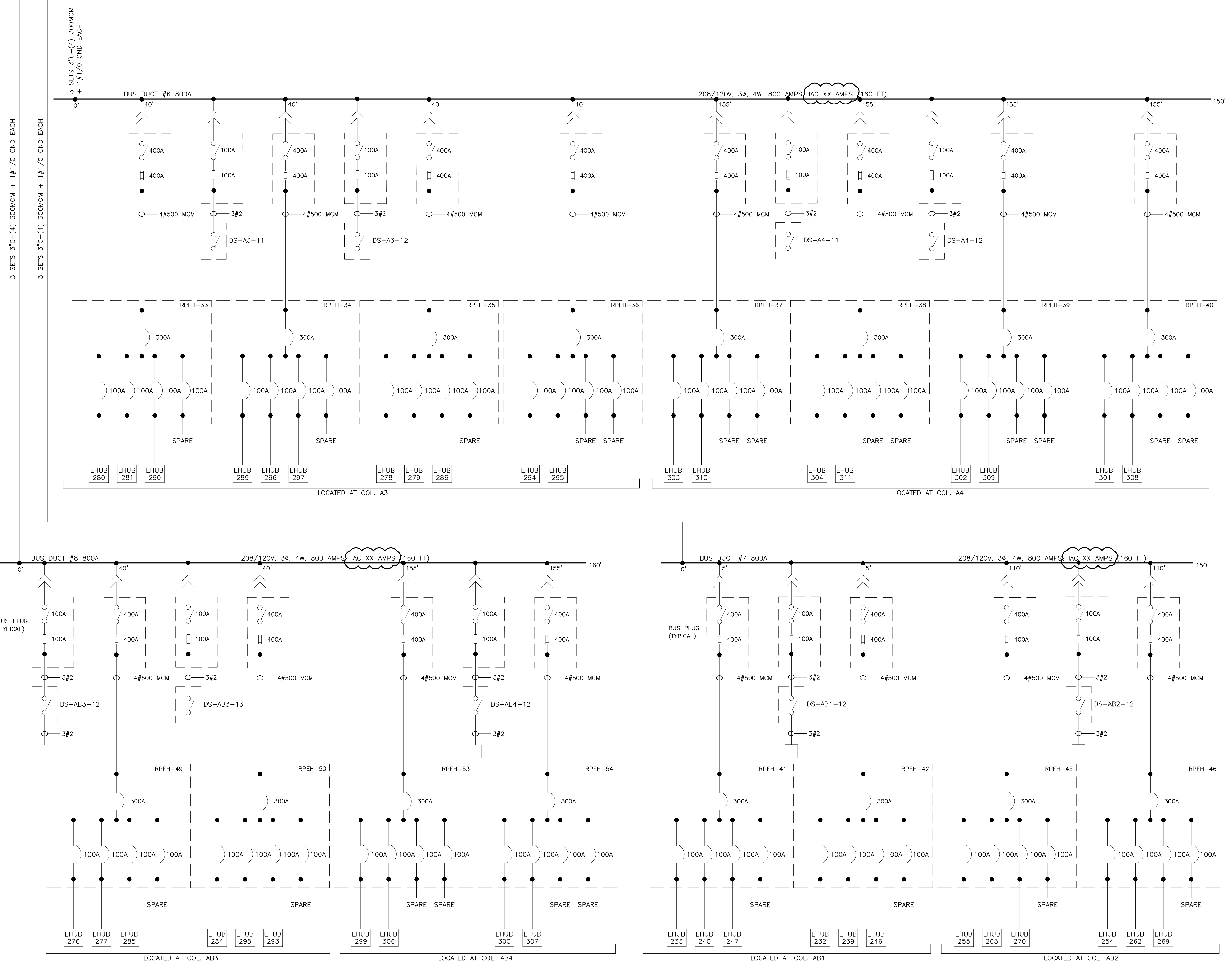
SL13

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

TO MAIN SWITCH GEAR SEE DWG SLD
TO SUBSTATION 15 SEE DWG SL15



- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
 - FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER. RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVAR
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE



REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
625 Erie Plaz Road
West Chester, Pennsylvania
19380-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 14 ELECTRICAL ROOM 2

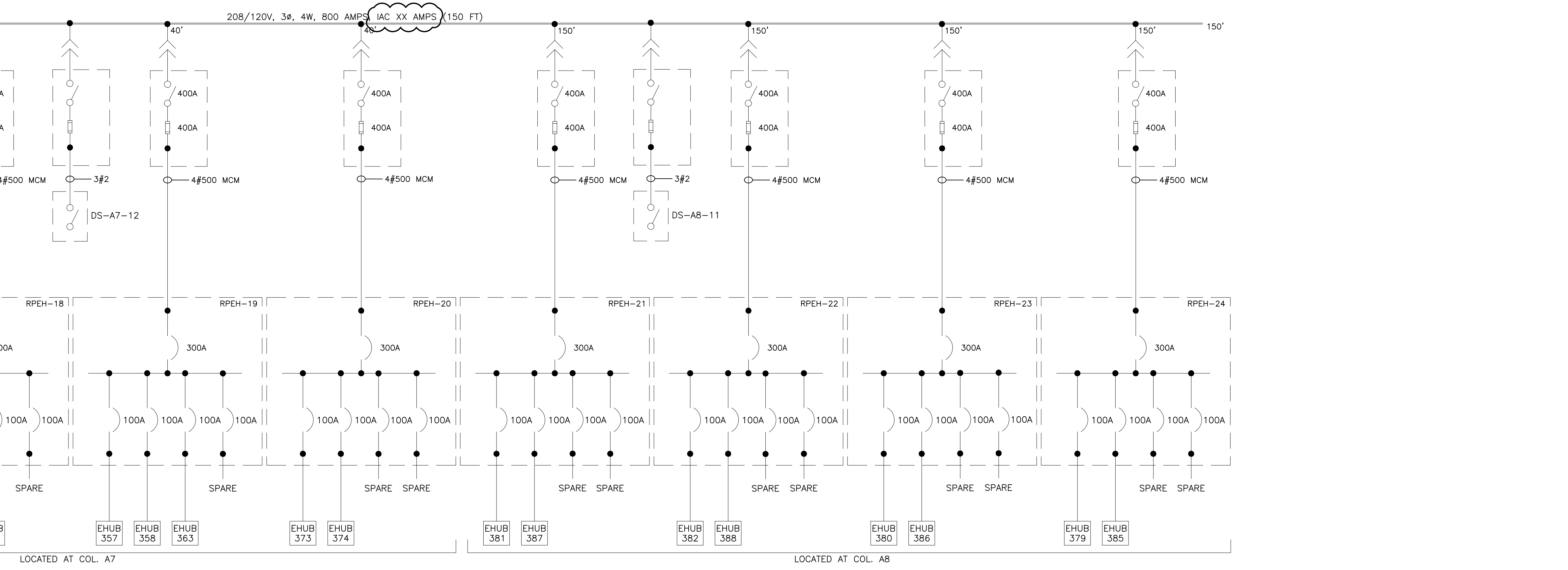
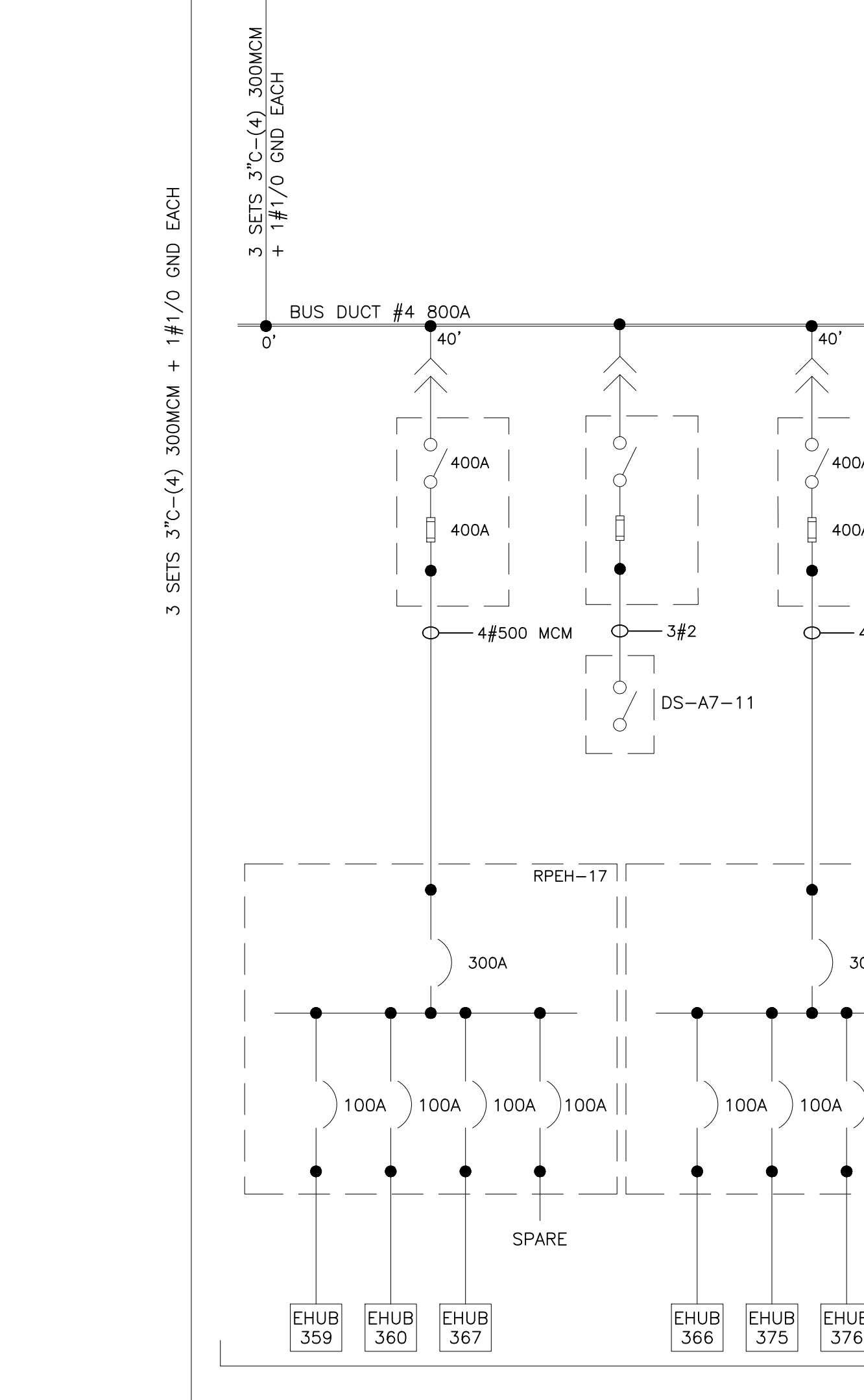
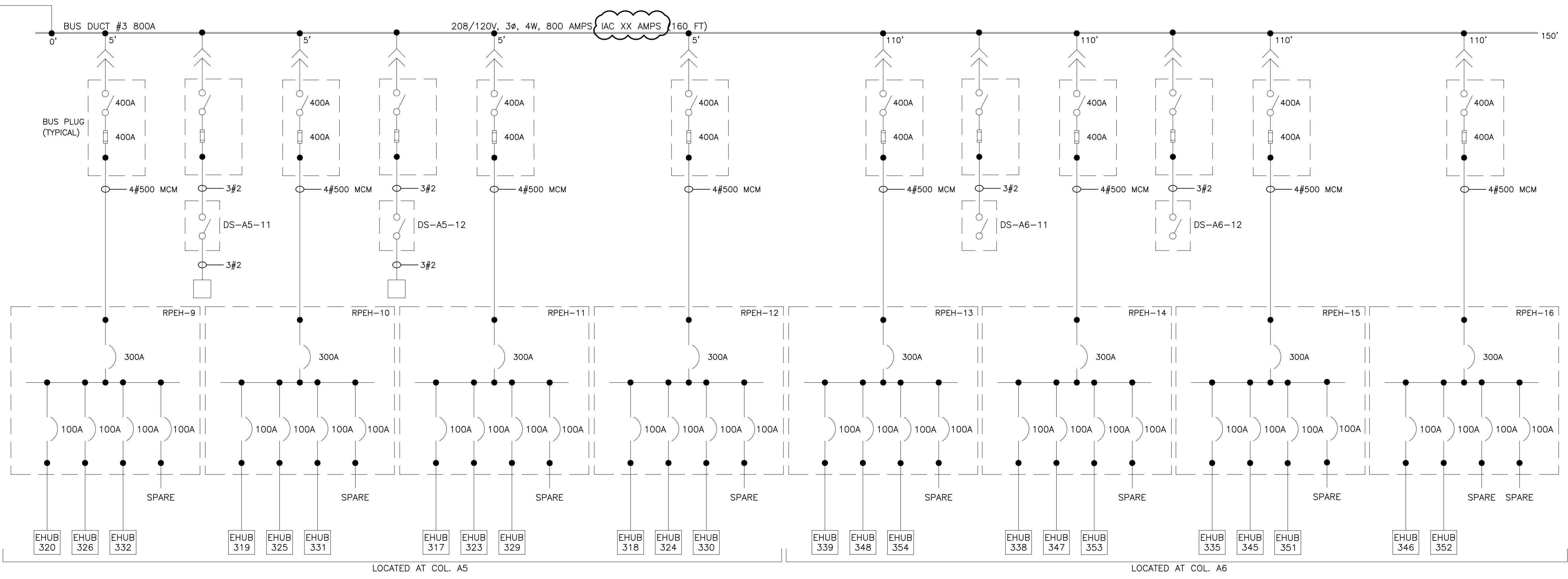
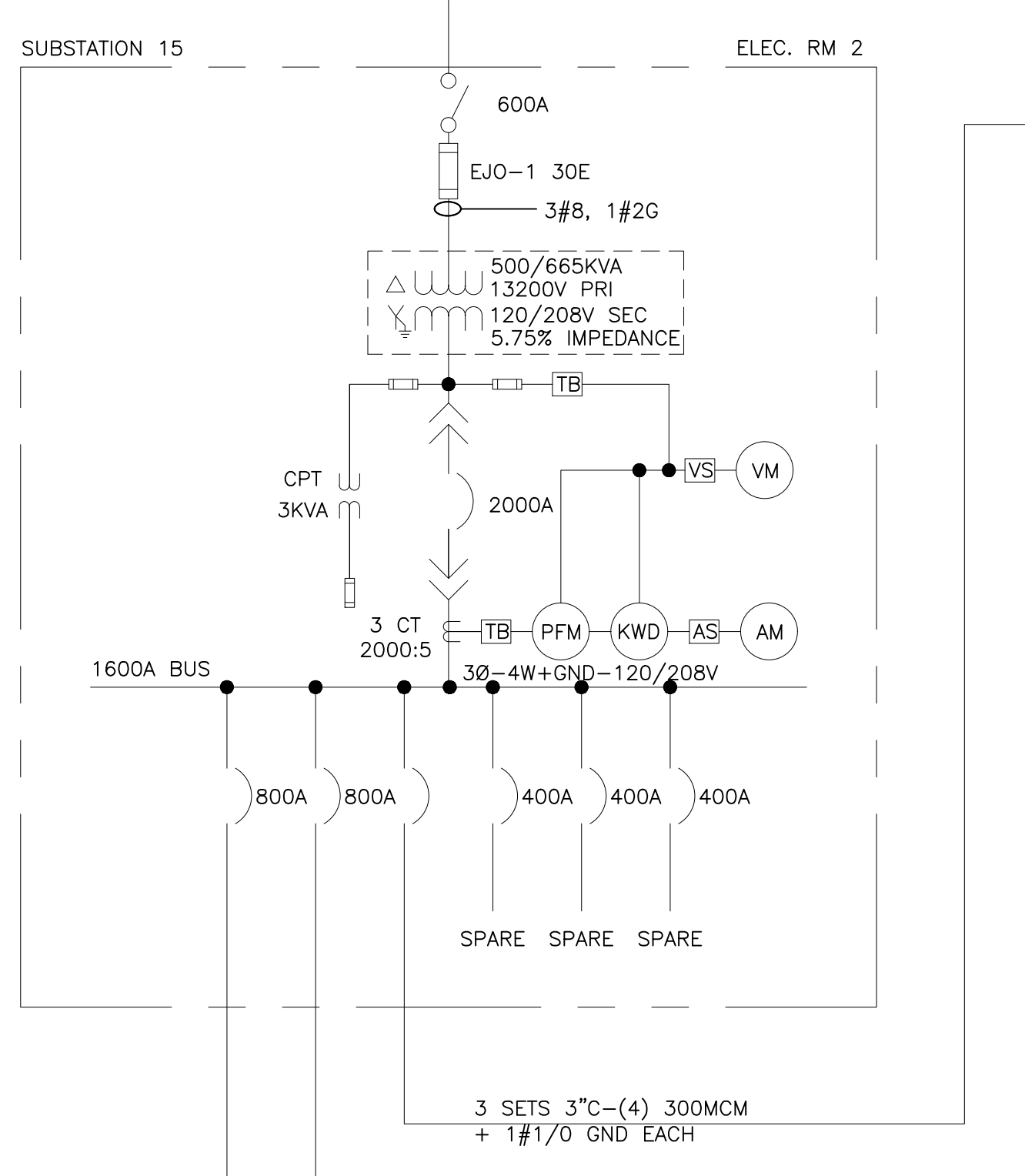
PACC PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL14

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

TO SUBSTATION 14 SEE DWG SL14

TO SUBSTATION 16 SEE DWG SL16



- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
 - FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER. RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X

- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOVAR
- AL ALUMINUM
- ∅ PHASE
- W WIRE
- 600 VOLT WIRE IN RACEWAY
- 3#2/0, 1#2G QUANTITY AND SIZE OF WIRES

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 Erie Plaz Road
 West Chester, Pennsylvania
 19380-1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
 POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

PHASE:

BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
 UNIT SUBSTATION 15
 ELECTRICAL ROOM 2

PAQC PROJECT NO.: XX-XX-XXXX-XX

CONSULTANT PROJECT NO.: E40006

DATE: 09-24-2017

SCALE: NOT TO SCALE

DRAWN BY:

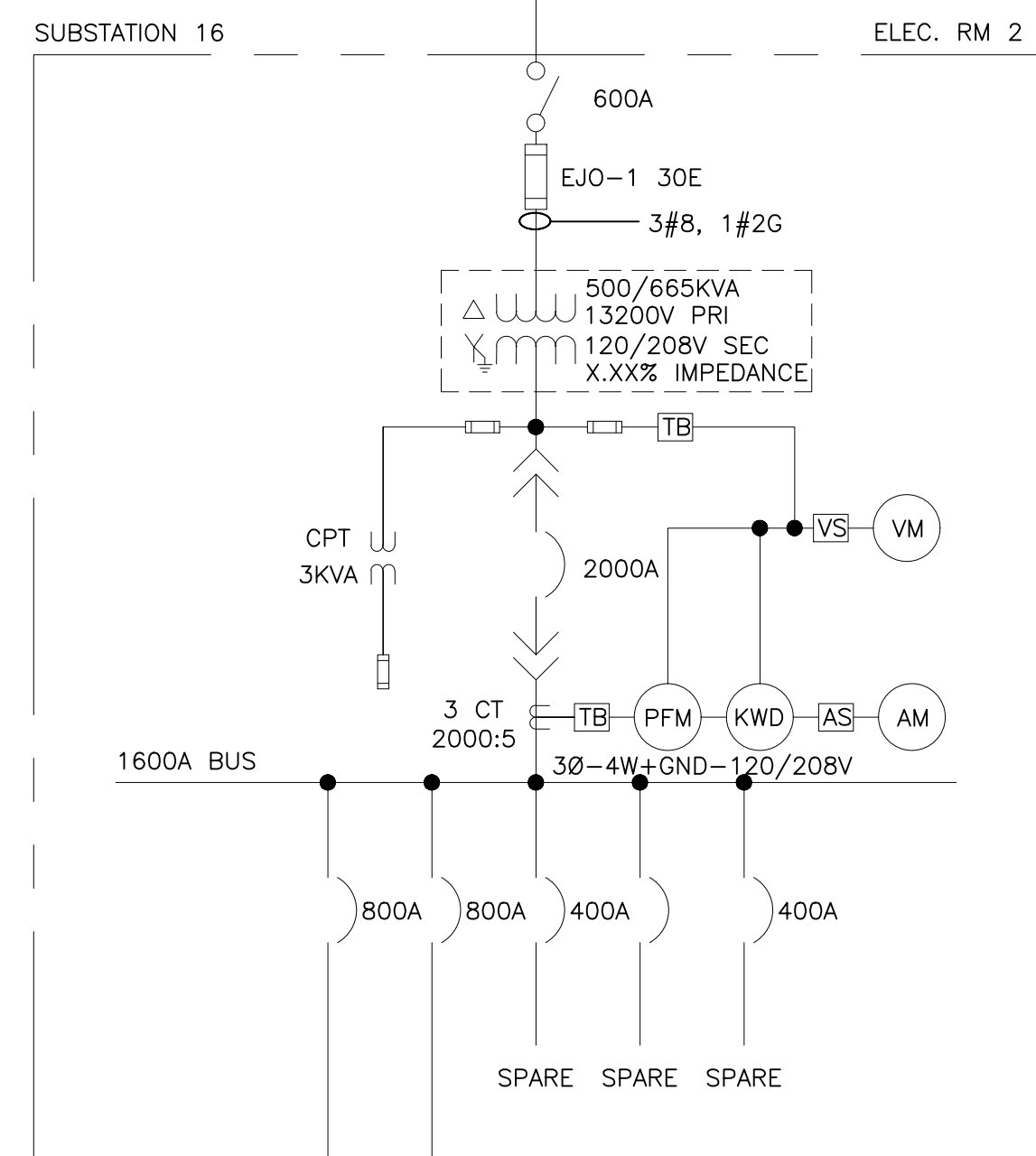
CHECKED BY:

SL15

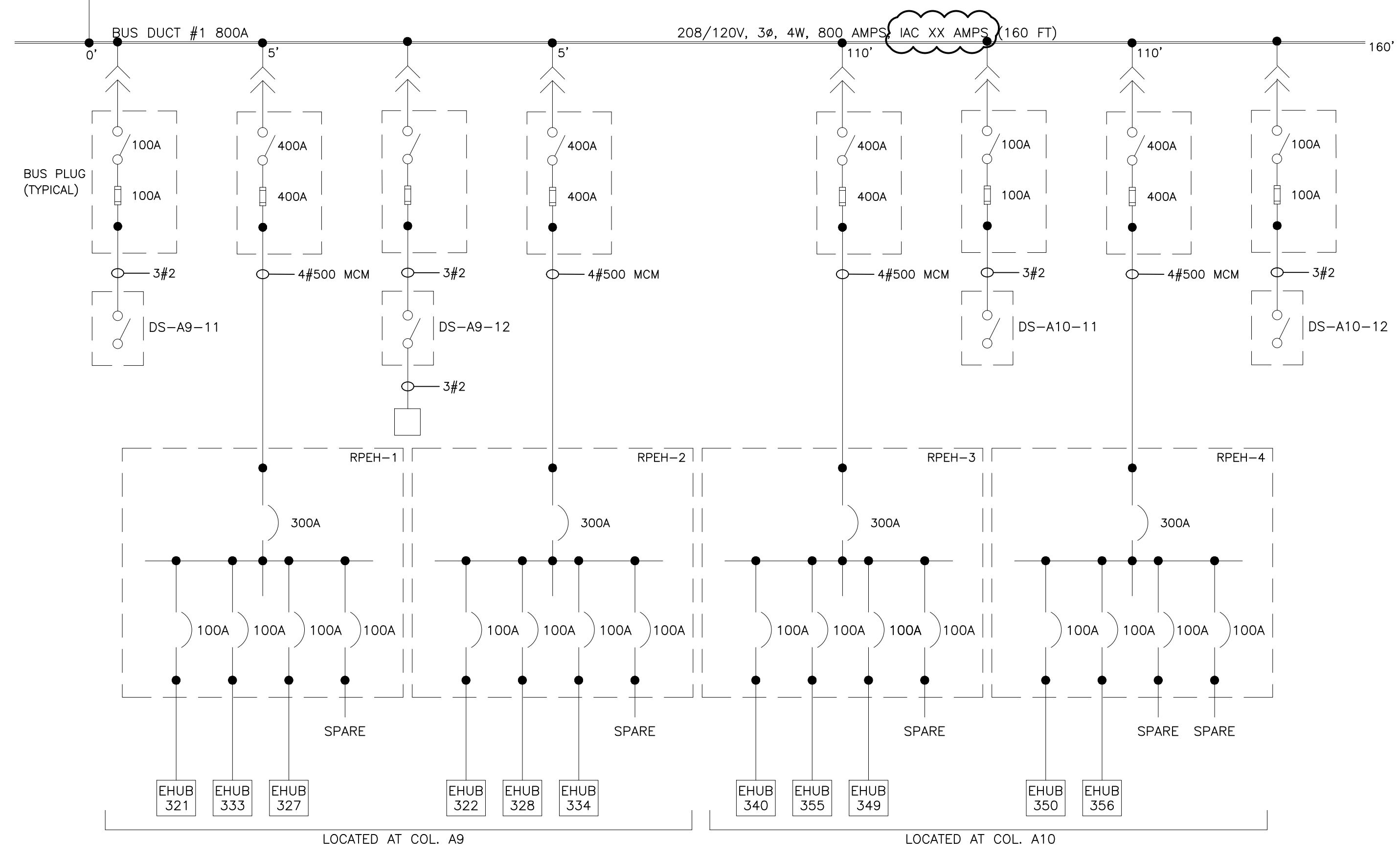
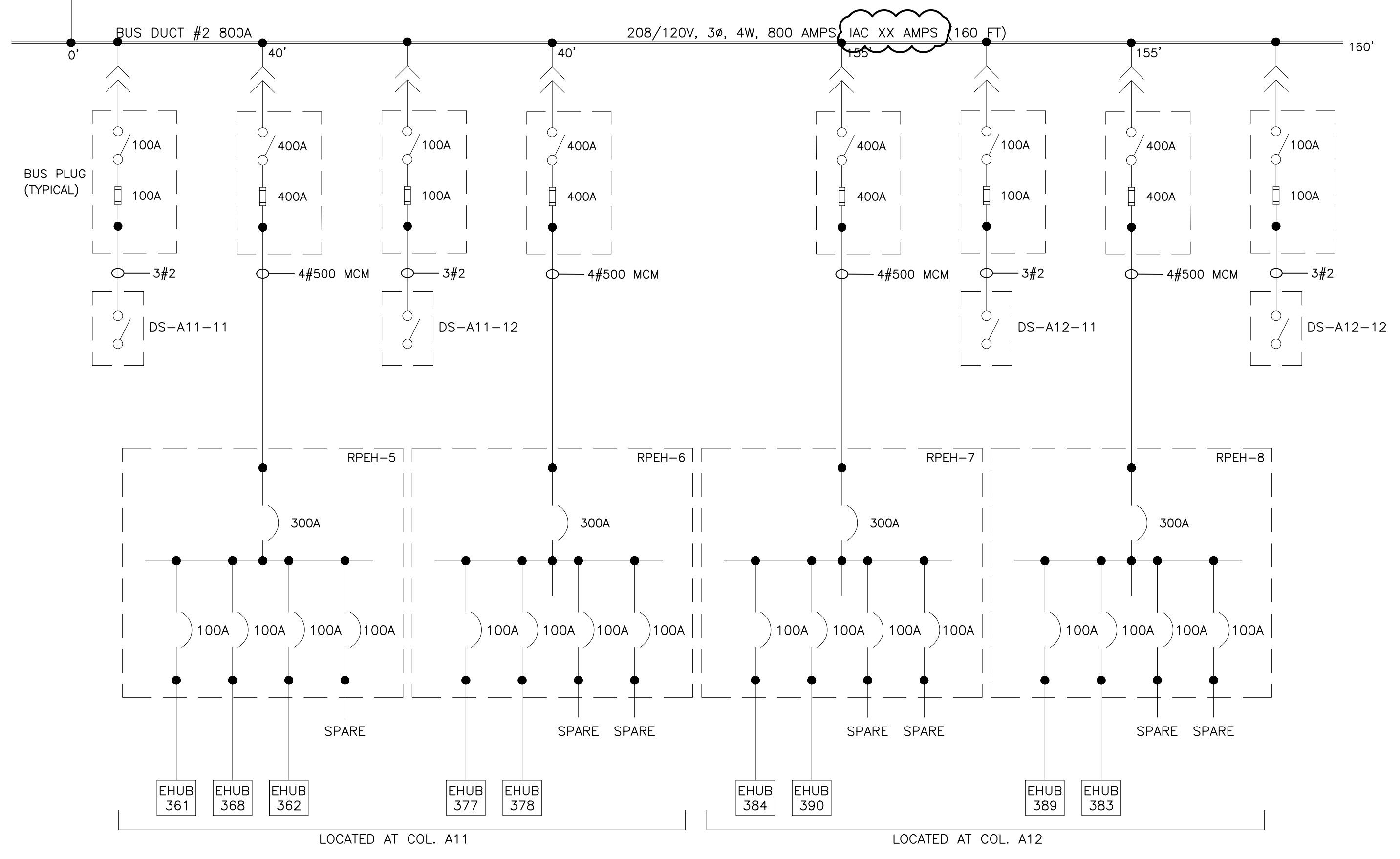
NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

TO SUBSTATION 15
SEE DWG SL15

TO SUBSTATION 17
SEE DWG SL17



3 SETS 3"-(4) 300MCM + 1#1/0 GND EACH



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
- FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE, FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED, RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER, RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOVAR
- AL ALUMINUM
- Ø PHASE
- W WIRE

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
625 First Run Road
West Chester, Pennsylvania
19382 - 1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
NON-MEMBERS MUST BE CONTACTED DIRECTLY
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE:
BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

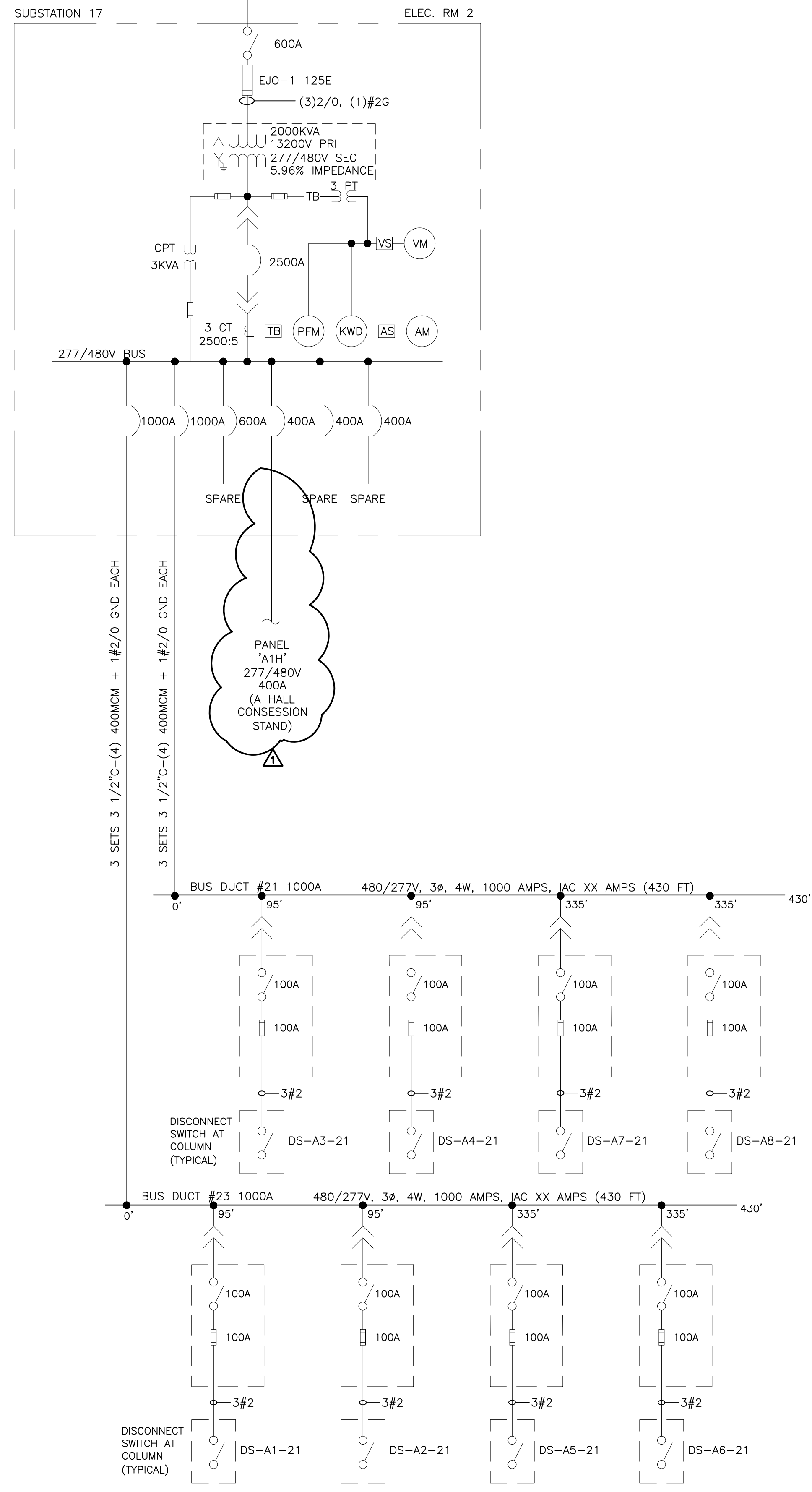
DRAWING TITLE:
UNIT SUBSTATION 16
ELECTRICAL ROOM 2

PROJECT NO.:	XX-XX-XXXX-XX	DRAWING NO.:	
CONSULTANT PROJECT NO.:	E40006		
DATE:	09-24-2017		
SCALE:	NOT TO SCALE		
DRAWN BY:			
CHECKED BY:			

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

SL16

TO SUBSTATION 16
SEE DWG SL16



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
- FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER. RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVARS KILOVARS
- AL ALUMINUM
- Ø PHASE
- W WIRE

REVISIONS

ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/24/24	GENERAL REVISION



PENNSYLVANIA ONE CALL SYSTEM, INC.
625 Erie Plaz Road
West Chester, Pennsylvania
19380-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE:
BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
UNIT SUBSTATION 17
ELECTRICAL ROOM 2

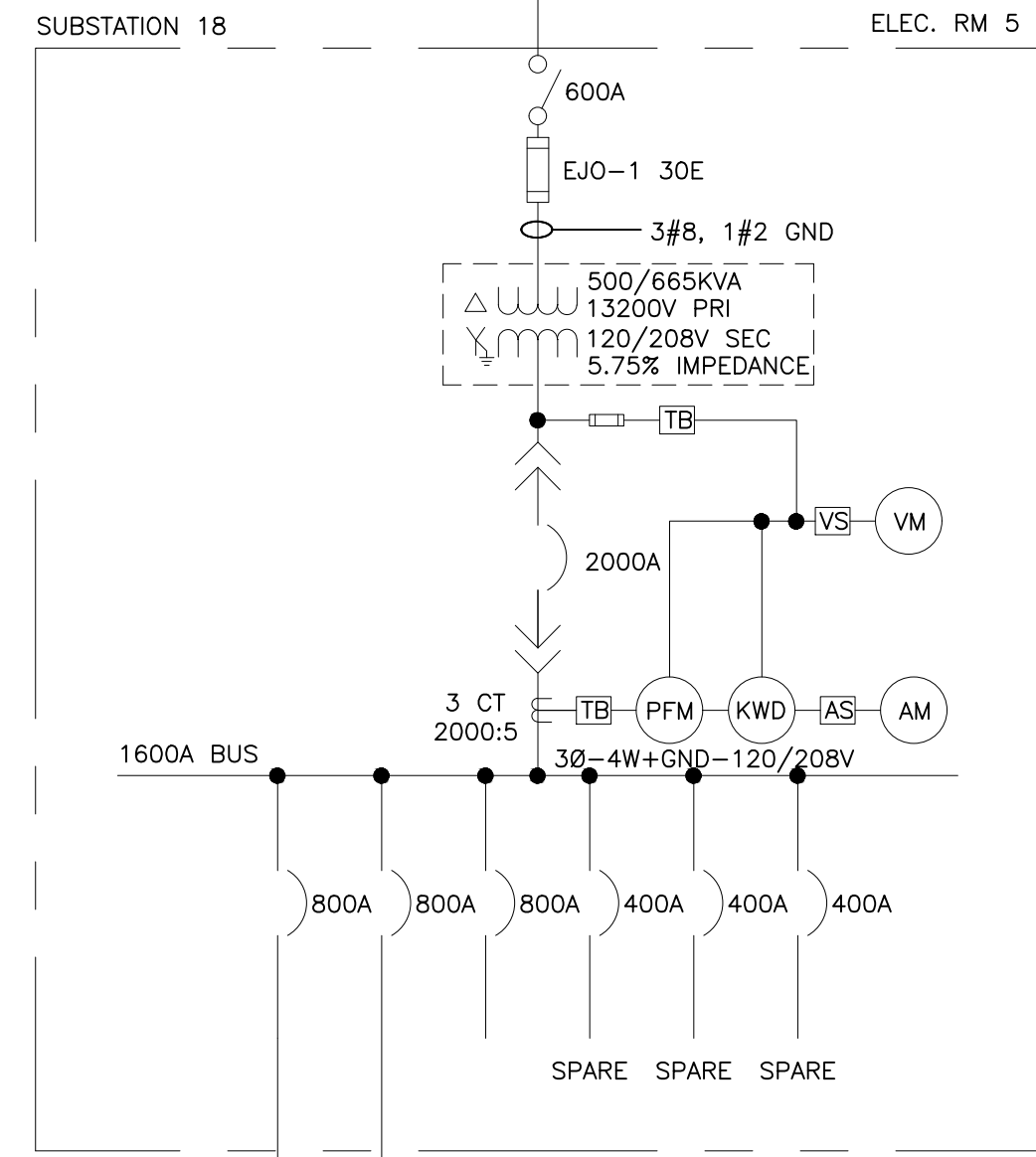
PA&C PROJECT NO.: XX-XX-XXXX-XX **DRAWING NO.:**
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL17

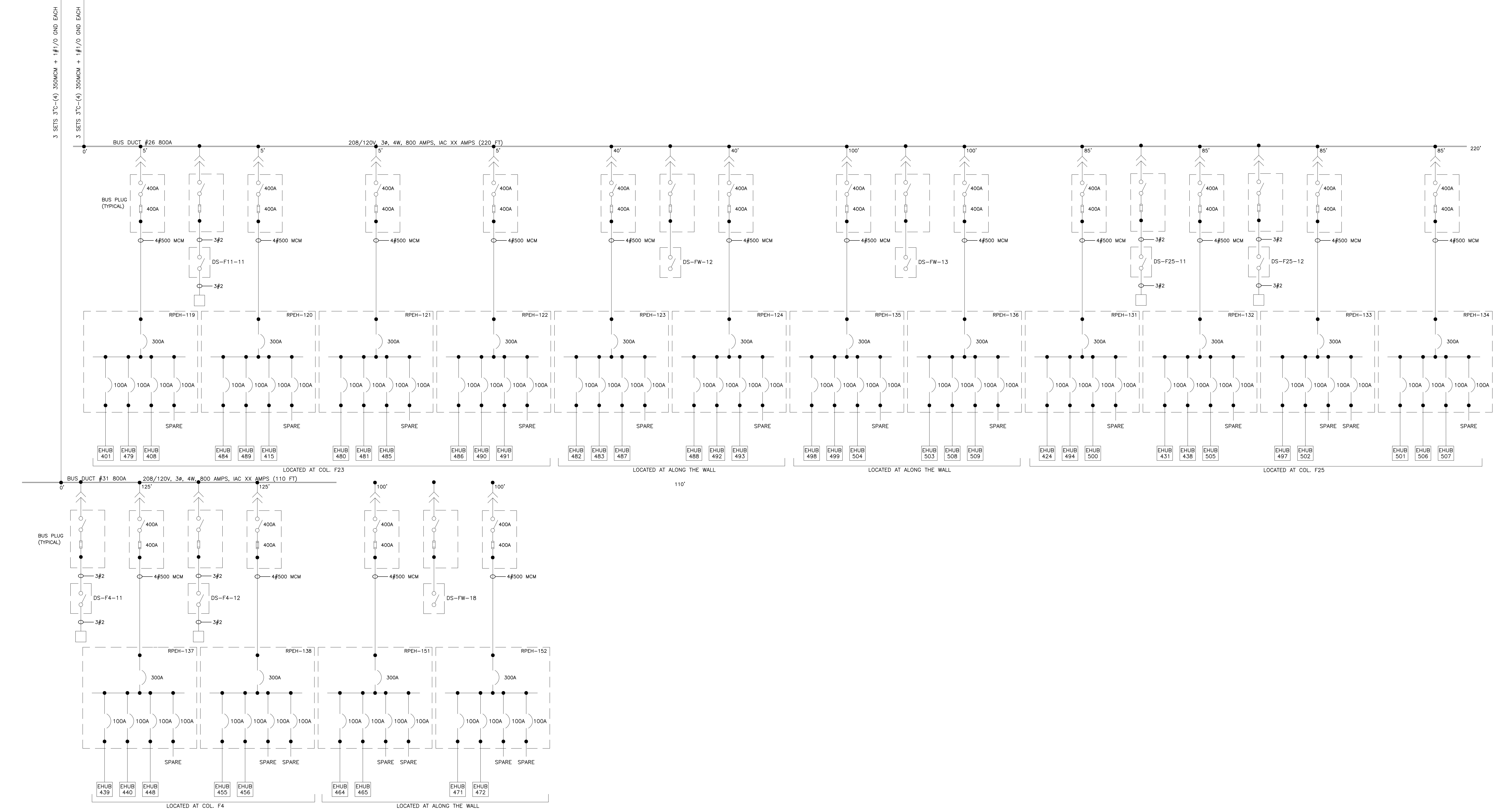
NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

TO SUBSTATION 29
SEE DWG SL20

TO MAIN SWITCHGEAR
SEE SL10



- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
 - FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER. RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - 600 VOLT WIRE IN RACEWAY QUANTITY AND SIZE OF WIRES
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVAR
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE



REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
625 Erie Plaz Road
West Chester, Pennsylvania
19380-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX
PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 18
ELECTRICAL ROOM 5

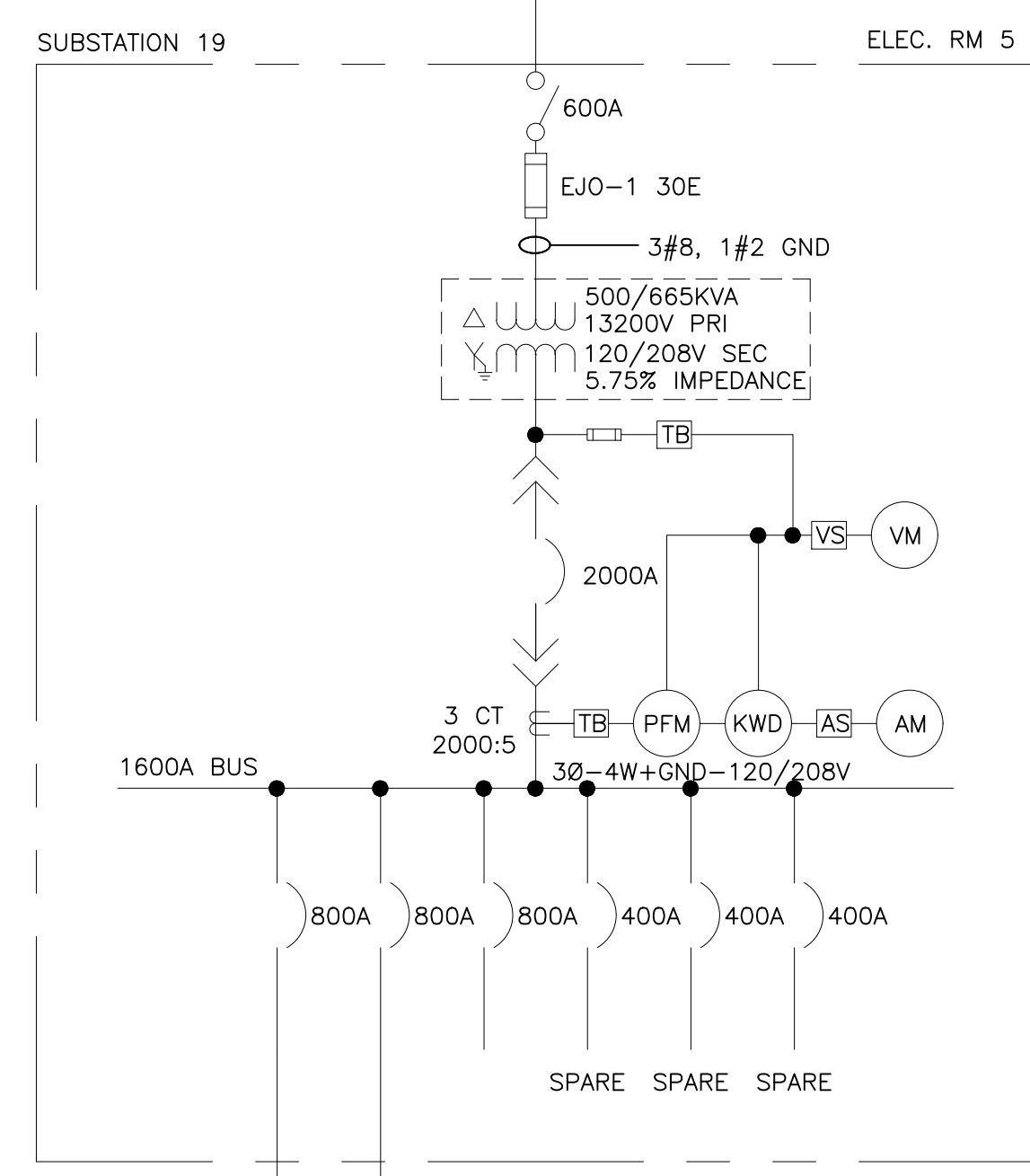
PACC PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

SL18

TO SUBSTATION 20
SEE DWG. SL20

TO SUBSTATION 18
SEE SL18



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
- FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER. RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVARS KILOVAR
- AL ALUMINUM
- Ø PHASE
- W WIRE

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
625 Erie Plaz Road
West Chester, Pennsylvania
19380 - 1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU DIG. WASTE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

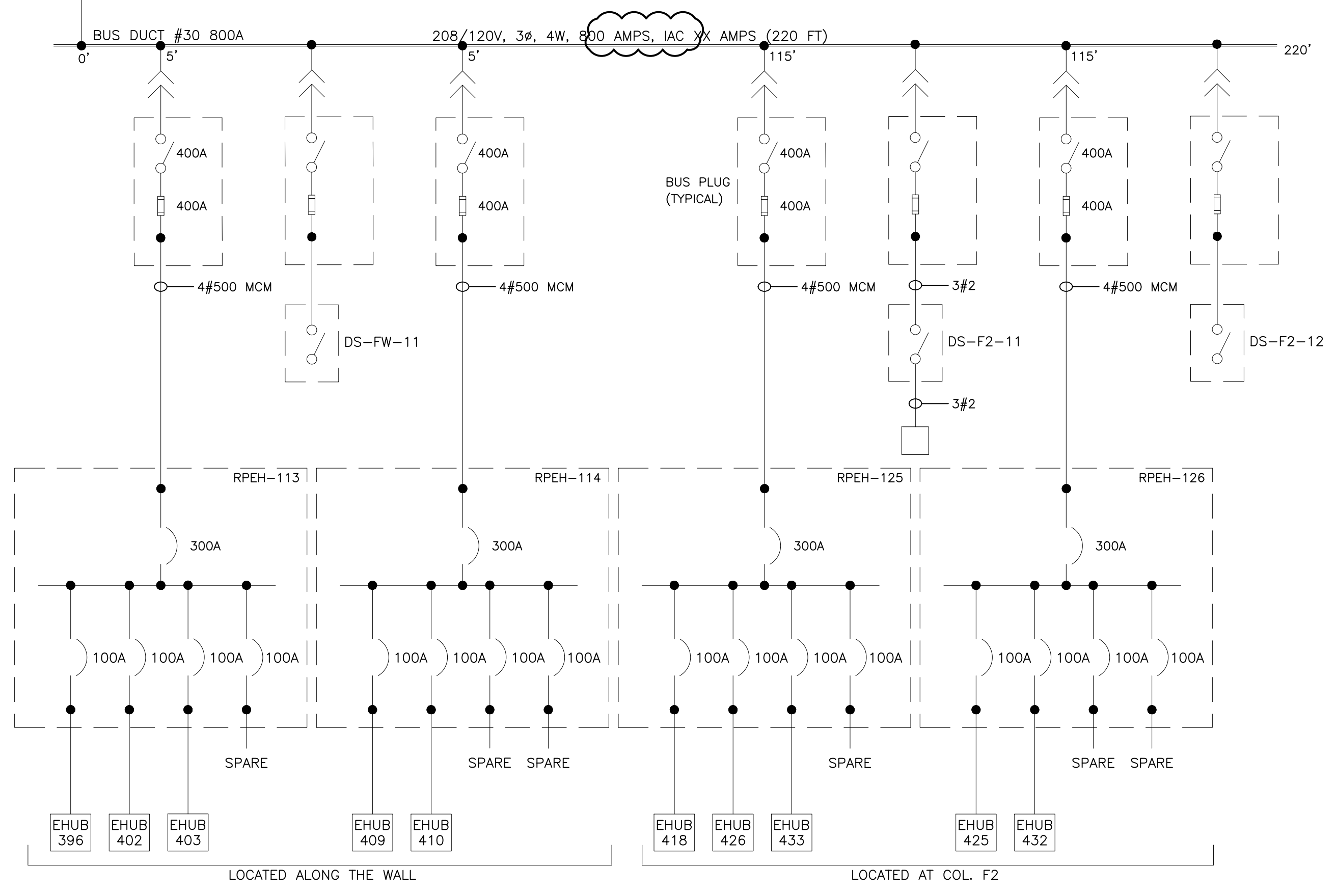
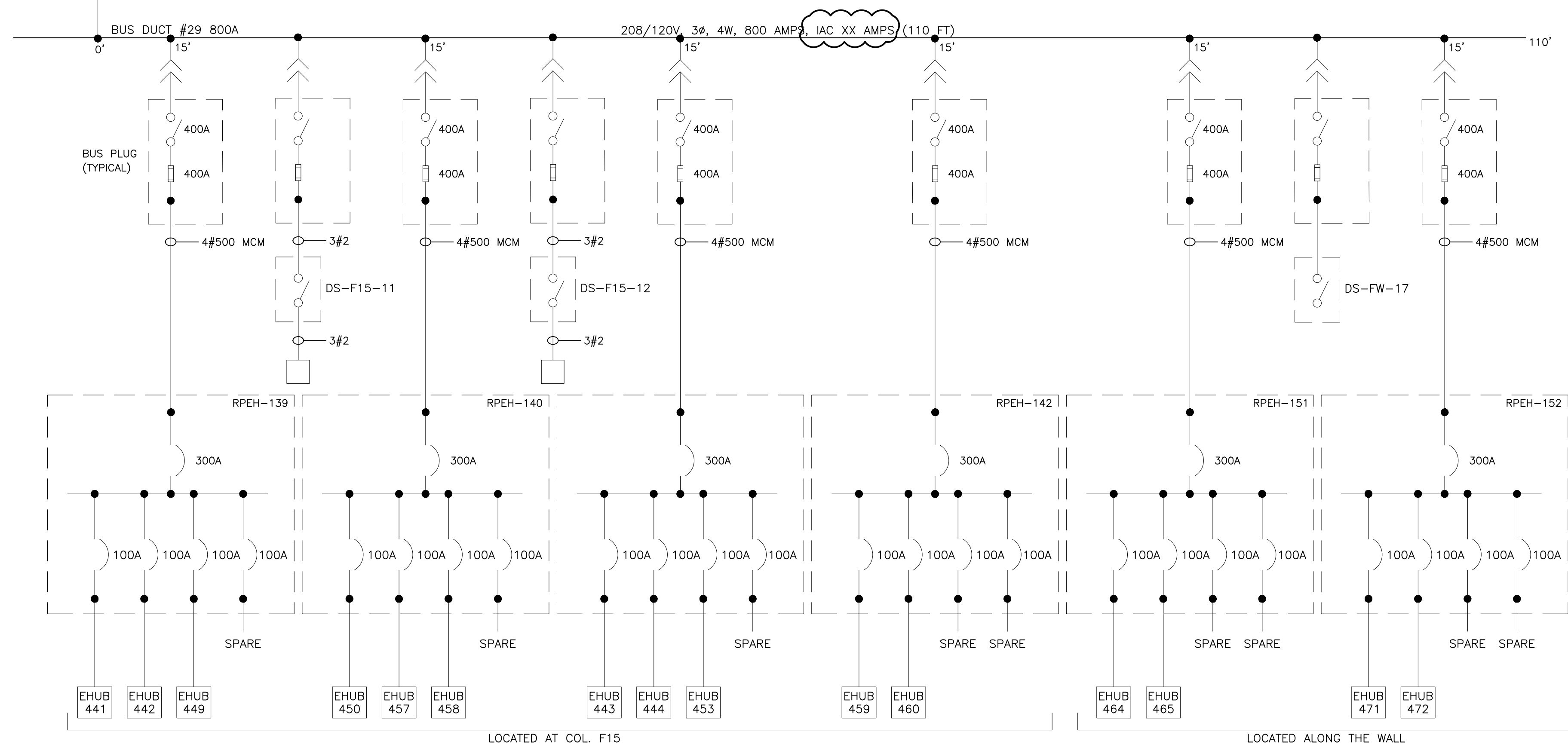
PHASE:
BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
UNIT SUBSTATION 19
ELECTRICAL ROOM 5

PA&C PROJECT NO.: XX-XX-XXXX-XX **DRAWING NO.:** E40006
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

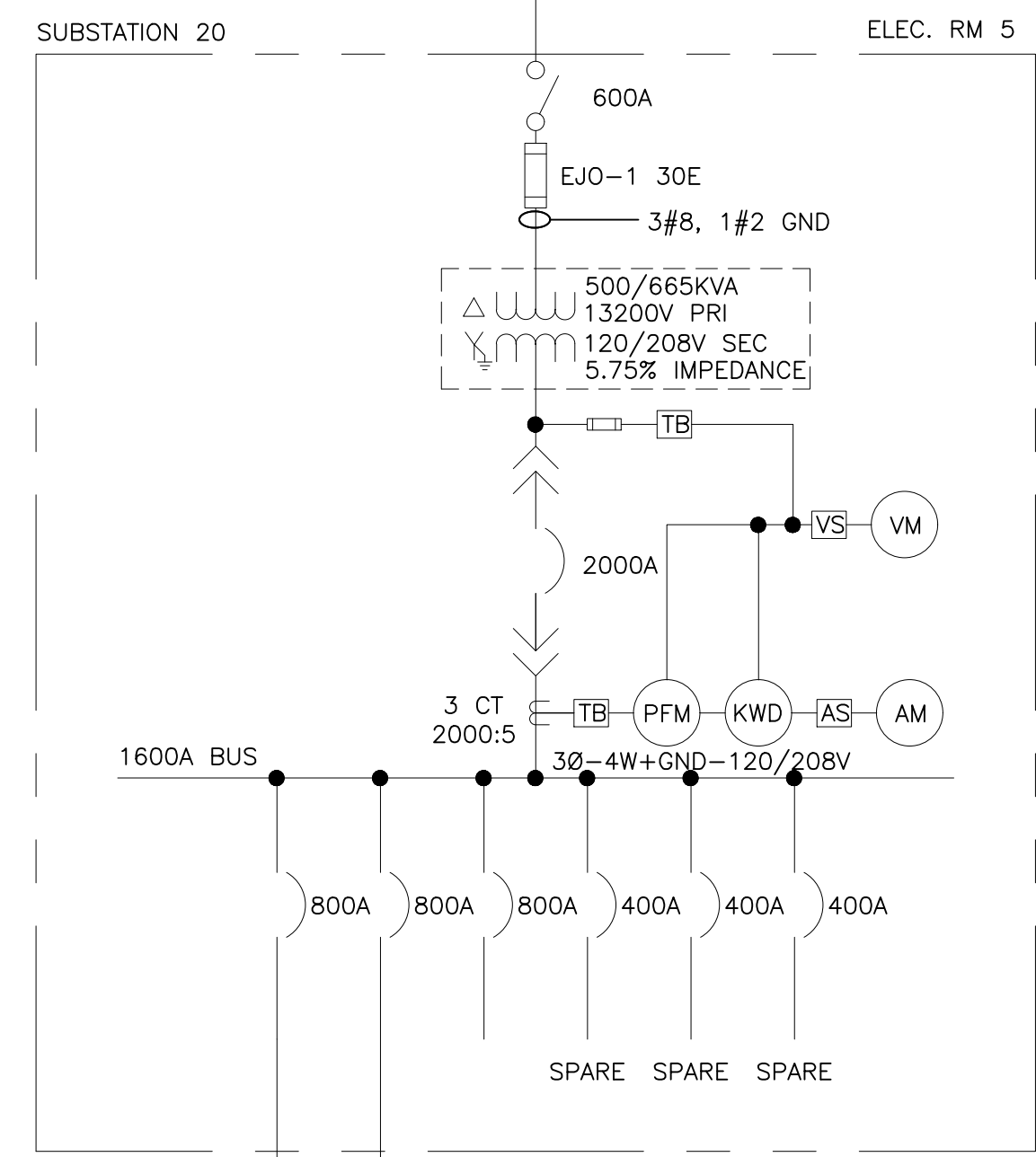
NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

SL19



TO SUBSTATION 21
SEE DWG SL21

TO SUBSTATION 19
SEE SL19

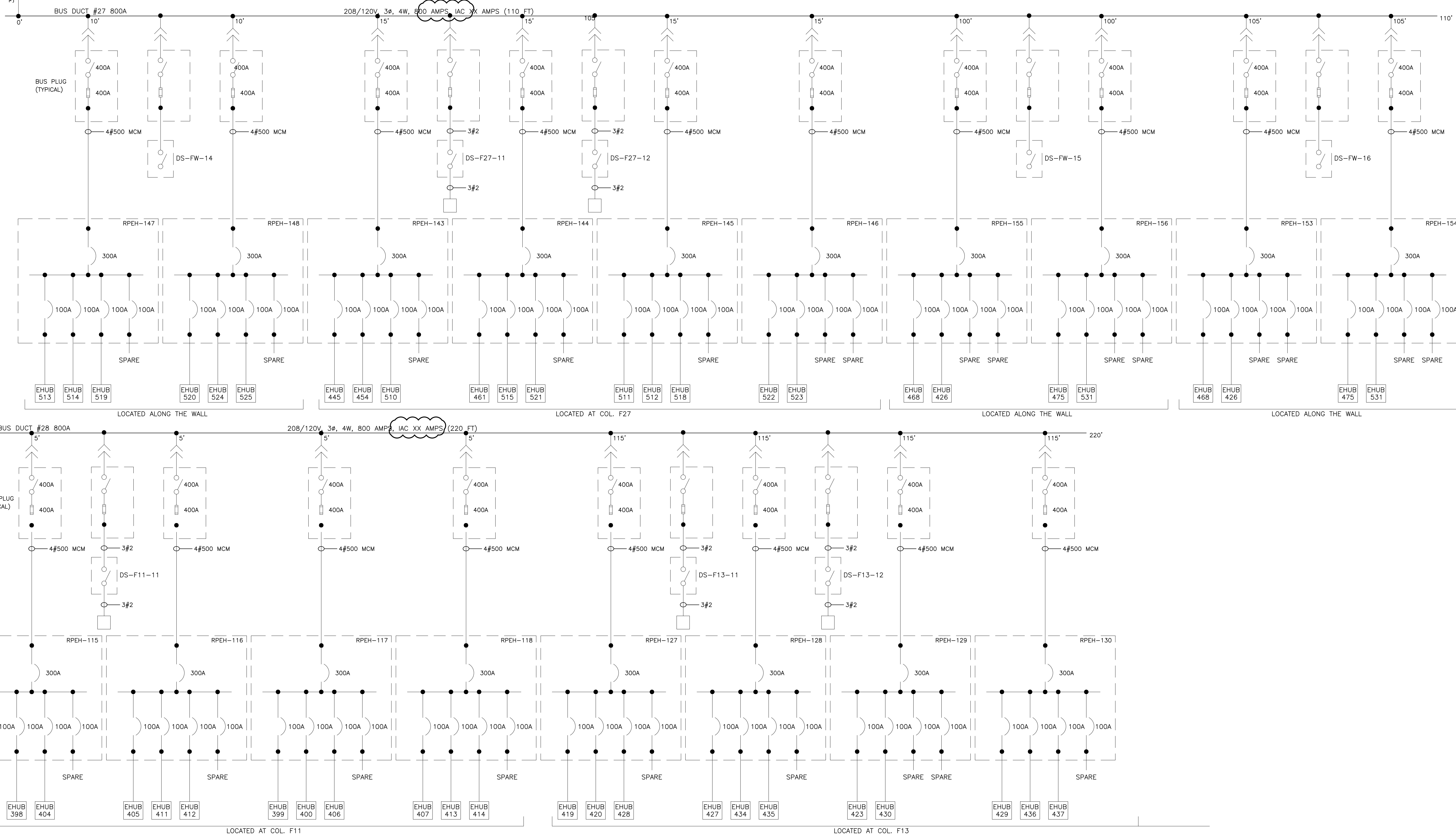


LEGEND:

- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
- FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER. RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOVAR
- AL ALUMINUM
- Ø PHASE
- W WIRE

3 SETS 3°C-(4) 350MCM + 1#1/0 GND EACH

3 SETS 3°C-(4) 350MCM + 1#1/0 GND EACH



REVISIONS

ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
1	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
625 Erie Plaz Road
West Chester, Pennsylvania
19380-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU DIG. WASTE, DRILL, BLAST OR DEMOLISH
NON-MEMBERS MUST BE CONTACTED DIRECTLY

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

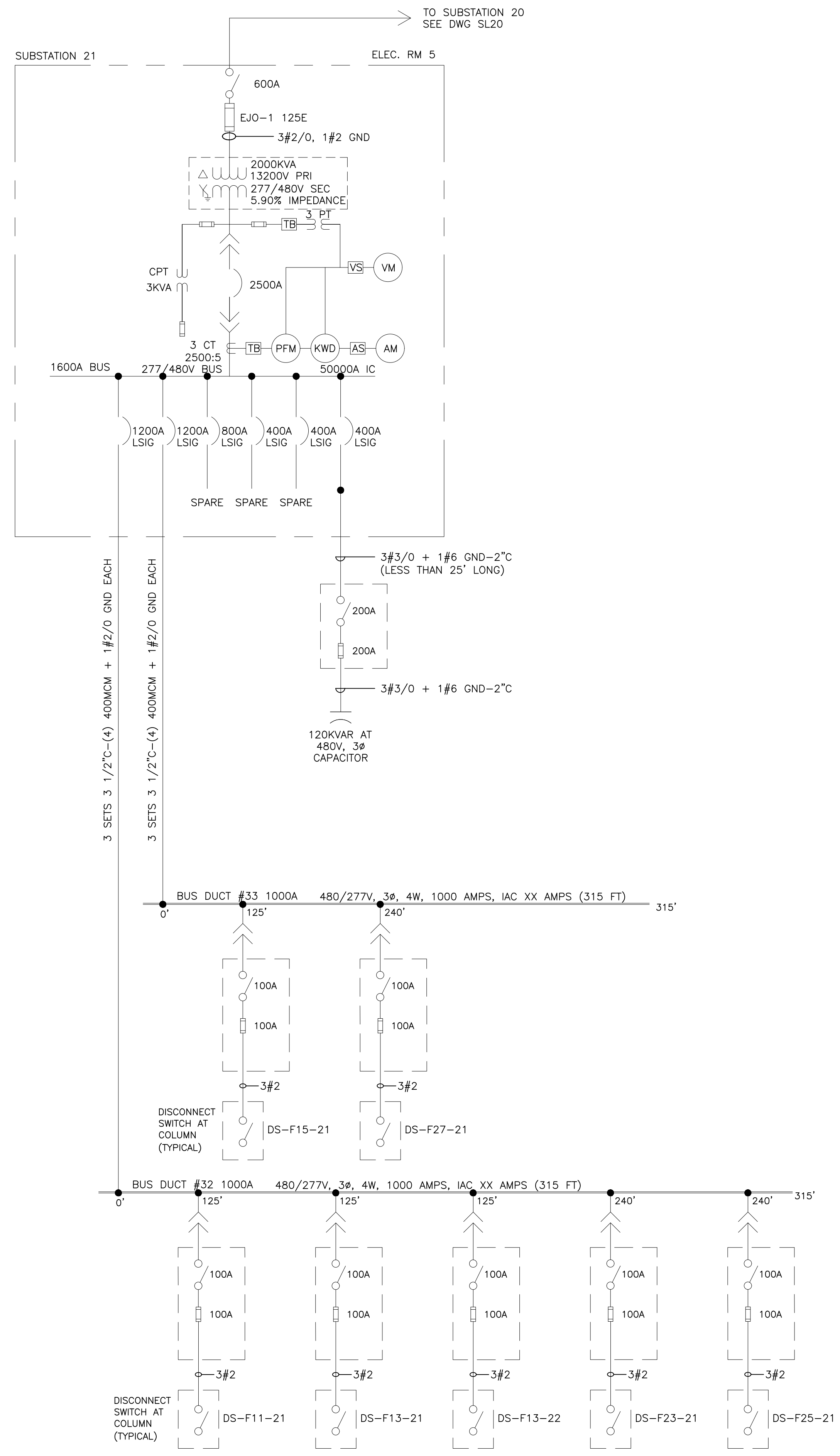
PHASE:
BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
UNIT SUBSTATION 20
ELECTRICAL ROOM 5

PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL20

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.



- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
 - FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER. RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVAR
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE
2	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 Erie Plaz Road
 West Chester, Pennsylvania
 19380-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (IF FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
 POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

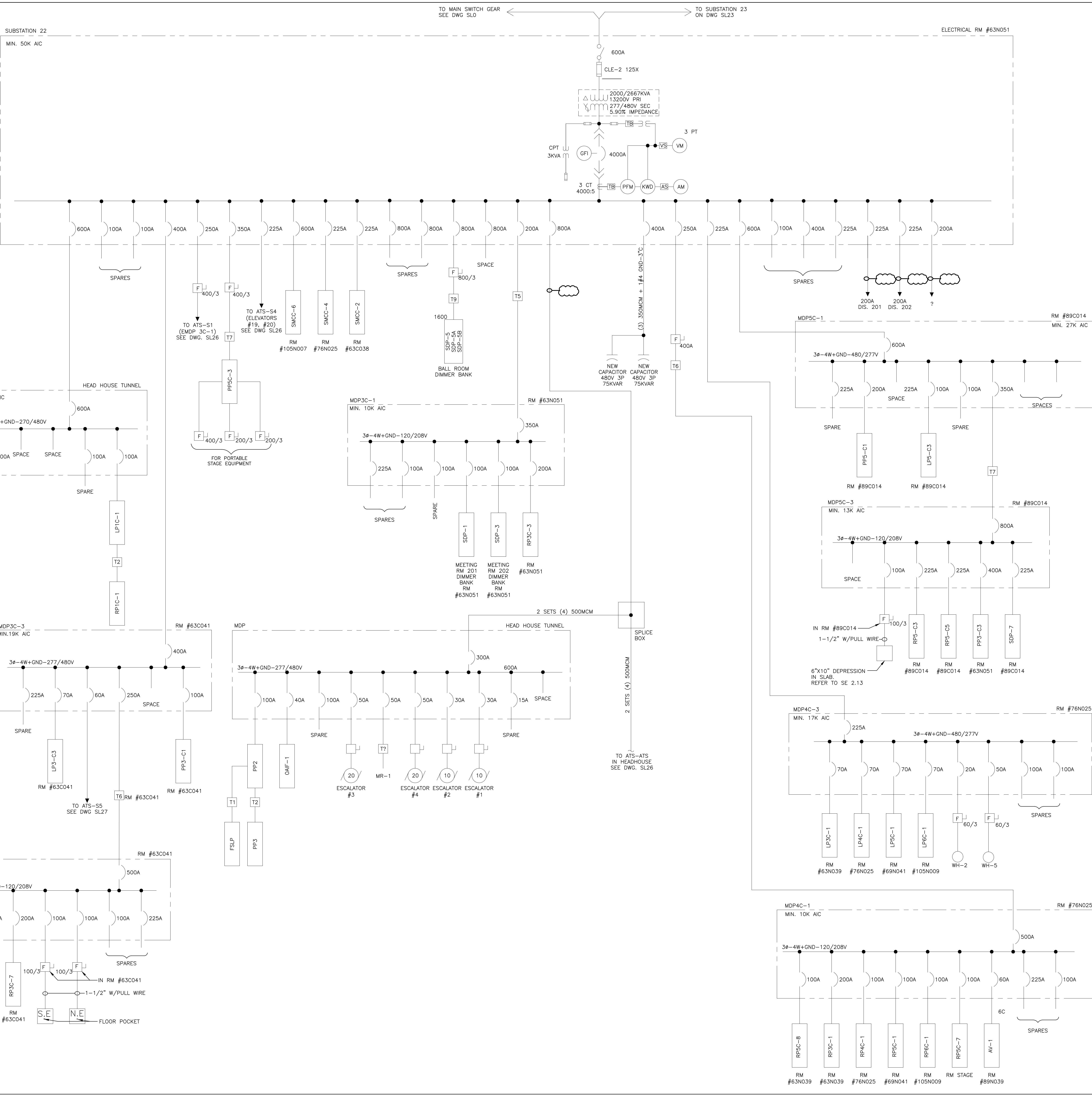
PHASE:
 BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
 UNIT SUBSTATION 21
 ELECTRICAL ROOM 5

PA&C PROJECT NO.: XX-XX-XXXX-XX	DRAWING NO.:
CONSULTANT PROJECT NO.: E40006	
DATE: 09-24-2017	
SCALE: NOT TO SCALE	
DRAWN BY:	
CHECKED BY:	

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

SL21



WIRE AND CONDUIT SIZING SCHEDULE					
CONDUCTOR & NEUTRAL	GROUND	A 1Ø, 2W	B 3Ø, 3W	C 3Ø, 4W	
1 14	14	3/4	3/4	3/4	
2 12	12	12	3/4	3/4	
3 10	10	3/4	3/4	3/4	
4 8	10	3/4	1	1	
5 6	10	3/4	1	1 1/4	
6 4	10	1	1 1/4	1 1/4	
7 4	8	1	1 1/4	1 1/4	
8 3	8	1	1 1/4	1 1/4	
10 2	8	1 1/4	1 1/4	1 1/2	
11 1	6	1 1/4	1 1/2	2	
12 1/0	6	1 1/4	1 1/2	2	
13 3/0	6	1 1/2	2	2 1/2	
14 4/0	4	2	2	2 1/2	
15 250	4	3	2 1/2	3	
16 350	4	2 1/2	3	3	
18 500	3	3	3	3 1/2	
19 (2) 250	(2) 2		(2) 2 1/2	(2) 3	
20 (2) 350	(2) 1		(2) 3	(2) 3	
21 (3) 300	(3) 1/0		(3) 2 1/2	(3) 3	
22 (3) 400	(3) 2/0		(3) 3	(3) 3 1/2	
23 (4) 350	(4) 3/0		(4) 3	(4) 3	
24 (5) 400	(5) 4/0		(5) 3	(5) 3 1/2	
25 (6) 400	(6) 250		(6) 3	(6) 3 1/2	
26 (6) 500	(6) 400		(6) 3 1/2	(6) 4	
27 (5) 500	(5) 250			(5) 4	

TRANSFORMER SCHEDULE					
TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	Ø	WIRE	
T-0	6	480V DELTA/120/208V WYE	3Ø	4W	
T-1	15	480V DELTA/120/208V WYE	3Ø	4W	
T-2	30	480V DELTA/120/208V WYE	3Ø	4W	
T-3	45	480V DELTA/120/208V WYE	3Ø	4W	
T-4	75	480V DELTA/120/208V WYE	3Ø	4W	
T-5	112 1/2	480V DELTA/120/208V WYE	3Ø	4W	
T-6	150	480V DELTA/120/208V WYE	3Ø	4W	
T-7	225	480V DELTA/120/208V WYE	3Ø	4W	
T-8	300	480V DELTA/120/208V WYE	3Ø	4W	
T-9	500	480V DELTA/120/208V WYE	3Ø	4W	

- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
 - FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER. RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - CAPACITOR
 - MOTOR STARTER
 - 3 PHASE MOTOR—HP NOTED
 - FUSED DISCONNECT SWITCH—3 POLE
 - DISCONNECT SWITCH—3 POLE
 - TRANSFORMER—SEE SCHEDULE FOR X
 - INTERRUPTING CAPACITY—SEE TABLE
 - CL CURRENT LIMITING
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVARS
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE
 - 60 VOLT WIRE IN RACEWAY
 - 3Ø/2Ø, 1#2Ø QUANTITY AND SIZE OF WIRES

REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
1	4/27/18	POWER FACTOR UPGRADE
2	4/30/21	ATS LOAD MOVED
3	4/24/24	RE-ISSUED



BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
NON-MEMBERS MUST BE CONTACTED DIRECTLY
PA LAW REQUIRES THESE WORKING DAYS
NOTICE TO UTILITIES BEFORE YOU DIG, WAKE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL: SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: ATS UPGRADE PROJECT - PHASE 1
UNIT SUBSTATION 22
ELECTRICAL ROOM

PAQC PROJECT NO.: XX-XX-XXXX-XX DRAWING NO.:
CONSULTANT PROJECT NO.: XXX

DATE: XXX
SCALE: NOT TO SCALE

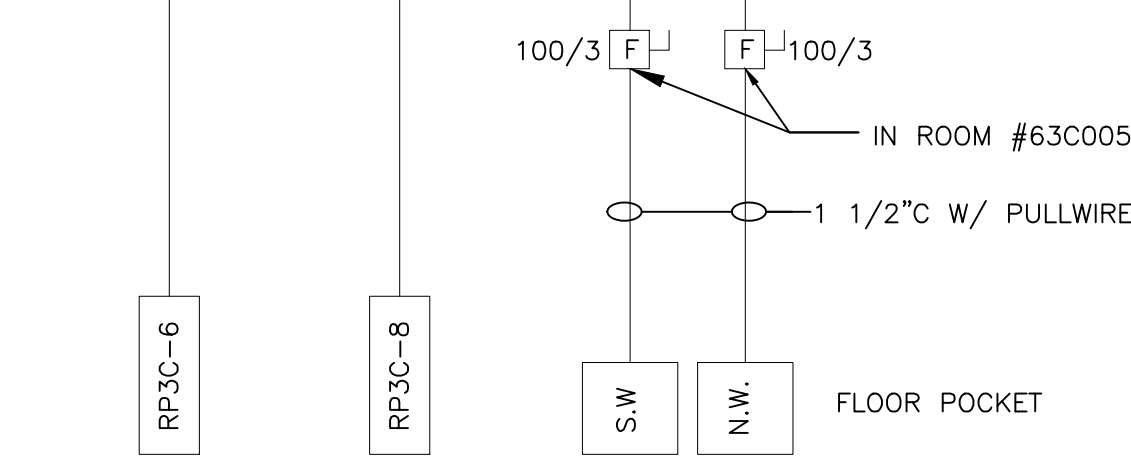
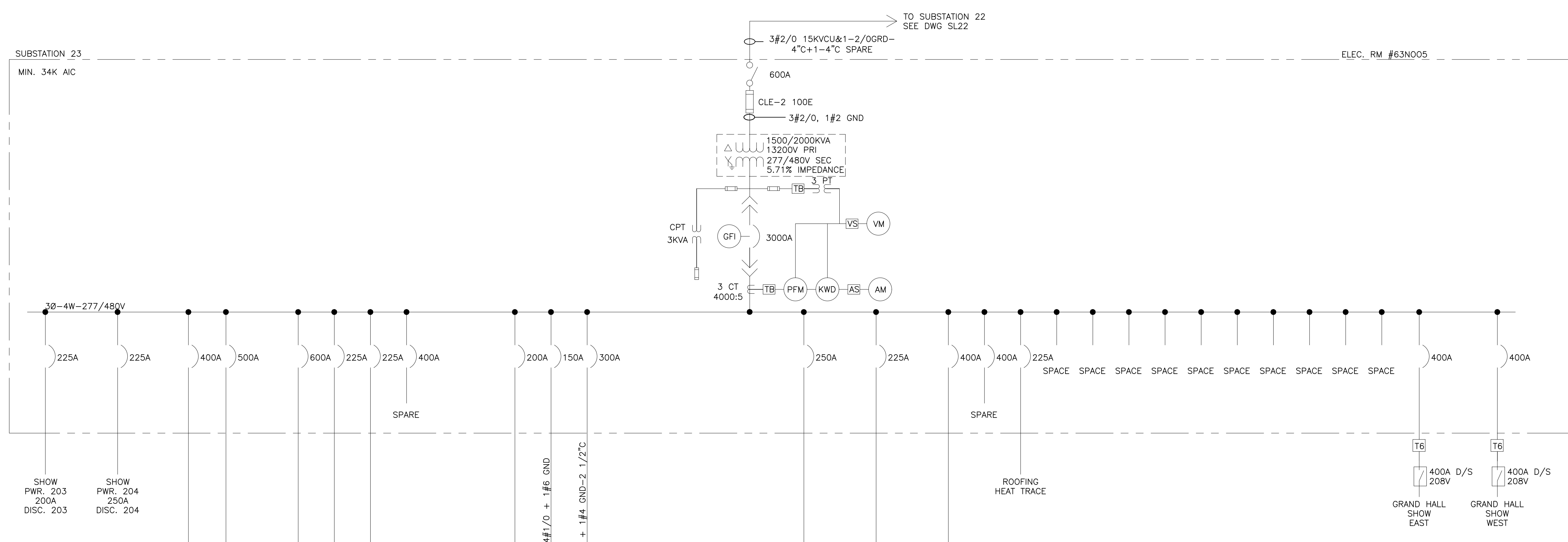
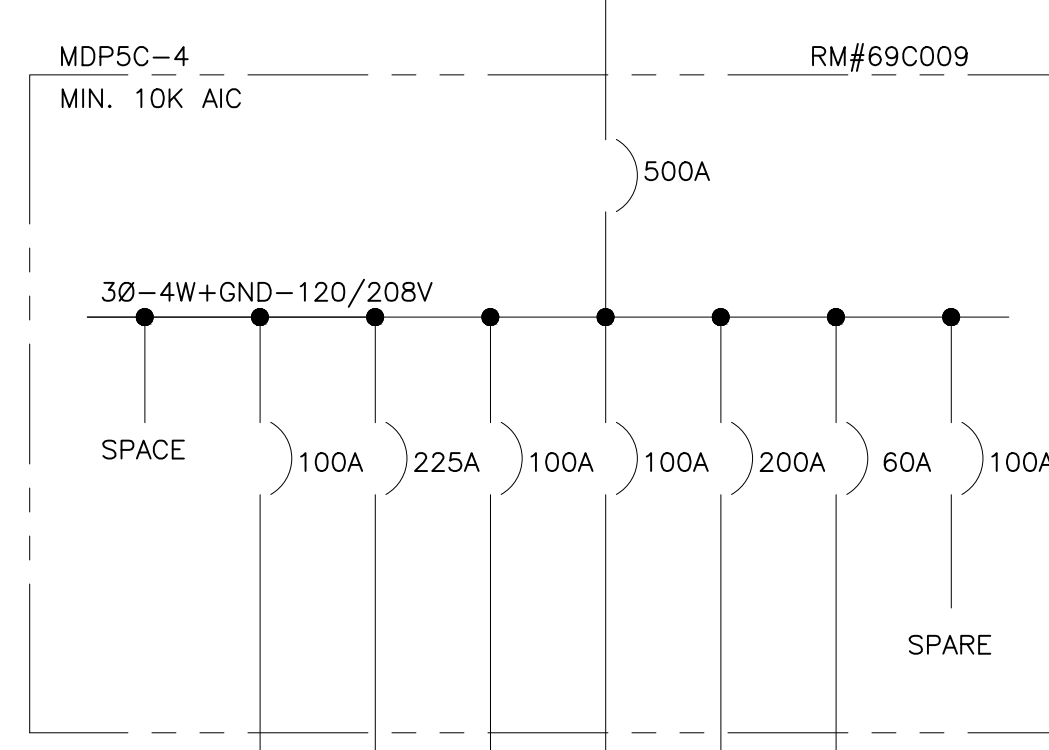
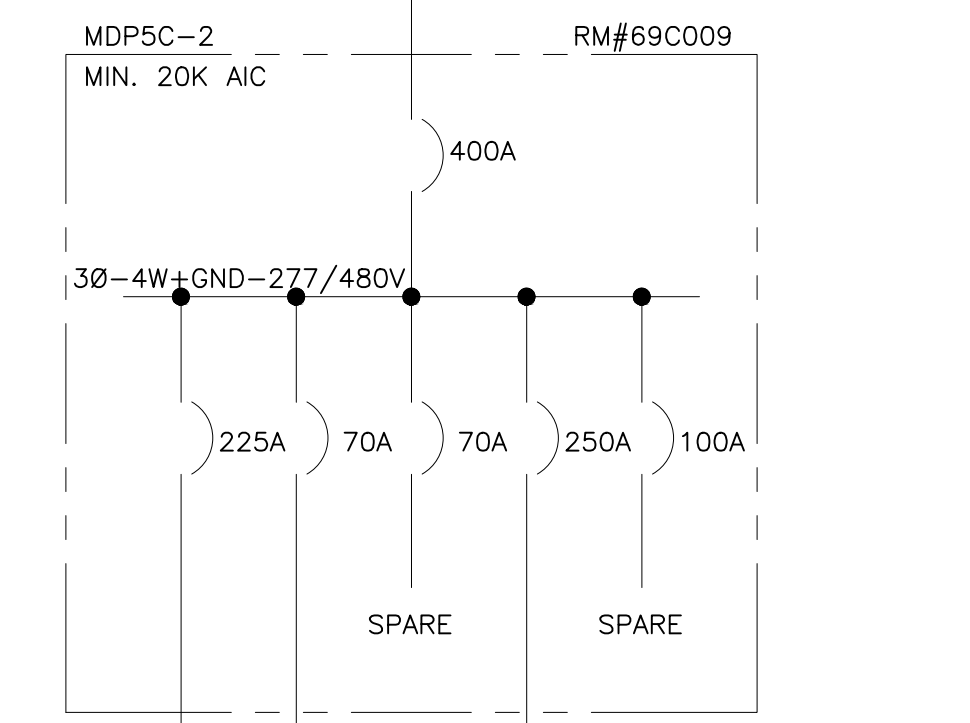
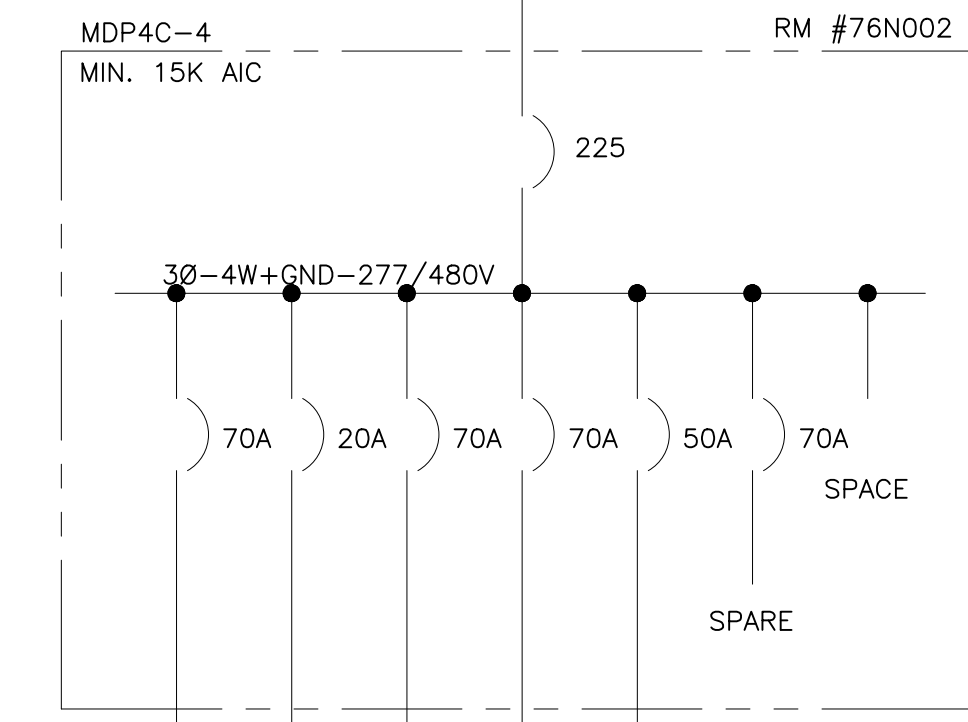
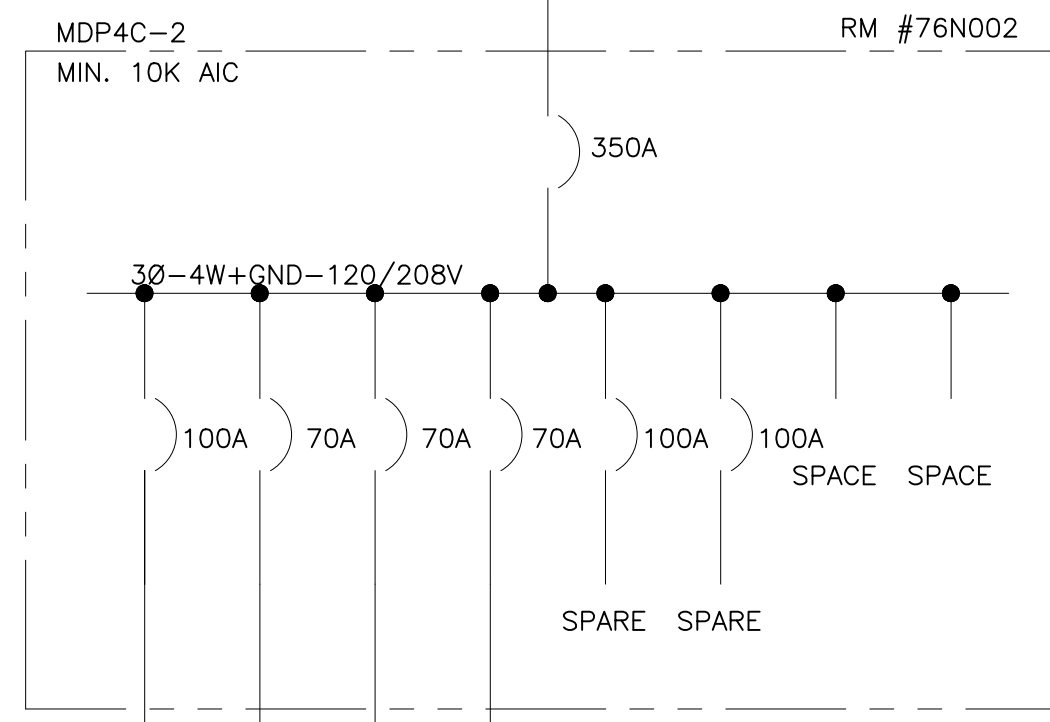
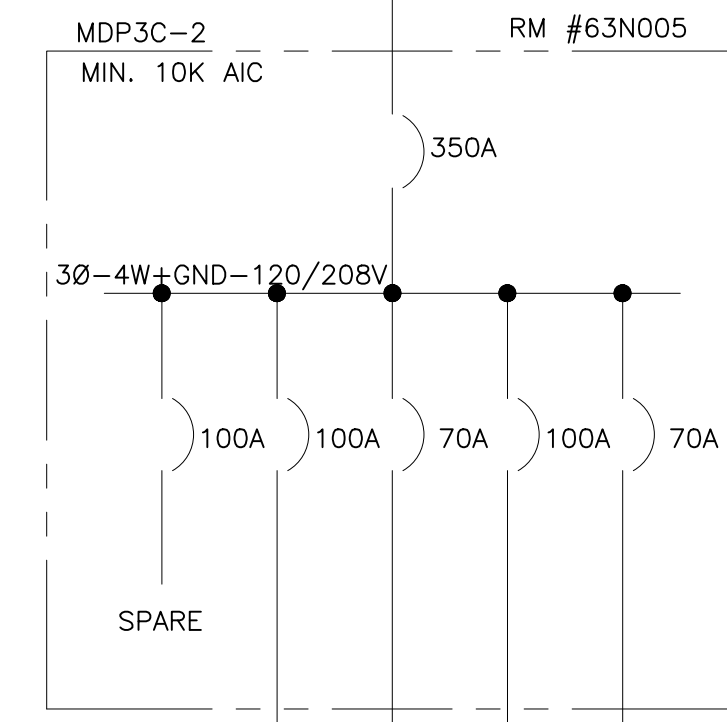
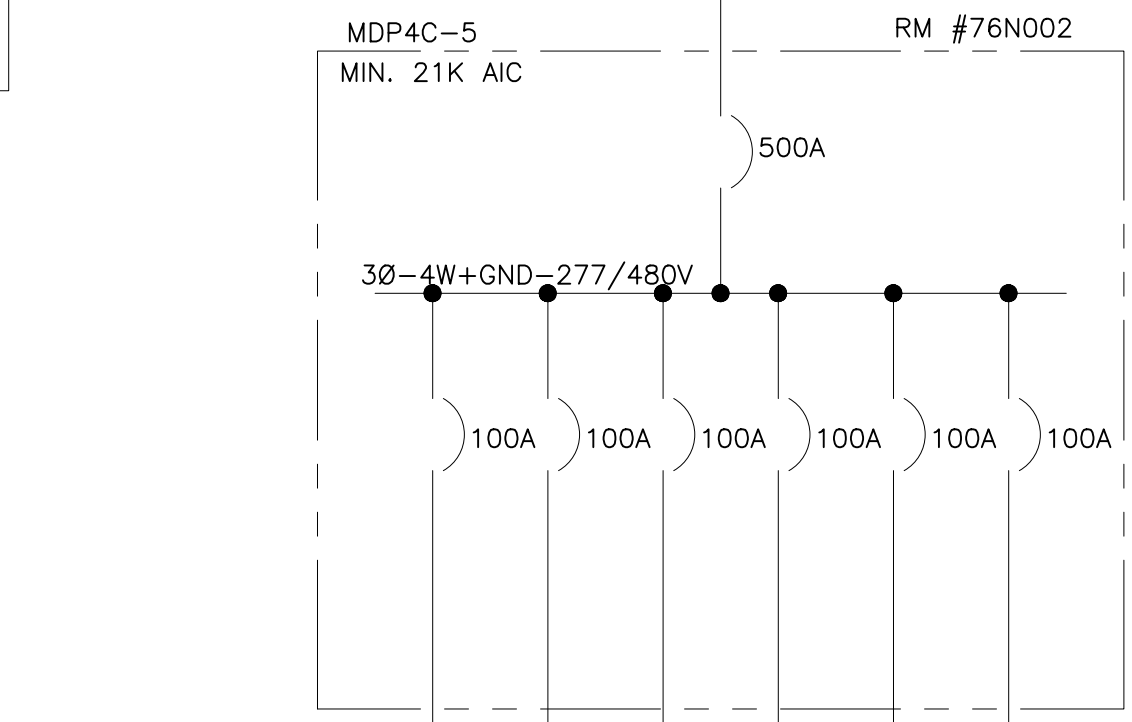
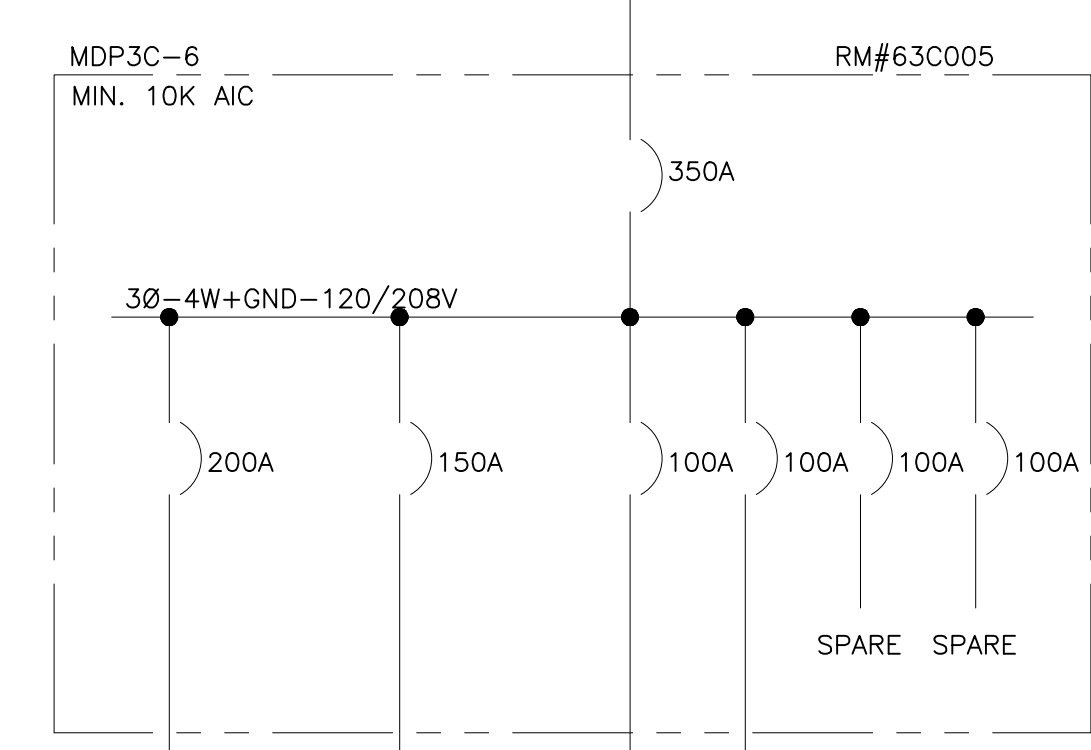
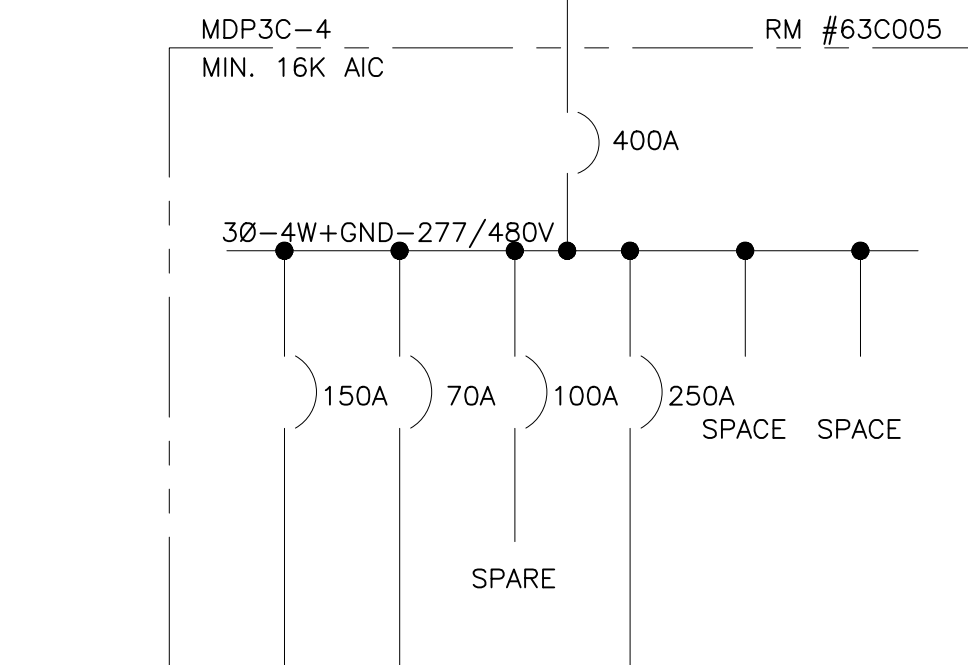
DRAWN BY:
CHECKED BY:

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

SL22

WIRE AND CONDUIT SIZING SCHEDULE					
CONDUC. / # & NEUTRAL	GROUND	A 1#, 2W	B 3#, 3W	C 3#, 4W	
1	14	14	3/4	3/4	3/4
2	12	12	3/4	3/4	3/4
3	10	10	3/4	3/4	3/4
4	8	10	3/4	1	1
5	6	10	3/4	1	1 1/4
6	4	10	1	1 1/4	1 1/4
7	4	8	1	1 1/4	1 1/4
8	3	8	1	1 1/4	1 1/4
10	2	8	1 1/4	1 1/4	1 1/2
11	1	6	1 1/4	1 1/2	2
12	1/0	6	1 1/4	1 1/2	2
13	3/0	6	1 1/2	2	2 1/2
14	4/0	4	2	2	2 1/2
15	250	4	3	2 1/2	3
16	350	4	2 1/2	3	3
18	500	3	3	3	3 1/2
19	(2) 250	(2) 2	(2) 2 1/2	(2) 3	
20	(2) 350	(2) 1	(2) 3	(2) 3	
21	(3) 300	(3) 1/0	(3) 2 1/2	(3) 3	
22	(3) 400	(3) 2/0	(3) 3	(3) 3 1/2	
23	(4) 350	(4) 3/0	(4) 3	(4) 3	
24	(5) 400	(5) 4/0	(5) 3	(5) 3 1/2	
25	(6) 400	(6) 250	(6) 3	(6) 3 1/2	
26	(6) 500	(6) 400	(6) 3 1/2	(6) 4	
27	(5) 500	(5) 250		(5) 4	

TRANSFORMER SCHEDULE				
TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	Ø	WIRE
T-0	6	480V DELTA/120/208V WYE	3Ø	4W
T-1	15	480V DELTA/120/208V WYE	3Ø	4W
T-2	30	480V DELTA/120/208V WYE	3Ø	4W
T-3	45	480V DELTA/120/208V WYE	3Ø	4W
T-4	75	480V DELTA/120/208V WYE	3Ø	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3Ø	4W
T-6	150	480V DELTA/120/208V WYE	3Ø	4W
T-7	225	480V DELTA/120/208V WYE	3Ø	4W
T-8	300	480V DELTA/120/208V WYE	3Ø	4W
T-9	500	480V DELTA/120/208V WYE	3Ø	4W



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
- FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE, FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED, RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER, RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- CAPACITOR
- MOTOR STARTER
- 3 PHASE MOTOR—HP NOTED
- FUSED DISCONNECT SWITCH—3 POLE
- TRANSFORMER—SEE SCHEDULE FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- IC INTERRUPTING CAPACITY—SEE TABLE
- CL CURRENT LIMITING
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILDAMPS
- KVAR KILOVAR
- AL ALUMINUM
- Ø PHASE
- W WIRE

REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
1	4/27/18	POWER FACTOR UPGRADE
2	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 622 Erie Plaz Road
 West Chester, Pennsylvania
 19380-1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL: SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
 POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

PHASE:
 BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
 ATS UPGRADE PROJECT - PHASE 1
 UNIT SUBSTATION 23
 ELECTRICAL ROOM

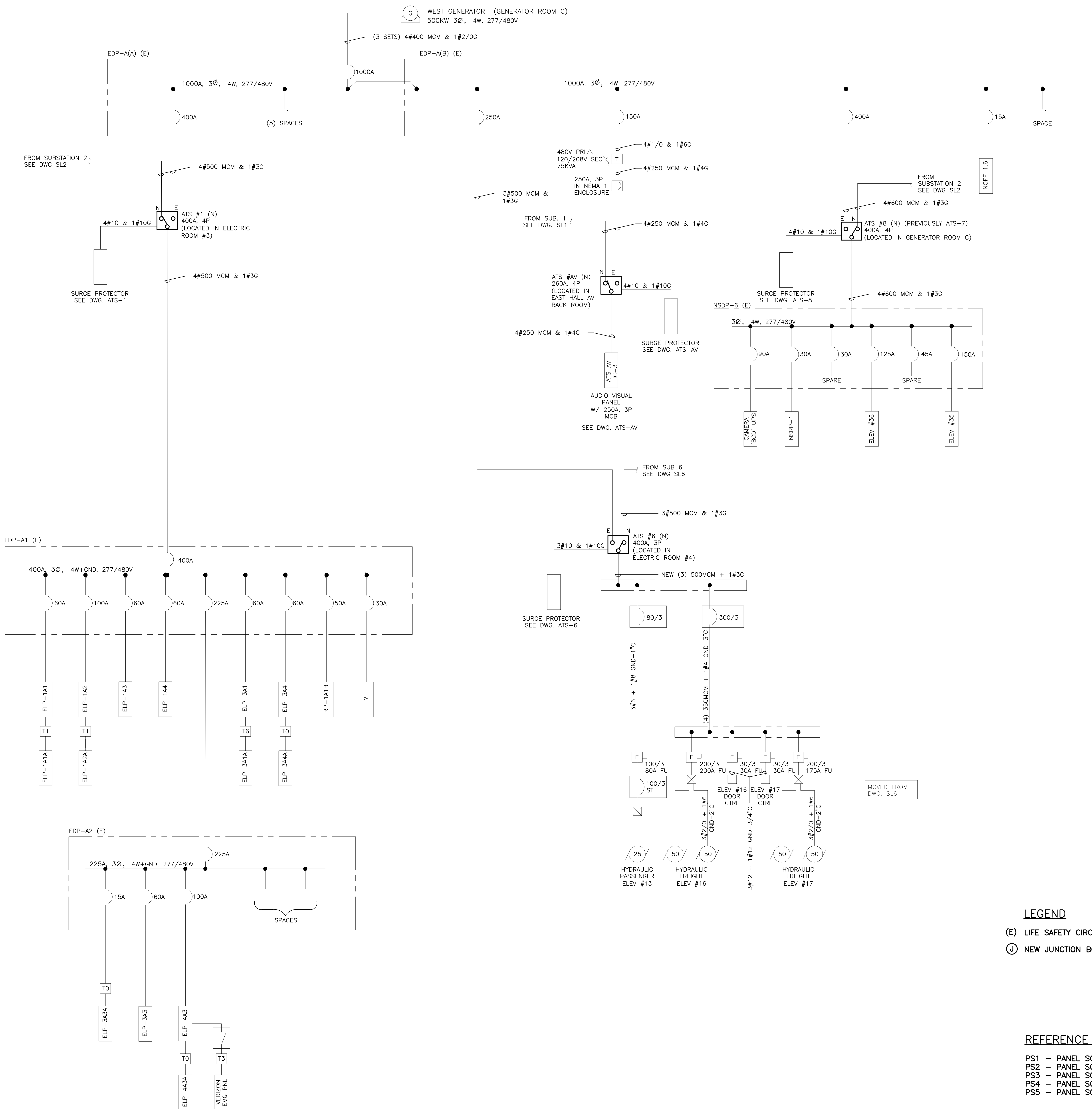
PAQC PROJECT NO.: XX-XX-XXXX-XX

CONSULTANT PROJECT NO.: XXX
 DATE: XXX
 SCALE: NOT TO SCALE

DRAWN BY:
 CHECKED BY:

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

SL23



- LEGEND**
- (E) LIFE SAFETY CIRCUITS
 - (J) NEW JUNCTION BOX USED TO RELOCATE FEEDERS

REFERENCE DRAWINGS

- PS1 - PANEL SCHEDULES FOR 1 TO 15
- PS2 - PANEL SCHEDULES FOR 16 TO 33
- PS3 - PANEL SCHEDULES FOR 34 TO 48
- PS4 - PANEL SCHEDULES FOR 49 TO 63
- PS5 - PANEL SCHEDULES FOR 64 TO 74

REVISIONS		
ISSUE	DATE	REVISIONS
1	4/30/21	ADDED ATS LOAD
2	4/5/23	ADDED SURGE PROTECTION
3	7/31/23	FOR BID
4	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 622 Erie Plaz Road
 West Chester, Pennsylvania
 19380 - 1076

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH
 NON-MEMBERS MUST BE CONTACTED DIRECTLY

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
 DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
 POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

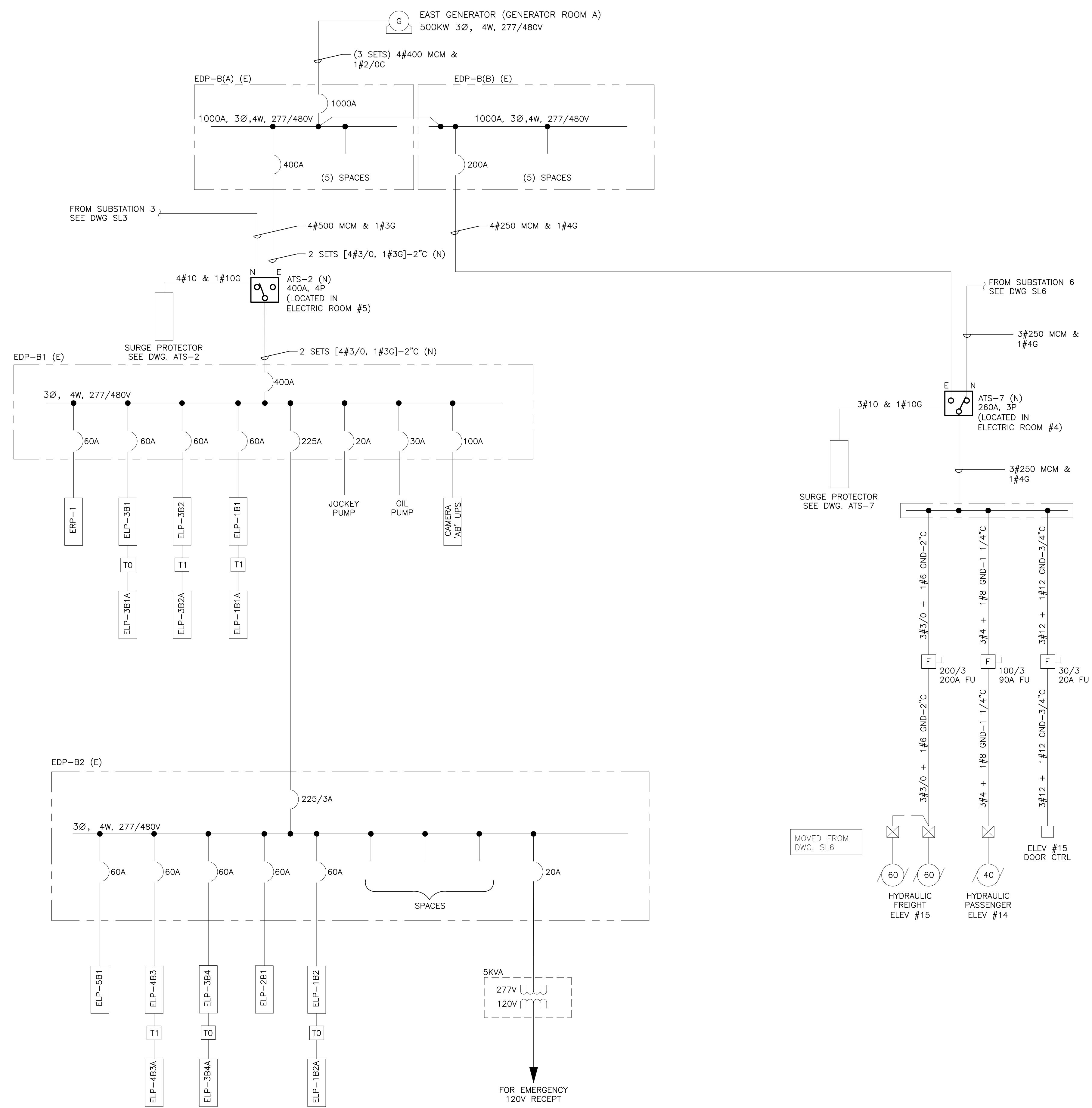
PHASE:
 BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
 ATS UPGRADE PROJECT - PHASE 1
 EMERGENCY WEST GENERATOR
 ADJACENT TO ELECTRICAL ROOM 1

PROJECT NO.:	XX-XX-XXXX-XX	DRAWING NO.:	
CONSULTANT PROJECT NO.:	XXX		
DATE:	XXX		
SCALE:	NOT TO SCALE		
DRAWN BY:			
CHECKED BY:			

SL24

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.



- LEGEND**
- (E) LIFE SAFETY CIRCUITS
 - Ⓢ NEW JUNCTION BOX USED TO RELOCATE FEEDERS

- REFERENCE DRAWINGS**
- PS1 - PANEL SCHEDULES FOR 1 TO 15
 - PS2 - PANEL SCHEDULES FOR 16 TO 33
 - PS3 - PANEL SCHEDULES FOR 34 TO 48
 - PS4 - PANEL SCHEDULES FOR 49 TO 63
 - PS5 - PANEL SCHEDULES FOR 64 TO 74

REVISIONS		
ISSUE	DATE	REVISIONS
1	4/30/21	ADDED ATS LOAD
2	4/5/23	ADDED SURGE PROTECTION
3	7/31/23	FOR BID
4	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 622 Erie Pike Road
 West Chester, Pennsylvania
 19380 - 1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH
 NON-MEMBERS MUST BE CONTACTED DIRECTLY

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
 DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX
 PROJECT TITLE: POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

PHASE:

BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

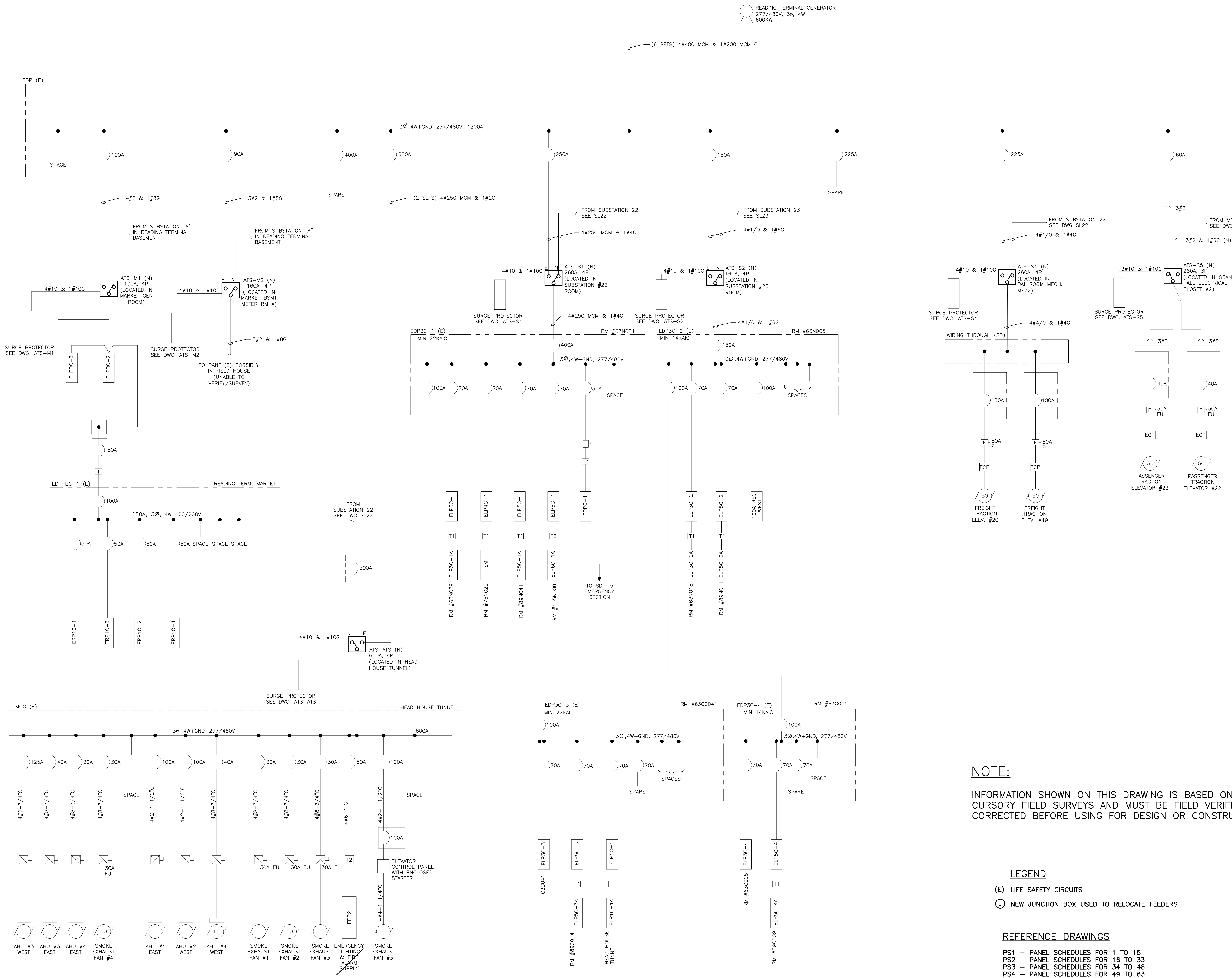
DRAWING TITLE:

ATS UPGRADE PROJECT - PHASE 1
 EMERGENCY EAST GENERATOR
 ADJACENT TO ELECTRICAL ROOM 2

PAQC PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: XXX
DATE: XXX
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL25

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.



NOTE:
 INFORMATION SHOWN ON THIS DRAWING IS BASED ON CURSORY FIELD SURVEYS AND MUST BE FIELD VERIFIED AND CORRECTED BEFORE USING FOR DESIGN OR CONSTRUCTION.

- LEGEND**
- (E) LIFE SAFETY CIRCUITS
 - (N) NEW JUNCTION BOX USED TO RELOCATE FEEDERS

- REFERENCE DRAWINGS**
- PS1 - PANEL SCHEDULES FOR 1 TO 15
 - PS2 - PANEL SCHEDULES FOR 16 TO 33
 - PS3 - PANEL SCHEDULES FOR 34 TO 48
 - PS4 - PANEL SCHEDULES FOR 49 TO 63
 - PS5 - PANEL SCHEDULES FOR 64 TO 74

REVISIONS		
ISSUE	DATE	REVISIONS
1	4/30/21	ADDED ATS LOADS
2	4/5/23	ADDED SURGE PROTECTION
3	7/31/23	FOR BID
4	4/24/24	RE-ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 Erie Plaz Road
 West Chester, Pennsylvania
 19380-1076
 BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THESE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU DIG. DATE, TIME, DEPTH OR DIRECTION

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
 DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
 DPP PROJECT COORDINATOR: XXXXXXXXXXXX

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX
 PROJECT TITLE: POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

PHASE:
 BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
 ATS UPGRADE PROJECT - PHASE 1
 READING TERMINAL GENERATOR
 READING TERMINAL MARKET

PACG PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: XXX
DATE: XXX
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL26

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.